

# PC-1

# Punjab Cities Programme Improvement & Construction of Roads & Chowks Project in Wazirabad City

ORIGINAL APPROVED COST	PKR Million. 200.890/-
ORIGINAL APPROVED GESTATION	12 Months Till June 2023
APPROVAL FORUM	DDSC (DDSC)

### 1. NAME OF THE PROJECT

Punjab Cities Programme Improvement & Construction of Roads & Chowks Project in Wazirabad City

### 2. LOCATION OF THE PROJECT

- 2.1. DISTRICT(S)
  - I. GUJRANWALA
- 2.2. TEHSIL(S)
  - I. WAZIRABAD

### 3. AUTHORITIES RESPONSIBLE FOR

- 3.1. SPONSORING AGENCY
  - LG&CD
- 3.2. EXECUTION AGENCY
  - LG&CD
- 3.3. OPERATIONS AND MAINTENANCE AGENCY
  - LG&CD
- 3.4. CONCERNED FEDRAL MINISTRY
  - FINANCE, REVENUE AND ECONOMIC AFFAIRS

### 4. PLAN PROVISION

Sr#	Description
1	Source of Funding: Scheme Listed in ADP CFY
2	<b>GS No:</b> 1769
3	Total Allocation:1,329.900
4	Comments: Punjab Cities Program (PCP) is a World Bank funded Program with a total cost of USD 236.00 million and comprises of below mentioned components.  Total loan from World Bank USD 200.00 million Component-1 Infrastructure development (PforR) USD 180.00 million Component-2 Technical Assistance USD 20.00 million MCs share (20% of PforR component) equivalent to: USD 36.00 million Total Program cost USD 236.00 million Component-2 i-e Technical Assistance component of Program costing USD 20.00 million is meant for management cost of the Program and capacity building of MCs & Government Departments and is included in the medium term/ five-year plan and has been funded now in ADP 2021-22 - under General Serial No-2521 with allocation of PKR 100.00 million as foreign component.

### 5. PROJECT OBJECTIVES

Project objectives are mentioned below

5. Project objectives and its relationship with sector objectives

### **Sector Objectives**

The sector objectives include:

- 1. Provision of efficient and effective municipality services to the masses.
- 2. Community development through improving basic infrastructure.
- 3. Clean and green environment for better living standards.
- 4. Effective use of land through master planning of urban areas.
- 5. Social uplifting and cohesion through provision of public open spaces and play grounds.
- 6. Ease in mobility and communication.
- 7. Cost efficient Solid Waste Management through waste to energy initiatives.
- 8. Capacity building of Local Governments.
- 9. Efficient Road network to make areas easily accessible

### **Objectives of the Project**

The Project aims at improvement of infrastructure of municipal services such as roads, chowks, cross roads, street lights, parks and parking shed for SWM machinery for improved communication and recreational facilities.

Scope of the work for this particular project includes the rehabilitation and improvement of existing roads, chowks and drainage system along with the construction of new drainage system where needed. However, the cleaning and de-silting of existing drains and pipes will be arranged by MC Wazirabad from their own resources.

The Project has the following objectives;

- 1. Improvement of service delivery level of the municipal services in the sector of communication.
- 2. Better travelling facilities for the commuters.
- 3. Reduction in road accidents.
- 4. Saving in travelling and repair cost of the vehicles.
- 5. Reduction in annual maintenance charges of roads and parks
- 6. Better lit roads and streets adding to security of people travelling at night.
- 7. Improvement in environments of the city making them livable.
- 8. Improvement in local and province economy.
- 9. Improvement in the economic growth potential of the city.

Hence, the objectives of the project are in line with the sector objectives mentioned at Sr. No-1, 2, 3, 5 and 6 above and the project forms integral part of the concerned sector.

# 6. DESCRIPTION AND JUSTIFICATION OF PROJECT

# 6.1 JUSTIFICATION OF PROJECT

Justification of project is given below

6. Description, justific	cation	, technical paran	neters and technolo	gy transfer aspects					
i. Present Condition	As per PLGA-12019 Urban Local Governments (ULGs) are basically and wholly responsible for delivery of the municipal services with a service delivery level which should satisfy the consumers and citizen. Unfortunately, the prevalent conditions of the service delivery are not encouraging in the city.								
	mai diss apa	intenance of the satisfaction at one rt from very low	municipal infrastrucend and degradation	rvice delivery is the lack of ture in all sectors causing co n of the infrastructure on the of s the consumers are reluctant	nsumer her end				
	repart bud infragult adv	The roads infrastructure has been damaged and degraded because of lack of repairs and upgradation due to shortage of money and constrained municipal budgets. If these roads & chowks are not improved at this stage, then this infrastructure will be further damaged / degraded giving financial loss to the public as well as private sectors and the growth potential of the city will be adversely affected. Damaged roads will increase the operational expenditure of the vehicles apart from wasting time and giving rise to public frustration and mental agony.							
	for	The only way to keep the infrastructure in operational and functional condition for better travelling and recreational facilities to the inhabitants of the city and the surrounding areas, is to improve the roads, chowks and important cross roads							
ii. Description of the subproject-	Th ler	e project compris	es of improvement of nd <b>02 Nos chowks</b> i	f <b>04 Nos</b> damaged roads with the city. Detail of these roads	otal				
iii Detail of civil works, equipment & machinery and	The detail of roads and chowks to be improved, rehabilitated or constructed in the city, is given below  Improvement and construction of roads								
other physical facilities	S. N.	Name of road	From-To	Detail of works involved					
	1	P1-Arif Shaheed Road & Double Railway crossing road	Telephone Exchange Chowk to Railway Crossing Nizamabad & HBL to Allahwala Chowk Via Double Railway	<ul> <li>Geometric Improvement</li> <li>Rehabilitation of Existing Pavement Structure</li> <li>Pavement Marking</li> <li>Street Lighting</li> <li>Improvement of drainage system</li> </ul>					
	2	P2-Awa Road	City Park to Dhounkal Road	<ul> <li>Geometric Improvement</li> <li>Rehabilitation of Existing Pavement Structure</li> <li>Pavement Marking</li> </ul>					

3	P7- Western Circular Road	_	tal to G.T via Railway	<ul> <li>Street Lighting</li> <li>Improvement of drainage system</li> <li>Geometric Improvement</li> <li>Rehabilitation of Existing Pavement Structure</li> <li>Pavement Marking</li> <li>Street Lighting</li> <li>Improvement of drainage system</li> </ul>	
4	P8- Bank of Nallah Palkhu & Railway Colony Road	Bypas Slaug	Road to ss Road via hter House & ray Colony	<ul> <li>Geometric Improvement</li> <li>Rehabilitation of Existing Pavement Structure</li> <li>Pavement Marking</li> <li>Improvement of drainage system</li> </ul>	
5. N.	Chowks or Cross F Name of Chowk				
1	CP-2 Telephone Exchange Chowl	k	<ul><li>Channeliza</li><li>Rehabilitati Structure</li><li>Pavement N</li><li>Street Light</li></ul>	_	
2 CP-3 Haji Pura 0		<ul> <li>Geometric Improvement of intersection</li> <li>Channelization of traffic flow</li> <li>Rehabilitation of Existing Pavement</li> </ul>			

- iv Indicate governess
  issues of the sector
  relevant to the
  project and
  strategy to resolve
  them
- Municipal Committee Wazirabad is facing acute shortage of staff. The smooth sailing of the Punjab Cities Program can only be assured when the required staff is available with Unit.
- The Repair and maintenance of the municipal services is not up to the mark in such Unit. Trainings will be imparted by PMDFC to the officers as well as the field staff under the Program but practicing the interventions and method/procedures learnt in these trainings is the actual requirement in which Units are lacking at present. Hence inculcating the mind set for good repair and maintenance is the major requirement for improving the service delivery level.

# 6.2 SECTORAL SPECIFIC INFORMATION

Sectoral specific information is already mentioned above in project objectives

### 7. CAPITAL COST ESTIMATES

Financial Components: Capital Grant Number: Engineering - (PC220036)

Cost Center:OTHERS- (OTHERS)

LO NO:N/A

Fund Center (Controlling):N/A

A/C To be Credited:Assignment

### **PKR Million**

Sr#	Object Code	2022-2023				
		Local	Foreign			
1	<b>A03970</b> -Others	0.000	200.890			
	Total	0.000	200.890			

7- Capital Cost of Project	The sum	nmary of the works included in the project is gi	ven below;				
Troject	S. No	Name of road	Cost (PKR million)				
	1	P1-Arif Shaheed Road & Double Railway crossing road	39.16				
	2	P2-Awa Road	6.30				
	3	P7- Western Circular Road	37.42				
	4	P8- Bank of Nallah Palkhu & Railway Crossing	30.96				
	5	CP-2 Telephone Exchange Chowk	6.64				
	6	CP-3 Haji Pura Chowk	7.20				
	7	Drainage System	16.25				
		Electrical Works	39.30				
	8	Environment Health Safety Budget	1.64				
		Total	187.75				
	9	Contingencies @2%	3.75				
	10	Punjab Sales Tax @5%	9.38				
		Grand Total	200.89				
	See An	See Annexure-B for details					
i- Indicate date of estimation of the project cost	The proj	ject estimates have been framed during the mon	nth of August, 2022				
ii- Basis of	The cost estimates have been framed on the basis of bill of quantities actually						
determining the		at site and unit rates from the Market Rate S	• '	by			
estimates be		ernment of Punjab (District Gujranwala 2 <sup>nd</sup> bia	•				
provided.		ns not available in the MRS, the same have	e been analyzed as p	per			
	prevailir	ng market rates.					

iii- Provide year wise estimation of physical activities The physical and financial requirements, year wise are included in the following table:

S. #	Name of road / chowk	Year 2022-2023
1	P1-Arif Shaheed Road & Double Railway crossing road	100%
2	P2-Awa Road	100%
3	P7- Western Circular Road	100%
4	P8- Bank of Nallah Palkhu & Railway Crossing	100%
5	CP-2 Telephone Exchange Chowk	100%
6	CP-3 Haji Pura Chowk	100%

iv- Phasing of capital cost on the basis of each item of work.

The phasing of capital cost of the project is included in the following table: (All figures are in million rupees)

S. #	Items of Road/chowk	Total (PKR million)	Year 2022-2023 (100%)
1	P1-Arif Shaheed Road & Double Railway crossing road	39.16	39.16
2	P2-Awa Road	6.30	6.30
3	P7- Western Circular Road	37.42	37.42
4	P8- Bank of Nullah Palkhu & Railway Crossing	30.96	30.96
5	CP-2 Telephone Exchange Chowk	6.64	6.64
6	CP-3 Haji Pura Chowk	7.20	7.20
7	Drainage System	16.25	16.25
8	Electrical Works	39.30	39.30
9	Environment Health Safety Budget	1.64	1.64
	Total work outlay	187.75	187.75
10	PST, contingencies, public awareness and Horticulture	13.13	13.13
	Total project cost (Millions)	200.89	200.89

7- Capital Cost of	pital Cost of The summary of the works included in the project is given below;							
Project								
	S. No	Name of road	Cost (PKR million)					
	1	P1-Arif Shaheed Road & Double Railway crossing road	39.16					
	2	P2-Awa Road	6.30					
	3	P7- Western Circular Road	37.42					
	4	P8- Bank of Nallah Palkhu & Railway Crossing	30.96					
	5	CP-2 Telephone Exchange Chowk	6.64					
	6	CP-3 Haji Pura Chowk	7.20					
	7	Drainage System	16.25					
		Electrical Works	39.30					
	8	Environment Health Safety Budget	1.64					
		Total	187.75					
	9	Contingencies @2%	3.75					
	10	Punjab Sales Tax @5%	9.38					
		Grand Total	200.89					
	See An	nexure-B for details						
i- Indicate date of estimation of the project cost	The project estimates have been framed during the month of August, 2022							
ii- Basis of	The cost estimates have been framed on the basis of bill of quantities actually							
determining the	1 1 -	at site and unit rates from the Market Rate S	•	•				
estimates be		ernment of Punjab (District Gujranwala 2 <sup>nd</sup> bia	•					
provided.		ns not available in the MRS, the same have	e been analyzed as	per				
	prevailir	ng market rates.						

iii- Provide year wise estimation of physical activities The physical and financial requirements, year wise are included in the following table:

S. #	Name of road / chowk	Year 2022-2023
1	P1-Arif Shaheed Road & Double Railway crossing road	100%
2	P2-Awa Road	100%
3	P7- Western Circular Road	100%
4	P8- Bank of Nallah Palkhu & Railway Crossing	100%
5	CP-2 Telephone Exchange Chowk	100%
6	CP-3 Haji Pura Chowk	100%

iv- Phasing of capital cost on the basis of each item of work.

The phasing of capital cost of the project is included in the following table: (All figures are in million rupees)

S. #	Items of Road/chowk	Total (PKR million)	Year 2022-2023 (100%)
1	P1-Arif Shaheed Road & Double	39.16	39.16
	Railway crossing road	37.10	37.10
2	P2-Awa Road	6.30	6.30
3	P7- Western Circular Road	37.42	37.42
4	P8- Bank of Nullah Palkhu & Railway	30.96	30.96
4	Crossing	30.90	30.90
5	CP-2 Telephone Exchange Chowk	6.64	6.64
6	CP-3 Haji Pura Chowk	7.20	7.20
7	Drainage System	16.25	16.25
8	Electrical Works	39.30	39.30
9	Environment Health Safety Budget	1.64	1.64
	Total work outlay	187.75	187.75
10	PST, contingencies, public awareness	12.12	12 12
10	and Horticulture	13.13	13.13
	Total project cost (Millions)	200.89	200.89

### 8. ANNUAL OPERATING COST (POST COMPLETION)

Financial Components: Capital Grant Number: Engineering - (PC220036)

Cost Center:OTHERS- (OTHERS)

LO NO:N/A

Fund Center (Controlling):N/A

A/C To be Credited:Assignment

### **PKR Million**

Sr#	Object Code	2023-2024		2024-2025		2025-2026		2026-2027		2027-2028	
		Local	Foreign								
1	<b>A03970</b> -Others	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

# 9. DEMAND AND SUPPLY ANALYSIS

Demand supply analysis information is given below

9- Demand & Supply	Existing supply level
Analysis  i- Existing Capacity of services	<ul> <li>Existing geometry of the roads and chowk is not well enough to sustain the smooth traffic flow. Existing pavement structure of the roads and chowk is deteriorated which needs the rehabilitation to bear the traffic loading and better riding quality.</li> <li>Municipal Committee Wazirabad is unable to render satisfactory service to the entire area of the city because of degraded infrastructure wherein some rehabilitation and improvement are direly needed but MC could not be able to accomplish them because of low revenue recovery and funding constraints. Very few areas are reasonably served but others are deprived of the required level of the service. This is resulting in low credibility of the municipal services and citizen dissatisfaction. Further the infrastructure has not been developed and extended keeping in pace with the growth of population mainly due to migration from rural areas to urban areas. The market prices of the materials and labor have also increased drastically during the last decade which increased the O&amp;M cost of services. This has further degraded the situation and the service delivery level is further deteriorating.</li> </ul>
ii- Projected Demand for 10 years	<ul> <li>Traffic is increasing day by day in Wazirabad city. Projected traffic of 4 project roads for 10 year is 151 million. Project roads of MC Wazirabad needs to be improved to save the travel time and better riding quality.</li> <li>The municipal services require radical improvement to enhance the efficiency of the service to increase service delivery to a satisfactory level. For this purpose, the existing infrastructure will have to be improved.</li> <li>Many shortcomings, problems and bottlenecks have been observed in the existing infrastructure which could not be addressed by MC due to funding constraints and now have been proposed to be addressed by rehabilitation of defective and outlived components of all the municipal services infrastructure.</li> </ul>
iii- Capacity of other similar projects being implemented in public/private sector	No other project of this nature is being implemented in public as well as private sector because of funding constrains in the Unit.
iv- Supply and Demand gaps	<ul> <li>The nature of supply and demand gap has been explained in the preceding paras which concludes;</li> <li>Existing condition of the road network is not good enough to bear the traffic load. It's causing excessive delays, increasing travel time, occurring accidents at intersections and vehicles wear and tear due to the poor condition of pavement surface. Increasing traffic load requires the improvement of existing road network and chowk.</li> <li>The existing infrastructure has poor efficiency resulting in unsatisfactory service delivery level.</li> </ul>

- The O&M cost of the infrastructure services is very high because of low efficiency and high market rates while there in a large gap between the O&M expenditure and the revenue recovery.
- Large subsidies are being injected by MC to the keep the services in operation
- Numerous public complaints are the talk of the day.
- Unsatisfactory municipal delivery is not encouraging the city to become engines of economic growth and hence the GDP of our city is much lower than the peers in the developing world.

Hence there is a large gap between the supply and demand which is to be bridged by improvement in the infrastructure and its management.

### v-Designed capacity and output of the project

1. Table showing Name of roads, From and to reaches, length, ROW, metaled width and type of pavement of each road and total length is given below:

	ociow.						
Sr. #	Road Name	From and To	Pavement Type	ROW	Carriag eway Type	Metaled Width	Leng th
1	P1-Arif Shaheed Road & Double Railway crossing road	Telephone Exchange Chowk to Railway Crossing Nizamabad & HBL to Allahwala Chowk Via Double Railway	Asphalt Concrete & Tuff Paver	38 ft (Varies)	Single	32 ft (varies)	2.30 km
2	P2-Awa Road	City Park to Dhounkal Road	Tuff Paver	17 ft (Varies)	Single	-	0.53 km
3	P7- Western Circular Road	Veterinary Hospital to G.T Road via Railway Station	Asphalt Concrete & Tuff Paver	27 ft (varies)	Single	-	1.19 km
4	P8- Bank of Nallah Palkhu & Railway Colony Road	G.T Road to Bypass Road via Slaughter House	Asphalt Concrete	16 ft	Single	16 ft	1.7 km

- 2. One 3 legs chowk (CP-2 Telephone Exchange Chowk), connecting with Sialkot-Wazirabad Road & Circular Road, second 6 leg Chowk (CP-3 Haji Pura Chowk) connecting with Sialkot Wazirabad Road, Daska Wazirabad Road & Govt College Road.
- 3. Roads and chowk are designed for 10-year life.
- 4. These roads will carry out the 151 Million traffic cumulatively for 10 years.

## 10. FINANCIAL PLAN AND MODE OF FINANCING

# 10.1 FINANCIAL PLAN EQUITY INFORMATION

Financial plan equity information is given below

		A. Loan/grant to MC			
		The amount of loan converted to grant to Wazirabad Unit will be <b>160,716,089 PKR. (160.71) million</b> . The financing of the project will be			
a)	Equit <b>y</b>	as given below:			
		Grant to Unit for the year 2022-2023 PKR 160.71million (80% of cost of PC-I)			
		20% Co-finance by MC (20% of the cost of PC-I)  PKR 40.17 million			
		Total available funds PKR 160.71 million			
		B. Project Cost PKR 200.89 million  *The loan is from World Bank to Government of Pakistan/Punjab which w trickle down to Wazirabad Unit as grant.	vill		

## 10.2 FINANCIAL PLAN DEBT INFORMATION

Financial plan debt information is mentioned below

# 10. Financial Plan Sources of financing Debt a) Indicate the local and foreign debt Loan

Below given loan for the Punjab Cities Program has been funded by World Bank for 16 PCP cities in Punjab.

Total loan to Government of Pakistan/Punjab	USD 200 million		
Component-1 for Infrastructure Development	USD 180 million		
Component-2 for Investment Project Financing			
For capacity building of MCs & three Govt.	USD 20 million		
organization and program management.			
20% share of Municipalities is equivalent to	USD 36 million		
Total funds available for Infrastructure	USD 216 million		
Development CSD 210 IIIIII0II			
This project will be funded under this financing.			

### 10.3 FINANCIAL PLAN GRANT INFORMATION

No grant is being given by Government of Punjab out of ADP funds. The World Bank loan to Government of Pakistan/Punjab will trickle down as grant to MC from Government of Punjab

# 10.4 WEIGHT COST OF CAPITAL INFORMATION

Nil

## 11. PROJECT BENEFITS AND ANALYSIS

# 11.1 PROJECT BENEFIT ANALYSIS INFORMATION

Project benefits are mentioned below

### 11-Project benefits and analysis

# i.Financial: Income to the project with assumption

- The project comprises of improvement of roads, chowks and cross roads in the city.
- Wazirabad Unit has no plan to levy user charges /toll tax on the roads as these are internal roads of city and levying of toll tax is not feasible.
- However, it is an infrastructure sector project but the capital cost of the project is not intended to be recovered. The unit will meet the cost of repair and maintenance out of its own resources. The project economic analysis is given as **Annexure-C**.

# ii.Social benefits to the target group

The completion of the project will result in:

- Up gradation of the infrastructure.
- Enhanced life of the roads and chowks.
- Reduction in travelling time of the commuters.
- Reduction of road accidents.
- Reduction in consumption of POL resulting in saving of the foreign exchange.
- Reduction in the operation and maintenance cost of the vehicles.
- Improvement in the environment of the city;
- Minimized public mental tension and frustration
- Improved local economy
- Improvement of city growth potential

# iii.EnvironmentalImpactnegative/positive

Construction/Rehabilitation of Roads and Chowks and their subsequent long-term use lead to many changes in the environment. There will be some negative impacts during rehabilitation of the Roads and Chowks in the form of noise of the machinery, dismantling of the existing roads, dust pollution, nuisance caused by higher traffic, risked caused by animal intersecting routes or consequences of any crossing water courses etc. Therefore, it is recommended to develop variant solutions in order to choose the one that would be least harmful to the environment, and then to incorporate them in an Environmental and Social Management Framework. However, the impacts will be temporary and there will be no negative impacts after completion of the project, rather, positive impacts, because of improvement in environments of the city, will be observed and present traffic hazards and jams will be eliminated. Hence overall positive impacts will be experienced due to execution and operation of the sub-projects.

To facilitate the selection of an optimal solution and for the inclusion of Safe Operating Procedures for Construction workers/labors; assessment indicators or an Environmental Screening Checklists have been developed which is attached as Annexure E (A) of this PC-1. The checklist focuses on Environmental Issues and social concerns and ensure that all environmental and social dimensions are adequately considered. Based on the remarks of the screening checklist, Environment and Social Management Plans (ESMPs) are prepared and the necessary costs for implementation of ESMPs have been provided in this PC-

	1. The Environment, Health and Safety SOPs for labor/workers are provided as			
	Annexure E (B).			
	Moreover, the ESMP for the required road and chowk sub-projects will be			
	prepared and made part of the bidding documents.			
iv.Quantifiable project	The quantifiable project out puts have been given above in Sr. No-9 (V).			
outputs	The social benefits to the citizen have been described at Sr. No-11(ii).			
v.Unit cost analysis	The unit cost analysis is produced below;			
	Project capital cost	PKR 200.89 million		
	Population of the city in year 2023	145,590 persons		
	Unit capital cost per capita	PKR 1379		
	• Unit R&M cost: – The Repair & ma	intenance cost is already being borne by		
	Wazirabad Unit and there will be no	increase in this cost. Due to improvement		
	of the infrastructure R&M cost will re	educe for at least 5 years after completion		
	of the project.			
vi.Employment	Employment Analysis			
generation	Direct Employment			
(direct and indirect)	a) Planning and Design of projects			
	The planning and design of the projection	ect has been entrusted to local consultants		
	who have appointed staff and expe	erts in road and related disciplines along		
	with their support staff. The cons	sultants will also appoint their staff for		
	resident supervision of the project to verify and certify the items of works to be executed under this PC-I.			
	b) Execution of the Project			
	a) PMDFC			
		ing and supervisory role and the company		
	1 1	complete this assignment. PMDFC has		
	<ul> <li>already deployed under mentioned staff for these projects:</li> <li>Civil Engineers</li> <li>Accounts, administration and audit personnel</li> <li>Urban planners</li> <li>GIS experts</li> </ul>			
	Support staff like computer op-	erators, vehicle drivers, office boys and		
	guards.			
	Procurement experts			
	Communication experts			
	Environmental and social experts			
	Contract management experts			
	b) Consultants			

	PMDFC has employed consultants for detailed design and resident		
	supervision of the projects who will deploy their staff for execution of the		
	project.		
	c) Municipality		
	Wazirabad Unit has regular staff like engineers, sub engineers and other		
	administrative & accounts keeping staff which will be responsible for		
	execution of the project and contract management. No additional staff		
	will be needed for execution of this project		
	d) Contractor		
	The contractor responsible for execution of the sub project will employ		
	skilled and un-skilled labor on this work.		
	Indirect Employment		
	Indirect employment for production of material such as cement, steel, stone metal,		
	bitumen, bricks etc. will be generated.		
vii.Impacts of delays	The impact of delay in project implementation will;		
on project cost and	Result in increased project cost due to escalation in cost of material and		
viability	labor.		
	Delay the benefits to the target group		
	Result in further deterioration of the infrastructure and the service delivery		
	level.		

# 11.2 ENVIRONMENTAL IMPACT ANALYSIS

Environment impact analysis is attached as Annexure-E

# 11.3 PACT ANALYSIS

undefined

# 11.4 ECONOMIC ANALYSIS

Economic Analysis is attached as Annexure-C

# 11.5 FINANCIAL ANALYSIS

N/A

### 12. IMPLEMENTATION SCHEDULE

### 12.1 IMPLEMENTATION SCHEDULE/GANTT CHART

Gantt chart is attached as Annexure-D

### 12.2 RESULT BASED MONITORING (RBM) INDICATORS

undefined

### 12.3 IMPLEMENTATION PLAN

The project is anticipated to commence by January 2023 and to be completed by October 2023 with project implementation period of 10 months.

### **12.4 M&E PLAN**

undefined

### 12.5 RISK MITIGATION PLAN

undefined

### 12.6 PROCUREMENT PLAN

The procurement of works and goods will be done by Procurement Committee of Wazirabad Unit as per PPRA Rules

### 13. MANAGEMENT STRUCTURE AND MANPOWER REQUIREMENTS

Management structure mapower requirements information is given below

### 13- Management Structure and manpower requirements

i. Administrative arrangements for the implementation of the project

### ii. Planning & design of the project

The project has been designed by the consultants employed by PMDFC and will also carry out the resident supervision of the project.

### iii. Preparation of cost estimation

The cost estimates have been prepared by the design consultants by actual measurements are required at site. The execution of the items of works included in these estimates /PC-I will be certified by these consultants.

### iv. Execution of the project

- The project will be executed by District Council Unit Wazirabad and supervised by the Consultants appointed by PMDFC in resident supervision mode. The technical staff & experts in PMDFC will oversee, co-ordinate and collaborate in the project planning, design and implementation through their experts in head office located in Lahore and regional offices. The reporting of progress to LG & CDD & World bank and troubleshooting will also be responsibility of PMDFC.
- MO (I&S) of the Unit has been designated as Project Manager /Engineer in Charge of the project. The supervision of the works will also be carried out by these municipal officers along with their support engineering staff. All supervisory staff is available with MC.
- The procurement of works and goods will be done by Procurement Committee of Wazirabad Unit as per PPRA Rules.

# v. Verification of quantities included in PC-Is and Resident Supervision of the works by consultants

The works will be supervised by Supervision Consultants in resident supervision mode by assuring the quantity and quality of works. The consultants will verify the items of work and their quantities contained in the PC-Is and cost estimates initially and then the quantities and quality of works included in the contractor claims at the stage of payments. Payments will be made by the Unit after these contractor claims have been entered in the measurement books by the Project Manager/Engineer in Charge and pre audited as per LG Works Rules.

ii- The manpower requirements by skills during execution and operation of the project and; The job description, qualification, experience, age and salary of each post

### a) PMDFC experts and staff

For rendering assistance in implementation of infrastructure projects in 16 MCs, PMDFC has the experts and staff in the required fields. In order to facilitate the Program Units, three regional offices have been established by PMDFC at Gujranwala, Faisalabad and Multan/Khanewal.

#### b) Resident Supervision Consultants

The project will be supervised by consultants. The tentative staff to be employed/deployed by the consultants for the certification of quantities of works and resident supervision of the project is given below.

<b>S</b> #	Personnel	Nos	Qualification
1	Chief Resident Engineer/Team Leader	01	BSc;/BE in Civil engineering from HEC approved University with minimum 20 years' professional experience and 5 years' experience on similar assignment or MSC; Civil Engineering/Public Health Engineering/Environmental Engineering with Bachelor in Civil Engineering and minimum 15 years, experience, with 5 years on similar assignments on urban planning, designing and construction supervision assignment.
2	Assistant Resident Engineer	Bachelor Degree in Civil engineering with minimum 8 years' experience in site supervision and execution for projects of similar nature	
3			DAE in Civil with minimum 10 years' experience in site supervision for projects of similar nature

### c) Contractor's Technical staff, skilled & non skilled labor

The contractors will employ the supervisory technical staff and skilled & non skilled labor for execution of works. The works will be supervised by experienced Engineers and sub engineers and the number of slots for engineers and skilled and non-skilled will depend upon the type and quantity of work and its period of completion.

### d) Repair & maintenance of the project

MC has its own regular staff which has been deployed for repair and maintenance of the municipal services infrastructure. However, it has been observed that the existing staff is not adequate to repair and maintain the services in a manner which can give good service delivery. Hence it is proposed to;

- Fill up the presently vacant slots
- Recruit additional staff as per need of the infrastructure after obtaining the sanctions from the competent authorities.

### 14. ADDITIONAL PROJECTS / DECISIONS REQUIRED

Shortage & frequent transfers of Provincially appointed staff

MC is facing shortage in provincially appointed and locally appointed cadres. This will seriously affect the pace of progress of the program and the implementation of the infrastructure projects may be delayed. Provincial Government should fill up the vacant staff immediately for optimizing the investments in MC Repair & Maintenance (R&M) staff

The R&M staff is also deficient and this is adversely affecting the service delivery level. Number of slots are vacant but MC is not allowed to recruit the persons to fill these slots due to ban on recruitments. Further the sanctioned strength of the field staff is much lesser than the actual requirement because with the increase in population and extension of services, additionally required staff has not been sanctioned by the competent authorities. Both of the above issues need to be addressed for optimal utilization of the investments and giving targeted benefits to the resident population of these cities.

### 15. CERTIFICATE

Focal Person Name: Muhammad Iftikhar Rasool Designation: Deputy Program Director

Email:miftikhar@pmdfc.org.pk

Tel. No.: 04299204386

Fax No:

Address: 184 Scotch Corner, Shahrah-e-Quaid-e-Azam, behind NIPA from, Lahore, 54000

MC is facing shortage in provincially appointed and locally appointed cadres. This will seriously affect the pace of progress of the program and the implementation of the infrastructure projects may be delayed. Provincial Government should fill up the vacant staff immediately for optimizing the investments in MC.  2) Repair & Maintenance (R&M) staff  The R&M staff is also deficient and this is adversely affecting the service delivery level. Number of slots are vacant but MC is not allowed to recruit the persons to fill these slots due to ban on recruitments.  Further the sanctioned strength of the field staff is much lesser than the actual requirement because with the increase in population and extension of services, additionally required staff has not been sanctioned by the competent authorities.  Both of the above issues need to be addressed for optimal utilization of the investments and giving targeted benefits to the resident population
of these cities.  Certified that the project proposal has been prepared on the basis of guidelines provided by the Planning Commission for the preparation of

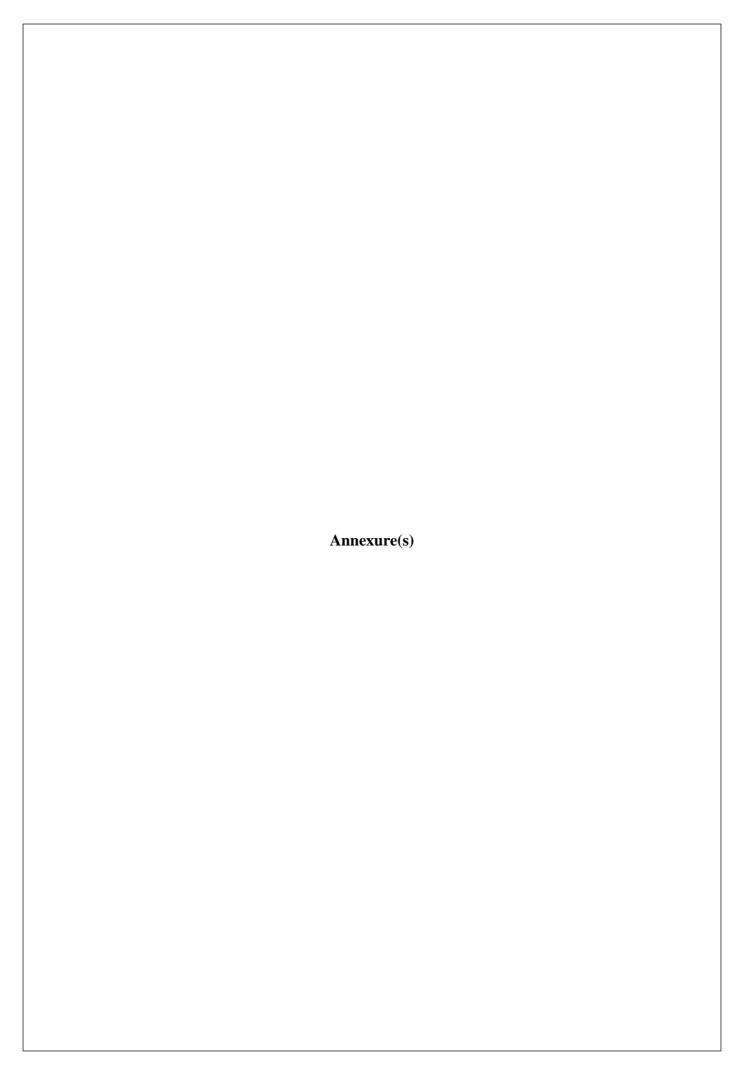
Prepared by	JERS Consultancy (Pvt) Ltd	Signatures	
Checked by	Municipal Officer (Infrastructure) District Council Unit Wazirabad	Signatures	magerill
	Chief Officer District Council Unit Wazirabad	Signatures	13
	Administrator Municipal Committee Wazirabad	Signatures	A A
Vetted by	Senior Program Officer PMDFC	Signatures	The state of the s
Forwarded by	Secretary LG&CD	Signatures	V

### 17. RELATION WITH OTHER PROJECTS

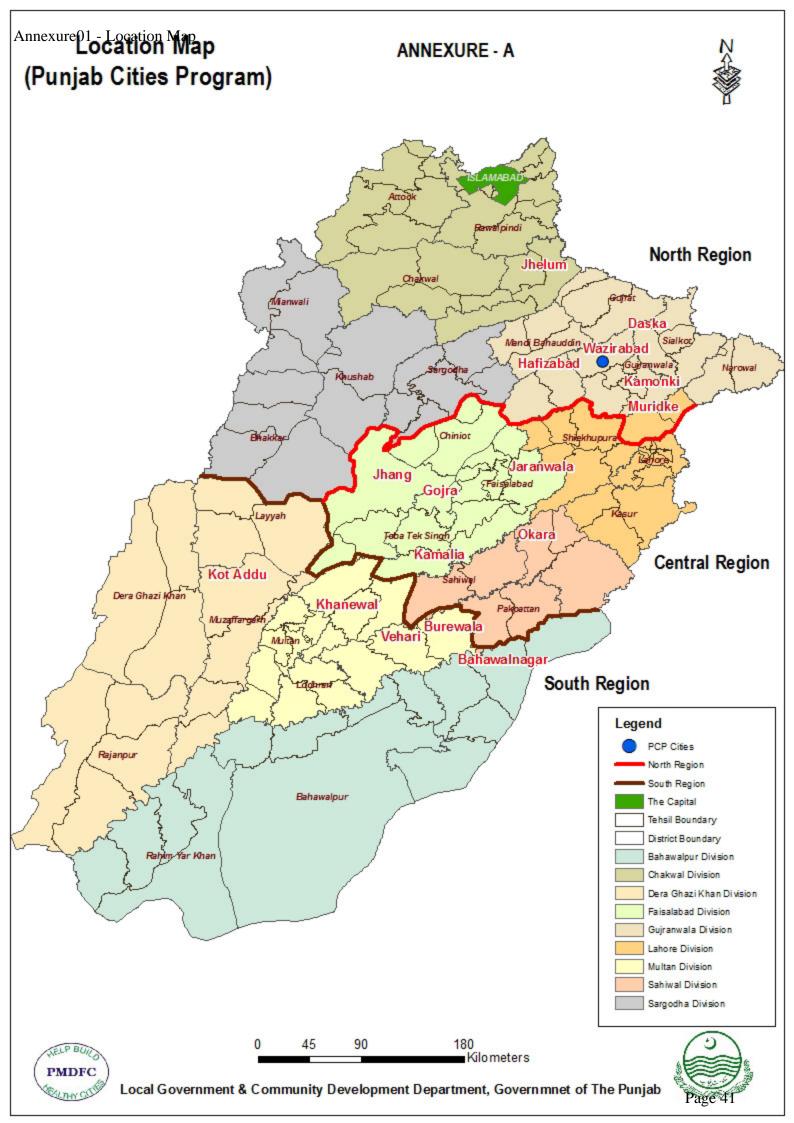
### 20. MARGINALISATION OF PC-1

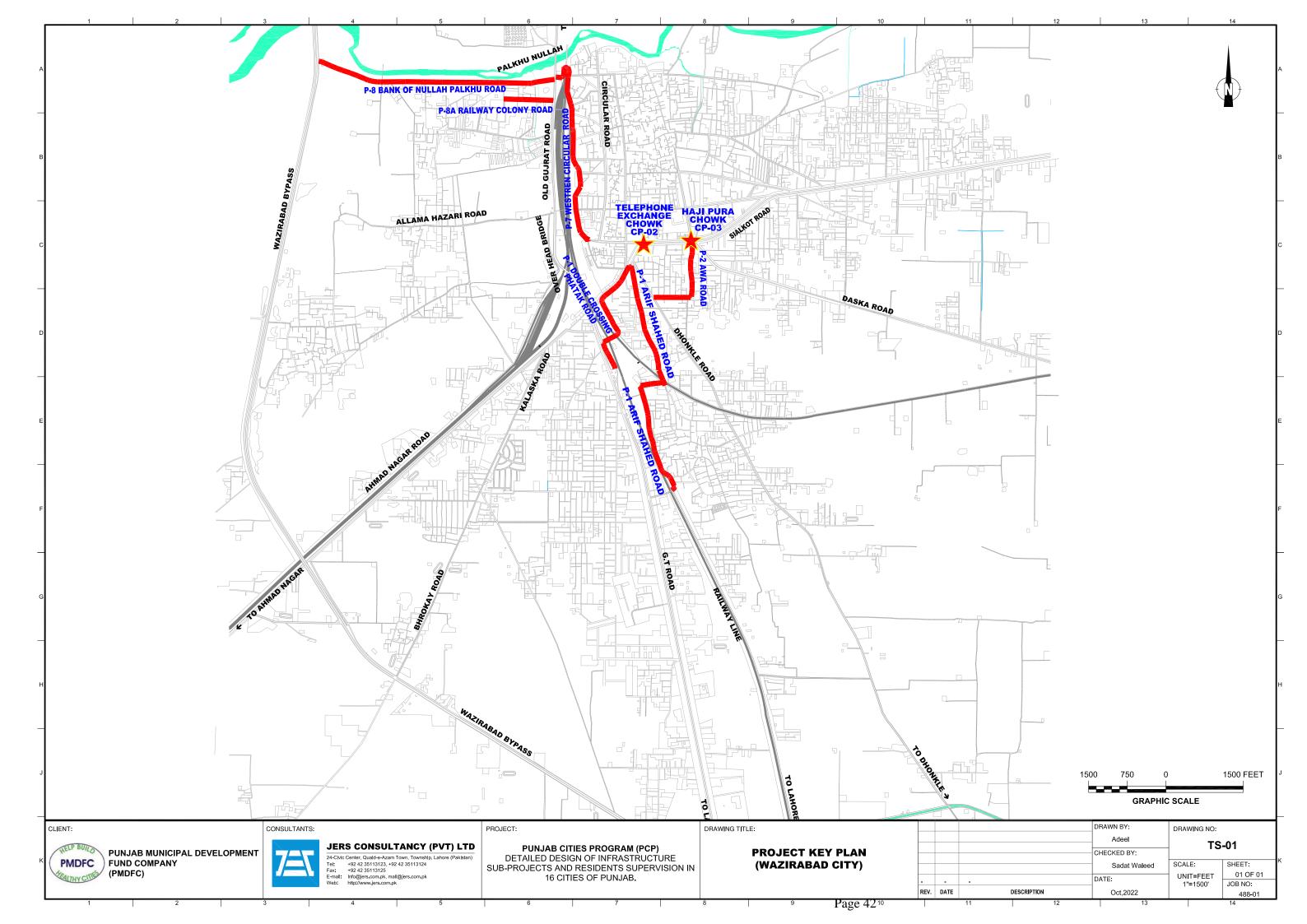
SR.NO.	CRITERIA	YES/NO	COMMENTS
Description	on & Objectives		
1	does the pc-i specify link/alignment with punjab growth strategy, punjab spatial strategy (if relevant) & sustainable development goals?	NO	
2	do project objectives/justification include focus on marginalised groups (women, pwds, minorities, transgender, poor etc.)?	NO	
Use of Ge	nder Disaggregated Data		
1	has gender disaggregated data been used to determine need for the project? if yes, identity the source. if not, what additions/observations have been made to strengthen the pc-i?	NO	
2	was gender disaggregated data used to identify potetialimpact of the project on selected beneficiaries?	NO	
Social Im	pact		
1a	have marginalised groups been included as beneficiaries of the project?	NO	
1b	if yes, does the pc-1 specify a specific quota/percentage for the marginalised (women, peds, etc.)?	NO	
2	does the pc-1 include specific provisions for capacity building / training of women (if applicable)?	NO	
Results B	ased Monitoring		
1a	does the pc-i include a results based monitoring framework (rbmf)/logical framework?	NO	
1b	if yes, does the framework include measurable targets relating to impact on marginalised groups?	NO	
2	were sdg indicators used for determining targets included in the pc-i?	NO	
3	was gender disaggregated data used to establish baseline and develop quantifiable targets/key indicators?	NO	
4	if yes, identify the source/refresh institute(s)?	NO	
Inculsion	Participation Participation		
1	was female representation ensured in planning and adp formulization?	NO	
2a	was stakeholder consultation held during adp formulization and/or pc-idevelopment?	NO	
2b	if yes, did the consultation include experts and representatives of marginalised groups and csos?	NO	

3	was participation of representatives of marginalised groups ensured in pc-1 rist assessment planning?	NO	
Monito	ring & Evaluation		
1	does the project provide a role to communities in project monitoring and/or implementation (if relevant)?	NO	
2a	does the project include formation of a steering committee and/or project implementation committiees?	NO	
2b	if yes, is there a provision to ensure representation of women in these committees?	NO	



### Annexure-A Location Map





#### **ROAD WORKS**

#### MC WAZIRABAD

#### **DETAILED COST ESTIMATE**

#### **SUMMARY**

Sr. No.	Description	Amount (Rs.)
1	ROAD WORKS	130,550,257
2	DRAINAGE SYSTEM	16,251,894
3	ELECTRICAL WORKS	39,304,130
4	ENVIRONMENTAL HEALTH SAFETY BUDGET	1,646,160
	Total Amount (Rs.)	187,752,441
	Contingencies @ 2%	3,755,049
	PRA Charges @ 5%	9,387,622
	Total Amount. Rs.	200,895,112

Annexure<u>02 - Cost Estimate</u>

# PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

### MC WAZIRABAD DETAILED COST ESTIMATE

<b>SUM</b>	$\mathbf{M}^{A}$	<b>IRY</b>
------------	------------------	------------

Sr. No.	Description	Amount (Rs.)
1	ROAD WORKS	
1.1	P-01 DOUBLE CROSSING PHATAK ROAD	39,161,076
1.2	P-02 AWA ROAD	6,306,097
1.3	P-07 WESTREN CIRCULAR ROAD	37,421,866
1.4	P-08 BANK OF NULLAH PALKHU ROAD	30,967,086
1.5	P-08A RAILWAY COLONY ROAD	2,846,482
1.6	CHOWK	13,847,651
	1) Total Amount. Rs.	130,550,257
2	STORMWATER DRAINAGE SYSTEM	
2.1	P-01 DOUBLE CROSSING PHATAK ROAD	4,160,718
2.2	P-02 AWA ROAD	8,491,689
2.3	P-07 WESTREN CIRCULAR ROAD	1,604,641
2.4	P-08A RAILWAY COLONY ROAD	58,581
2.5	CHOWK	1,936,265
	2) Total Amount. Rs.	16,251,894
3	ELECTRICAL WORKS	
3.1	P-01 DOUBLE CROSSING PHATAK ROAD	20,129,871
3.2	P-02 AWA ROAD	7,472,920
3.3	P-07 WESTREN CIRCULAR ROAD	11,701,339
	3) Total Amount. Rs.	39,304,130
4	ENVIRONMENTAL HEALTH SAFETY BUDGET	1,646,160
	Total Amount (Rs.) ''1+2+3+4''	187,752,441
	Say Millions	187.752

### **ROAD WORKS**

#### **DETAILED COST ESTIMATE**

#### P-01 DOUBLE CROSSING PHATAK ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ROAD WORK				
		Dismantling				
1	4/29	Dismantling brick or flagged flooring without concrete foundation.	100Cft	128.25	866.20	111,090
		Scarifying				
2	18/11	Scarifying old road surface including removal of debris within 1 chain (30 m).	100Cft	95.15	424.60	40,401
		Excavation				
3	3/1	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:- i) ordinary	1000Cft	41.90	9,055.25	379,415
		Compaction of Earthwork				
4	3/25	Compaction of earthwork with power road roller, including ploughing, mixing, moistening earth to optimum moisture content in layers, etc. complete: i) 95% to 100% maximum modified AASHO dry density.	1000Cft	26.28	1,783.25	46.864

#### DETAILED COST ESTIMATE

#### P-01 DOUBLE CROSSING PHATAK ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Sub Base Course				
5	18/3/a/	Providing and laying sub-base course of stone				
	(i)	product of approved quality and grade				
	+	including, placing, mixing, spreading and				
	1/1	compaction of sub base material to required				
		depth, camber and grade to achieve 98%				
		maximum dry density determined according to				
		AASHTO T-180 method-D, including carriage				
		of all material to site of work complete in all respect as per specifications and as directed by				
		the engineer incharge. (Crushed stone aggregate				
		from Dina querry to site, actual compacted				
		depth shall be considered for payment)				
			100Cft	173.45	14,353.62	2,489,635
						·
		Water Bound Macadam				
6	18/4/a	Providing and laying base course of crushed				
	+	stone (Water Bound Macadam) of approved				
	1/1	quality and grade including, placing, mixing,				
		spreading and compaction of base course material to required depth, camber and grade to				
		achieve 100% maximum modified AASHTO				
		dry density, including carriage of all material to				
		site of work complete in all respect as per				
		specifications and as directed by the engineer				
		incharge. (Crushed stone aggregate from				
		Sargodha querry to site, actual compacted depth				
		shall be considered for payment)				
			100Cft	204.85	28,734.26	5,886,213
		Prime Coat				
7	18/6	Providing and laying bituminous priming coat,				
		using 10 lbs. kerosene oil and 10 lbs. binder per				
		100 Sft. or 0.5 Kg kerosene and 0.5 Kg binder				
		per square metre.	100Sft	95.15	2,309.00	219,701
		Carpeting				
		AWC				
8	18/10/a	Providing and laying plant premixed bituminous	Per inch			
	+	carpet, including compaction and finishing to				
	1/1	required camber, grade and density. (2 inch	per 100Sft.			
		thick) (iv) 4.5% Bitumen	100311.	95.15	16,676.12	1,586,733
						Page 47

### DETAILED COST ESTIMATE

#### P-01 DOUBLE CROSSING PHATAK ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)	
		Paint For Traffic Lanes					
9	13/36	Painting Traffic Lane Marking of specified width (1.5mm thick), with Thermoplastic (TP) Paint including Glass Beads, complete in all respect, as approved and directed by Engineer incharge.					
		ii) 6" wide	Rft	2,440.00	56.35	137,494	
		Vl. C4					
10	6/52/b	<b>Kerb Stone</b> Providing and fixing precast Edge Kerb Stone (4" to 6" thick), of 3500 PSI Compressive Strength, embeded in PCC 1:2:4 over lean concrete 1:4:8 etc. complete in all respect.					
		b) With Painting					
		(i) 14" high	P.Rft	200.00	518.90	103,780	
		Tuff Paver					
11	10/41	Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope. complete in all respect. (50% Grey / 50% Coloured)					
		c) 80-mm thick (For Shoulder)	Sft	134,810.00	192.80	25,991,368	
		D 1 E1-2					
12	18/5	Road Edging  Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects.	Rft	14,520.00	58.65	851,598	
12	C15	P.C.C (For Retaining Tuff Paver)					
13	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):					
		(f) Ratio 1: 2: 4	100Cft	23.96	38,271.80	916,992	

#### DETAILED COST ESTIMATE

#### P-01 DOUBLE CROSSING PHATAK ROAD

	ROADS NETWORK					
Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Cat Eyes				
14	18/28	Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.				
		b) Aluminium Alloy				
		(1) Dual-Directional		204.00	602.00	210.046
15	18/25/a	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG	Each	304.00	693.90	210,946
		CIRCULAR/TRIANGULAR				
		3 ft size	P.Sft	60.00	950.25	57,015
16	18/27/b	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover,hold fasts embeded in PCC 1:2:4 etc, complete in all respect				
		(b) 3 inch diameter	Rft	110.00	1,260.85	138,694
17	13/42/a	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.				
		a) High Intensity Prismatic (HIP) Tape	P. Sft	60.00	1,114.60	66,876
18	1/1	Crush  Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contratcor.	Cft	2,108.48	119.77	252,529
	1	1	•	, ,		Page 49 of 110

#### **DETAILED COST ESTIMATE**

#### P-01 DOUBLE CROSSING PHATAK ROAD

Sr.	2nd BI- Annual-2022				Unit Rate	Amount
No	(July to Dec) Gujranwala	Description	Unit	Quantity	(Rs.)	(Rs.)
19	MR	Deduction of used bricks from original quantity.	%oNos.	67.97	(4,800.00)	(326,268)
		Total Amount Rs.				39,161,076
		DRAINAGE SYSTEM Dismantling				
1	4/19/c	c) Dismantling cement concrete 1:2:4 plain.	100Cft	0.75	11,209.45	8,354
		Excavation				
2	3/7/i	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water fromtrenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:- i) in ordinary soil.				
		1) in ordinary son.	1000Cft	10.74	9,055.25	97,244
		P.C.C				
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(i) Ratio 1: 4: 8	100Cft	3.45	29,079.80	100,325
		(f) Ratio 1: 2: 4	100Cft	19.10	38,271.80	730,991
		Brick Work				
4	7/7/i	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3	100Cft	18.55	35,372.90	656,273
5	7/10	Extra for pacca brick work in steining of wells or any other circular masonry.	100Cft	1.49	2,896.80	4,318
		Plaster				
6	11/8/b	Cement plaster 1:3 upto 20' (6.00 m) height:-				
		b) ½" (13 mm) thick	100Sft	12.10	3,468.30	41,965

#### **DETAILED COST ESTIMATE**

#### P-01 DOUBLE CROSSING PHATAK ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
'		R.C.C Work				
7	6/6/a/i/3	Providing and laying reinforced cement concrete (i/c pre-stressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, complete				
		nation and placing in position, complete				
		a).(i) Reinforced cement concrete in roof slab, beams, columns, lintels, girders and other structural members laid in situ or pre-cast laid in position, or pre-stressed members cast in situ, complete in all respect. Type C (nominal mix 1:2:4)	D.G.	457.00	556.05	254.115
		1.2.4)	P Cft	457.00	556.05	254,115
		Steel				
8	6/12/b	Fabrication of mild steel reinforcement for cement concrete, i/c cutting, bending, laying in position, making joints and fastening, i/c cost of bending wire and labour charges for bending of steel reinforcement (also includes removal of rust from deformed bars) Gade 40	100Kg	14.00	31,418.50	439,773
		V sub C4 sus				
9	6/52/b	Kerb Stone  Providing and fixing precast Edge Kerb Stone (4" to 6" thick), of 3500 PSI Compressive Strength, embeded in PCC 1:2:4 over lean concrete 1:4:8 etc. complete in all respect.				
		b) With Painting				
		(i) 14" high	P.Rft	162.50	518.90	84,321
		Gully Grating Chamber				
10	21/8	Constructing standard gully grating chamber, 2'x2½' (610x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	Each	40.00	17,162.50	686,500
11	7/30	Supplying and filling sand under floor; or plugging in wells.	100Cft	25.00	2,944.60	73,615

#### **DETAILED COST ESTIMATE**

#### P-01 DOUBLE CROSSING PHATAK ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		uPVC Pipe				
12	19/47	Providing, fixing, testing and commissioning of μ-PVC (Unplasticized polyvinyl Chloride)				
		Nikasi /waste pipe make of dadex / Popular /				
		Beta/ BBJ plain / socket ended conforming to				
		code EN-1401 of specified SDR (Standard				
		Dimension Ratio) including the cost of specials				
		and Solvents complete in all respect as approved				
		and directed by the Engineer Incharge.				
		Type (SDR 41/SN-4)				
		(vii) 8"(200 mm)	Rft	1,000.00	451.30	451,300
		RPC Manhole Cover				
13	N.S	Providing and fixing RPC Manhole Cover				
		Manufactured with 100% Reinforced Plastic				
		Composite Material, 650 mm dia with clear				
		opening size 600 mm (24" dia) and RPC				
		manhole frame having dia meter 790 mm				
		(Complete)				
		(Certified under ISO 9001-2015)	Each	23.00	10,065.00	231,495
		Crush				
14	1/1	Carriage of 100 cft of all materials like stone				
		aggregate spawl kanker lime surkhi etc or 150				
		cft of timber by truck or by any other means				
		owned by the contratcor.	Cft	2,409.88	119.77	288,628
		Manhole Cover				
15	MR	Old/existing Manhole cover and Frame				
		complete set shift to MC store.	Set	23.00	500.00	11,500
		Total Amount (Rs)				4,160,718

### DETAILED COST ESTIMATE

#### P-01 DOUBLE CROSSING PHATAK ROAD

	2nd BI-					
Sr. No	Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ELECTRICAL WORKS				
		Scheduled Items (A)				
		Excavation				
1	3/21	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m)				
		a) By Manual ii) in ordinary soil.	%oCft	21.20	10,712.60	227,107
		RCC Foundation for Poles				
2	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-				
		3) Type C (nominal mix 1: 2: 4)	Cft	1,512.00	456.85	690,757
		Steel Work				
3	6/12/b	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-				
		(b) Deformed bars (Grade-40)	100Kg	37.80	31,418.50	1,187,619

#### DETAILED COST ESTIMATE

#### P-01 DOUBLE CROSSING PHATAK ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Crush				
4	1/1	Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contratcor.	Cft	1,330.56	119.77	159,359
5	24/6	Supply and erection PVC pipe for recessed wiring (main and sub-main) purpose, including bends, specials, etc. in floor, wall or trenches:-				
		i) 50 mm i/d	Rft	7,875.00	188.45	1,484,044
6	24/12	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaid G.I. pipe/M.S. conduits /PVC pipe/G.I. wire/trenches, etc (rate for cable only):-				
		ii) 6 mm sq (7/0.044")	Rft	1,260.00	118.20	148,932
7	24/13	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire / trenches, etc. (rate for cable only):-				
		b) PVC insulated, PVC sheathed 3 core, 660/1100 volt cable:-				
		iii) 7/0.74 mm (7/0.029") c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-	Rft	2,520.00	105.65	266,238
		vi) 10 mm (7/0.052")	Rft	7,875.00	524.50	4,130,438
		vii) 16 mm (7/0.064")	Rft	100.00	643.55	64,355

### DETAILED COST ESTIMATE

#### P-01 DOUBLE CROSSING PHATAK ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
8	N.S	Supplying, installation testing and commissioning of Tubular shape electric street light pole, made of hot dipped 3 mm thick (7 SWG) galvanized steel ,tappered from127 mm at bottom to 60 mm at top,with 1500 mmx60 mm dia. arm for luminaire installation, duly G.I.welded with 350x350x20 mm base plate with the help of 4 no triangular stiffeners 100x20x100 mm of GI sheet,with built in junction box with shutter,i/c the cost of nuts & Jrag bolts, duly fixed in prelaid concrete foundation, foundation will be paid additionally as approved and directed by the Engineer Incharge.				
		a) Single Arm				
		(i) 6 mtr height	Each	63.00	47,736.00	3,007,368
9	24/69/c	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming to IP 66 & IK 08 or above Philips/Osram/Thorn or equivalent with corrosion resistant die casted Aluminum housing, silicon gasket in special groove, UV stable & scratch resistant synthetic materials, thermally hardened glass complete with LED Chip (Philips Lumiled/Cree/Nichia/Osram make or equivalent), programmable LED driver (Harvard/TCI/Lumotech/Philips/VOSSLOH Schwabe/Lightech make or equivalent), minimum 10kV surge protection rating i/c the cost of all accessories/components required for proper operation, fully flexible for future upgradation and easy replacements for maintenance purposes, bucket elevator charges as approved and directed by the Engineer Incharge.				
		c) 120 Lm/Watt (vi) 120 Watt with 14400 Lumens	Each	63.00	53,307.60	3,358,379
						- , ,
10	24/77	Supply and erection of electric energy meter, including meter testing fee, etc.				
		b) three phase, 4 wires: ii) 3x50 Amp, 400 volts	Each	1.00	14,693.25	14,693
		11, 51150 mip, 100 voits	Lacii	1.00	11,073.23	Page 55 <sub>3 of 11</sub>

#### **DETAILED COST ESTIMATE**

#### P-01 DOUBLE CROSSING PHATAK ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)	
11	24/105/iii	Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges,complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge					
		(iii) 25 KVA	Each	1.00	329,622.55	329,623	
12	24/70	Earthing of iron clad/aluminum switches, etc. with G.I. wire No. 8 SWG in G.I. pipe 15 mm (½") dia, recessed or on surface of wall and floor, complete with 1.5 metre long G.I. pipe, 50 mm (2") dia with reducing socket 4 to 5 metre below ground level, and 2 metre away from building plinth.	Job	66.00	9,635.35	635,933	
		Sub Total Scheduled Items: (A)				15,704,845	

#### **DETAILED COST ESTIMATE**

#### P-01 DOUBLE CROSSING PHATAK ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)	
N	on Schedule	Part-B					
13	N.S	Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.					
	(a)	LCP-3 Phase	No.	1.00	325,026	325,026	
14	N.S	Shifting of 25 Nos. Wapda Electric Poles	Job			3,750,000	
15	N.S	Electric Connection Charges	Each	1.00	350,000	350,000	
		Total Cost (Part B)			Rs.	4,425,026	
		Grand Total (Part A + Part B)			Rs.	20,129,871	
		Grand Total Amount Rs.				63,451,664	

#### PUNJAB CITIES PROGRAM (PCP)

### DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### P-01 DOUBLE CROSSING PHATAK ROAD

#### CALCULATION OF QUANTITES

	KOADS NE	1 ,,,					
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
1	Dismantling brick or flagged flooring without concrete foundation.						
	Touridation.	1	2,850	4.50		12,825	Sft
		1	2,630	4.50	Total.	128.25	%Sft
	Scarifying						
2	Scarifying old road surface including removal of debris within 1 chain (30 m).						
	RD 0+000 to 0+290	1	290	13.50		3,915	Sft
	RD 0+290 to 0+610	1	320	17.50		5,600	Sft
					Total	9,515	Sft
					Total.	95.15	%Sft
3	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:- i) ordinary						
	For widening						
	RD 0+290 to 0+610	1	320	2.50	0.75	600	Cft
	RD 0+900 to 1+650	2	750	5.00	0.75	5,625	Cft
	RD 1+650 to 2+400	1	750	5.00	0.75	2,813	Cft
	RD 2+400 to 2+550	1	150	7.00	1.00	1,050	Cft
	RD 2+550 to 5+330	1	2,780	11.00	0.75	22,935	Cft
	RD 5+330 to 7+550	1	2,220	4.00	1.00	8,880	Cft
					Total	41,903	Cft
					Total.	41.90	%Cft
	Compaction of Earthwork						
4	Compaction of earthwork with power road roller, including ploughing, mixing, moistening earth to optimum moisture content in layers, etc. complete: i) 95% to 100% maximum modified AASHO dry density.						
	For widening						
	RD 0+290 to 0+610	1	320	2.50	0.50	400	Cft
	RD 0+900 to 1+650	2	750	5.00	0.50	3,750	Cft
	RD 1+650 to 2+400	1	750	5.00	0.50	1,875	Cft

PUNJAB CITIES PROGRAM (PCP)

#### DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS **SUPERVISION IN 16 CITIES OF PUNJAB**

#### P-01 DOUBLE CROSSING PHATAK ROAD

### CALCULATION OF QUANTITES

	CALCULATION ( ROADS NE						
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	RD 2+400 to 2+550	1	150	7.00	0.50	525	Cft
	RD 2+550 to 5+330	1	2,780	11.00	0.50	15,290	Cft
	RD 5+330 to 7+550	1	2,220	4.00	0.50	4,440	Cft
					Total	26,280	Cft
					Total.	26.28	%oCft
	Sub Base Course						
5	Providing and laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Dina querry to site, actual compacted depth shall be considered for payment)						
	For widening	1	220	2.50	0.22	261	- Cr.
	RD 0+290 to 0+610	1	320	2.50	0.33	264	Cft
	RD 0+900 to 1+650 RD 1+650 to 2+400	2	750 750	5.00	0.33	2,475	Cft
	RD 1+650 to 2+400 RD 2+400 to 2+550	1	150	5.00 7.00	0.33	1,238	Cft Cft
	RD 2+400 to 2+550 RD 2+550 to 5+330	1	2,780	11.00	0.33	10,091	Cft
	RD 2+330 to 3+330 RD 5+330 to 7+550	1	2,780	4.00	0.33	2,930	Cft
	XD 3+330 t0 /+330	1	۷,۷۷	4.00	Total	17,345	Cft
					Total.	173.45	%Cft

#### **PUNJAB CITIES PROGRAM (PCP)**

### DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### P-01 DOUBLE CROSSING PHATAK ROAD

#### CALCULATION OF QUANTITES

Sr.							
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Water Bound Macadam						
6	Providing and laying base course of crushed stone						
	(Water Bound Macadam) of approved quality and grade						
	including, placing, mixing, spreading and compaction of base course material to required depth, camber and						
	grade to achieve 100% maximum modified AASHTO						
	dry density, including carriage of all material to site of						
	work complete in all respect as per specifications and as						
	directed by the engineer incharge. (Crushed stone						
	aggregate from Sargodha querry to site, actual						
	compacted depth shall be considered for payment)						
	Crushed stone aggregate from approved quarry						
	For Road			46 = -	0.22	4.600	
	RD 0+000 to 0+290	1	290	13.50	0.33		Cft
	RD 0+290 to 0+610	1	320	20.00	0.33		Cft
	RD 0+900 to 1+650	2	750	5.00	0.33		Cft
	RD 1+650 to 2+400	1	750	5.00	0.33		Cft
	RD 2+400 to 2+550	1	150	7.00	0.33		Cft
	RD 2+550 to 5+330	1	2,780	11.00	0.33	**	Cft
	RD 5+330 to 7+550	1	2,220	4.00	0.33		Cft Cft
					Total	20,483	Cit
					Total.	204.85	%Cft
	Prime Coat						
7	Providing and laying bituminous priming coat, using 10						
	lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5						
	Kg kerosene and 0.5 Kg binder per square metre.						
	RD 0+000 to 0+290	1	290	13.50		1,292 2,112 2,475 1,238 347 10,091 2,930 20,485  204.85  204.85  3,915 5,600 9,515  95.15  95.15  Page	Sft
	RD 0+290 to 0+610	1	320	17.50		5,600	Sft
					Total	9,515	Sft
					Total.	95.15	%Sft
	Carpeting						
	AWC						
8	Providing and laying plant premixed bituminous carpet,						
	including compaction and finishing to required camber,						
	grade and density. (2 inch thick) (iv) 4.5% Bitumen						
	RD 0+000 to 0+290	1	290	13.50		3,915	Sft
	RD 0+290 to 0+610	1	320	17.50			Sft
					Total	9,515	Sft
					Total.	95.15	%Sft
		1	<u> </u>	1			

#### PUNJAB CITIES PROGRAM (PCP)

#### DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS **SUPERVISION IN 16 CITIES OF PUNJAB**

#### P-01 DOUBLE CROSSING PHATAK ROAD

#### CALCULATION OF QUANTITES

#### **ROADS NET WORK**

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Paint For Traffic Lanes						
9	Painting Traffic Lane Marking of specified width (1.5mm thick), with Thermoplastic (TP) Paint including Glass Beads, complete in all respect, as approved and						
	directed by Engineer incharge.						
	RD 0+000 to 0+290	4	290			1,160	Rft
	RD 0+290 to 0+610	4	320			1,280	Rft
					Total.	2,440	Rft
10	Providing and fixing precast Edge Kerb Stone (4" to 6" thick), of 3500 PSI Compressive Strength, embeded in PCC 1:2:4 over lean concrete 1:4:8 etc. complete in all respect.						
	b) With Painting						
	(i) 14" high						
		1	200			200	Rft
					Total.	200	Rft
	Tuff Paver						
	crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope. complete in all respect. (50% Grey / 50% Coloured)						
	c) 80-mm thick (For Shoulder)						
	RD 0+290 to 0+610	1	320	2.50		800	Sft
	RD 0+900 to 1+650	1	750	38.00		28,500	Sft
	RD 1+650 to 2+400	1	750	20.00		15,000	Sft
	RD 2+400 to 2+550	1	150	7.00		1,050	Sft
	RD 2+550 to 5+330	1	2,780	21.00		58,380	Sft
	RD 5+330 to 7+550	1	2,220	14.00		1,280  2,440  200  200  200  200  200  28,500  15,000  1,050  58,380  31,080  134,810  580  640  1,500  1,500  300  5,560  4,440	Sft
					Total.		Sft
	Road Edging						
12	Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects.						
	RD 0+000 to 0+290	2	290			580	Rft
	RD 0+290 to 0+610	2	320			640	Rft
	RD 0+900 to 1+650	2	750			1,500	Rft
	RD 1+650 to 2+400	2	750			1,500	Rft
	RD 2+400 to 2+550	2	150			300	Rft
	RD 2+550 to 5+330	2	2,780			5,560	Rft
	RD 5+330 to 7+550	2	2,220				Rft
					Total.	14,520	Rft

#### PUNJAB CITIES PROGRAM (PCP)

#### DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS **SUPERVISION IN 16 CITIES OF PUNJAB**

#### P-01 DOUBLE CROSSING PHATAK ROAD

#### CALCULATION OF QUANTITES

	CALCULATION ( ROADS NE						
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	P.C.C (For Retaining Tuff Paver)						
13	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(f) Ratio 1: 2: 4						
	RD 0+000 to 0+290	2	290	0.33	0.50	96	Cft
	RD 0+290 to 0+610	2	320	0.33	0.50	106	Cft
	RD 0+900 to 1+650	2	750	0.33	0.50	248	Cft
	RD 1+650 to 2+400	2	750	0.33	0.50	248	Cft
	RD 2+400 to 2+550	2	150	0.33	0.50	50	Cft
	RD 2+550 to 5+330	2	2,780	0.33	0.50	917	Cft
	RD 5+330 to 7+550	2	2,220	0.33	0.50	733	Cft
					Total.	23.96	%Cft
	Cat Eyes						
14	Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.						
	b) Aluminium Alloy						
	(1) Dual-Directional						
	(ii) 43x2=86 Glass beads a side	304				304	Each
15	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG						
	CIRCULAR/TRIANGULAR						
	3 ft size	10	3.00	2.00		60	Sft
16	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover,hold fasts embeded in PCC 1:2:4 etc, complete in all respect						
	(b) 3 inch diameter	10	11			110	Rft

#### PUNJAB CITIES PROGRAM (PCP)

### DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### P-01 DOUBLE CROSSING PHATAK ROAD

#### CALCULATION OF QUANTITES

							-
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
17	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.						
	a) High Intensity Prismatic (HIP) Tape					60	Sft
	DRAINAGE SYSTEM						
	Dismantling						
1	c) Dismantling cement concrete 1:2:4 plain.						
	Manhole Neck	23	8.64	0.75	0.50	75	Cft
					Total	0.75	%Cft
	Excavation						
2	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water fromtrenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:- i) in ordinary soil.						
	Proposed Drain 1.50ft wide drain	1	325	4.25	3.25	4,489	Cft
	Pipe Laying	40	25.00	2.50	2.50	6,250	Cft
					Total	10,739	Cft
					Total	10.74	%oCft
3	P.C.C  Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):  (i) Ratio 1: 4: 8  Proposed Drain 1.50ft wide drain	1	325	4.25	0.25	345	Cft
					Total	3.45	%Cft
	(f) Ratio 1: 2: 4						
	Proposed Drain 1.50ft wide drain						
	Proposed Drain base slab	1	325	4.25	0.50	691	Cft
	Benching	1	325	1.50	0.25	122	Cft
	Coping						
	Proposed Drain 1.50ft wide drain	2	325	0.75	0.25	122	Cft
	Pipe Laying	40	10	1.50	1.50	900	Cft
	For manhole neck	23	8.64	0.75	0.50	75	Cft
					Total	1,910	Cft
					Total	19.10	%Cft

#### PUNJAB CITIES PROGRAM (PCP)

### DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### P-01 DOUBLE CROSSING PHATAK ROAD

#### CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.	
	Brick Work							
4	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3							
	Proposed Drain 1.50ft wide drain							
	Step-1	1	325	1.125	2.50	914	Cft	
	Step-2	1	325	1.125	1.50	548	Cft	
		1	325	0.750	1.00	244	Cft	
	For manhole neck	23	8.64	0.750	1.00	149	Cft	
					Total	1,855	Cft	
					Total	18.55	%Cft	
5	Extra for pacca brick work in steining of wells or any							
	other circular masonry.				Total	1.49	%Cft	
6	Cement plaster 1:3 upto 20' (6.00 m) height:-							
	b) ½" (13 mm) thick							
	Proposed Drain 1.50ft wide drain	1	325		2.50	813	Sft	
	For manhole neck	46	8.64		1.00	397	Sft	
					Total	1,210	Sft	
					Total	12.10	%Sft	
	R.C.C Work							
7	Providing and laying reinforced cement concrete (i/c prestressed concrete), using coarse sand and screened							
	graded and washed aggregate, in required shape and							
	design, i/c forms, moulds, shuttering, lifting,							
	compacting, curing, rendering and finishing exposed							
	surface, complete (but excluding the cost of steel							
	reinforcement, its fabrication and placing in position, complete							
	a).(i) Reinforced cement concrete in roof slab, beams,							
	columns, lintels, girders and other structural members							
	laid in situ or pre-cast laid in position, or pre-stressed							
	members cast in situ, complete in all respect. Type C (nominal mix 1:2:4)							
		0.7	325.00	3.00	0.67	457.00	Cft	
					Total	457.00	Cft	
						-		

#### PUNJAB CITIES PROGRAM (PCP)

#### DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS **SUPERVISION IN 16 CITIES OF PUNJAB**

#### P-01 DOUBLE CROSSING PHATAK ROAD

### CALCULATION OF QUANTITES

CALCULATION OF QUANTITES  ROADS NET WORK									
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.		
	Steel								
8	Fabrication of mild steel reinforcement for cement concrete, i/c cutting, bending, laying in position, making joints and fastening, i/c cost of bending wire and labour charges for bending of steel reinforcement (also includes removal of rust from deformed bars) Gade 40								
	Concrete Qty		457	Cft @	6.75	3,085	lbs/cft		
						1,400	kg		
					Total	14.00	Kg		
	Kerb Stone								
9	Providing and fixing precast Edge Kerb Stone (4" to 6" thick), of 3500 PSI Compressive Strength, embeded in PCC 1:2:4 over lean concrete 1:4:8 etc. complete in all respect.								
	b) With Painting								
	(i) 14" high	0.5	325			163	Rft		
					Total	163	Rft		
	Gully Grating Chamber								
10	Constructing standard gully grating chamber, 2'x2½' (610x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	40				40.00	Each		
11	Supplying and filling sand under floor; or plugging in wells.	40	25.00	2.50	1.00	25.00	%Cft		
	uPVC Pipe								
12	Providing, fixing, testing and commissioning of μ-PVC (Unplasticized polyvinyl Chloride) Nikasi /waste pipe make of dadex / Popular / Beta/ BBJ plain / socket ended conforming to code EN-1401 of specified SDR (Standard Dimension Ratio) including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge.								
	Type (SDR 41/SN-4)								
	(vii) 8"(200 mm)	40	25.00			1,000	Rft		

#### PUNJAB CITIES PROGRAM (PCP)

### DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### P-01 DOUBLE CROSSING PHATAK ROAD

#### CALCULATION OF QUANTITES

Sr.	 						
No	Description	No.	Length	Width	Height	Qty.	Unit.
	RPC Manhole Cover						
13	Providing and fixing RPC Manhole Cover Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (Complete) (Certified under ISO 9001-2015)	23				23	Each
	ELECTRICAL WORKS						
	Scheduled Items (A)						
	Excavation						
1	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m)						
	a) By Manual						
	ii) in ordinary soil.						
	For pipe 50mm dia from TR to LCP and LCP to poles	1	7,875	1.00	2.50	19,688	Cft
	Light Poles	63	2.00	2.00	6.00	1,512	Cft
					Total	21,200	Cft
					Total	21.20	%oCft
	RCC Foundation for Poles						
2	Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-						
	(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-						
	3) Type C (nominal mix 1: 2: 4)						
	Light Poles	63	2.00	2.00	6.00	1,512	Cft
					Total	1,512	Cft
						,	

#### PUNJAB CITIES PROGRAM (PCP)

### DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### P-01 DOUBLE CROSSING PHATAK ROAD

#### CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Steel Work						
3	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-						
	(b) Deformed bars (Grade-40)		2.50Kg/C	ft		3,780	Kg
					Total	37.80	Kg
4	Supply and erection PVC pipe for recessed wiring (main and sub-main) purpose, including bends, specials, etc. in floor, wall or trenches:-						
	i) 50 mm i/d						
	From LCP to Pole and pole to pole (Up + Down)	63	125.00			7,875	Rft
5	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaid G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):-						
	ii) 6 mm sq (7/0.044")						
	For two nos. Earthing lead	63	20.00			1,260	Rft
6	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire / trenches, etc. (rate for cable only):-						
	b) PVC insulated, PVC sheathed 3 core, 660/1100 volt cable:-						
	iii) 7/0.74 mm (7/0.029")						
	From Terminal Box to light fixture on pole (P+N+E)	63	40.00			2,520	Rft
	c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-						
	vi) 10 mm (7/0.052")	63	125.00			7,875	Rft
	vii) 16 mm (7/0.064")	1	100.00			100	Rft

Annexure02 - Cost Estimate PUNJAB CITIES PROGRAM (PCP)

### DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS **SUPERVISION IN 16 CITIES OF PUNJAB**

#### P-01 DOUBLE CROSSING PHATAK ROAD

#### CALCULATION OF QUANTITES

	CALCULATION OF QUANTITES  ROADS NET WORK									
	NORDO NE	_ ,, 0								
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.			
7	Supplying, installation testing and commissioning of Tubular shape electric street light pole, made of hot dipped 3 mm thick (7 SWG) galvanized steel ,tappered from127 mm at bottom to 60 mm at top,with 1500 mmx60 mm dia. arm for luminaire installation, duly G.I.welded with 350x350x20 mm base plate with the help of 4 no triangular stiffeners 100x20x100 mm of GI sheet,with built in junction box with shutter,i/c the cost of nuts & J-rag bolts, duly fixed in prelaid concrete foundation, foundation will be paid additionally as approved and directed by the Engineer Incharge.									
	a) Single Arm									
	(i) 6 mtr height	63				63	Nos			
8	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming to IP 65, Philips/ Osram /Thorn with corrosion resistant die casted aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection i/c the cost of all accessories/components required for proper operation, fully flexible for future upgradation and easy replacements for maintenance purposes, bucket elevator charges as approved and directed by the Engineer Incharge.									
	c) 120 Lm/Watt	<i>(</i> 2					NT			
	(v) 90 Watt with 10800 Lumens	63				63	Nos			
9	Supply and erection of electric energy meter, including meter testing fee, etc.									
	b) three phase, 4 wires:					1.00				
	ii) 3x50 Amp, 400 volts	1				1.00	Nos			

#### **PUNJAB CITIES PROGRAM (PCP)**

### DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### P-01 DOUBLE CROSSING PHATAK ROAD

#### CALCULATION OF QUANTITES

Description	No.	Length	Width	Height	Qty.	Unit.
Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges, complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge						
(iii) 25 KVA	1				1.00	Nos.
Earthing of iron clad/aluminum switches, etc. with G.I. wire No. 8 SWG in G.I. pipe 15 mm (½") dia, recessed or on surface of wall and floor, complete with 1.5 metre long G.I. pipe, 50 mm (2") dia with reducing socket 4 to 5 metre below ground level, and 2 metre away from building plinth.	66				66.00	No.
Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.						
LCP-3 Phase	1				1.00	Nos.
Shifting of 25 Nos, Wanda Electric Poles						
Electric Connection Charges	1				1.00	Each
	Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges,complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge  (iii) 25 KVA  Earthing of iron clad/aluminum switches, etc. with G.I. wire No. 8 SWG in G.I. pipe 15 mm (½") dia, recessed or on surface of wall and floor, complete with 1.5 metre long G.I. pipe, 50 mm (2") dia with reducing socket 4 to 5 metre below ground level, and 2 metre away from building plinth.  Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.  LCP-3 Phase  Shifting of 25 Nos. Wapda Electric Poles	Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges,complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge  (iii) 25 KVA 1  Earthing of iron clad/aluminum switches, etc. with G.I. wire No. 8 SWG in G.I. pipe 15 mm (½") dia, recessed or on surface of wall and floor, complete with 1.5 metre long G.I. pipe, 50 mm (2") dia with reducing socket 4 to 5 metre below ground level, and 2 metre away from building plinth.  66  Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.  LCP-3 Phase 1  Shifting of 25 Nos. Wapda Electric Poles	Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges,complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge  (iii) 25 KVA	Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges,complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge  (iii) 25 KVA	Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges,complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge  (iii) 25 KVA 1  Earthing of iron clad/aluminum switches, etc. with G.I. wire No. 8 SWG in G.I. pipe 15 mm (½") dia, recessed or on surface of wall and floor, complete with 1.5 metre long G.I. pipe, 50 mm (2") dia with reducing socket 4 to 5 metre below ground level, and 2 metre away from building plinth.  66  Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.  LCP-3 Phase 1  Shifting of 25 Nos. Wapda Electric Poles	Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges,complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge  (iii) 25 kVA

#### **DETAILED COST ESTIMATE**

#### P-02 AWA ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
1	3/1	Excavation  Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:- i) ordinary		1.31	9,055.25	11 862
		•	1000Cft	1.31	9,055.25	11,862
		Compaction of Earthwork				
2	3/25	Compaction of earthwork with power road roller, including ploughing, mixing, moistening earth to optimum moisture content in layers, etc. complete: i) 95% to 100% maximum modified AASHO dry density.	1000Cft	0.88	1,783.25	1,569
		Sub Page Course				
3	18/3/a/ (i) + 1/1	Providing and laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Dina querry to site, actual compacted depth shall be considered for payment)		5.78	14,353.62	82,964
		Water Bound Macadam				

#### **DETAILED COST ESTIMATE**

#### P-02 AWA ROAD

		ROADS NETWO	RK			
Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
4	18/4/a + 1/1	Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sargodha querry to site, actual compacted depth shall be considered for payment)	100Cft	11.55	28,734.26	331,881
		Tuff Paver				
5	10/41	Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope. complete in all respect. (50% Grey / 50% Coloured)				
		c) 80-mm thick	Sft	27,550.00	192.80	5,311,640
		,		,		, ,
		Road Edging				
6	18/5	Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects.	Rft	3,500.00	58.65	205,275
		P.C.C (For Retaining Tuff Paver)				
7	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(f) Ratio 1: 2: 4	100Cft	5.78	38,271.80	221,211
8	18/25/a	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.				
		(a) G.I Sheet 14 SWG				
		CIRCULAR/TRIANGULAR  3 ft size	P.Sft	18.00	950.25	17,105
<u> </u>		J IL SIZE	r.on	10.00	930.23	Page 7.1

#### DETAILED COST ESTIMATE

#### P-02 AWA ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
9	18/27/b	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover,hold fasts embeded in PCC 1:2:4 etc, complete in all respect				
		(b) 3 inch diameter	Rft	33.00	1,260.85	41,608
10	13/42/a	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.				
		a) High Intensity Prismatic (HIP) Tape	P. Sft	18.00	1,114.60	20,063
		Crush				
11	1/1	Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contratcor.	Cft	508.64	119.77	60,919
		Total Amount Rs.				6,306,097
		DRAINAGE SYSTEM Dismantling				
1	4/19/c	c) Dismantling cement concrete 1:2:4 plain.	100Cft	0.26	11,209.45	2,906
2	3/7/i	Excavation  Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water fromtrenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:-				
		i) in ordinary soil.				

#### DETAILED COST ESTIMATE

#### P-02 AWA ROAD

	ROADS NETWORK							
Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)		
		P.C.C						
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
		(f) Ratio 1: 2: 4	100Cft	10.86	38,271.80	415,632		
		Brick Work						
4	7/7/i	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3	100Cft	37.27	35,372.90	1,318,292		
						-,,		
5	7/10	Extra for pacca brick work in steining of wells or any other circular masonry.	100Cft	0.52	2,896.80	1,502		
		-						
6	11/8/b	Plaster Cement plaster 1:3 upto 20' (6.00 m) height:-						
U	11/0/0	b) ½" (13 mm) thick	100Sft	50.38	3,468.30	174,742		
			100511	20.20	3,100.20	17.,7.12		
		R.C.C Work						
7	6/6/a/i/3	Providing and laying reinforced cement concrete (i/c pre-stressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, complete						
		a).(i) Reinforced cement concrete in roof slab, beams, columns, lintels, girders and other structural members laid in situ or pre-cast laid in position, or pre-stressed members cast in situ, complete in all respect. Type C (nominal mix 1:2:4)	P Cft	3,447.00	556.05	1,916,704		
		G. I						
8	6/12/b	Steel  Fabrication of mild steel reinforcement for cement concrete, i/c cutting, bending, laying in position, making joints and fastening, i/c cost of bending wire and labour charges for bending of steel reinforcement (also includes removal of rust from deformed bars) Gade 40	100Kg	105.57	31,418.50	3,316,762		
						Page 73		

#### DETAILED COST ESTIMATE

#### P-02 AWA ROAD

Sr.	2nd BI- Annual-2022 (July to Dec)	Description	Unit	Quantity	Unit Rate	Amount
No	Gujranwala	_			(Rs.)	( <b>Rs.</b> )
		Kerb Stone				
9	6/52/b	Providing and fixing precast Edge Kerb Stone (4" to 6" thick), of 3500 PSI Compressive Strength, embeded in PCC 1:2:4 over lean concrete 1:4:8 etc. complete in all respect.				
		b) With Painting				
		(i) 14" high	P.Rft	1,225.00	518.90	635,653
		Gully Grating Chamber				
10	21/8	Constructing standard gully grating chamber, 2'x2½' (610x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	Each	5.00	17,162.50	85,813
11	7/30	Supplying and filling sand under floor; or plugging in wells.	100Cft	3.13	2,944.60	9,202
		uPVC Pipe				
12	19/47	Providing, fixing, testing and commissioning of µ-PVC (Unplasticized polyvinyl Chloride) Nikasi /waste pipe make of dadex / Popular / Beta/ BBJ plain / socket ended conforming to code EN-1401 of specified SDR (Standard Dimension Ratio) including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge.				
		Type (SDR 41/SN-4)				
		(vii) 8"(200 mm)	Rft	100.00	451.30	45,130
		RPC Manhole Cover				
13	N.S	Providing and fixing RPC Manhole Cover Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (Complete) (Certified under ISO 9001-2015)				
			Each	8.00	10,065.00	80,520

#### DETAILED COST ESTIMATE

#### P-02 AWA ROAD

	ROADS NET WORK							
Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)		
		Crush						
14	1/1	Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contractor.	Cft	3,989.04	119.77	477,761		
			Cit	3,707.04	117.77	477,701		
		Manhole Cover						
15	MR	Old/existing Manhole cover and Frame complete set shift to MC store.	Set	8.00	500.00	4,000		
		Total Amount (Rs)				8,491,689		
						, ,		
		ELECTRICAL WORKS						
		Scheduled Items (A)						
1	2/21	Excavation						
1	3/21	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing,						
		refilling around structure with excavated earth,						
		watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m)						
		a) By Manual						
		ii) in ordinary soil.	%oCft	6.06	10,712.60	64,918		
		RCC Foundation for Poles						
2	6/6	Providing and laying reinforced cement concrete						
		(including prestressed concrete), using coarse						
		sand and screened graded and washed aggregate, in required shape and design, including forms,						
		moulds, shuttering, lifting, compacting, curing,						
		rendering and finishing exposed surface,						
		complete (but excluding the cost of steel						
		reinforcement, its fabrication and placing in position, etc.):-						
		(a)(iii) Reinforced cement concrete in slab of						
		rafts / strip foundation, base slab of column and						
		retaining walls; etc and footing beams, other						
		structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e.						
		horizontal shuttering) complete in all respects:-						
		3) Type C (nominal mix 1: 2: 4)	Cft	432.00	456.85	197,359		
		, Jr - (		12.00	12 3.33	,		

#### DETAILED COST ESTIMATE

#### P-02 AWA ROAD

	ROADS NETWORK							
Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)		
		Steel Work						
3	6/12/b	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-						
		(b) Deformed bars (Grade-40)	100Kg	10.80	31,418.50	339,320		
		Crush						
4	1/1	Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contractor.	Cft	380.16	119.77	45,531		
						,		
5	24/6	Supply and erection PVC pipe for recessed wiring (main and sub-main) purpose, including bends, specials, etc. in floor, wall or trenches:-						
		i) 50 mm i/d	Rft	2,250.00	188.45	424,013		
6	24/12	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaid G.I. pipe/M.S. conduits /PVC pipe/G.I. wire/ trenches, etc (rate for cable only):-						
		ii) 6 mm sq (7/0.044")	Rft	360.00	118.20	42,552		
7	24/13	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire / trenches, etc. (rate for cable only):-						
		b) PVC insulated, PVC sheathed 3 core, 660/1100 volt cable:-						
		iii) 7/0.74 mm (7/0.029") c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-	Rft	720.00	105.65	76,068		
		vi) 10 mm (7/0.052")	Rft	2,250.00	524.50	1,180,125		
		vii) 16 mm (7/0.064")	Rft	100.00	643.55	64,355		

#### DETAILED COST ESTIMATE

#### P-02 AWA ROAD

	ROADS NETWORK						
Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)	
8	N.S	Supplying,installation testing and commissioning of Octagonal shape electric street light pole, made of hot dipped 4.5 mm thick (7 SWG) galvanized steel ,tappered from 225 mm at bottom to 100 mm at top,with 1500 mmx60 mm dia. arm for luminaire installation, duly G.I.welded with 470x470x20 mm base plate with the help of 4 no triangular stiffeners 100x350x20 mm of GI sheet,with built in junction box with shutter,i/c the cost of nuts & J-rag bolts, duly fixed in prelaid concrete foundation, foundation will be paid additionally as approved and directed by the Engineer Incharge.					
		a) Single Arm (i) 6 mtr height	Each	18.00	47,736.00	859,248	
9	24/69/c	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming to IP 66 & IK 08 or above Philips/Osram/Thorn or equivalent with corrosion resistant die casted Aluminum housing, silicon gasket in special groove, UV stable & scratch resistant synthetic materials, thermally hardened glass complete with LED Chip (Philips Lumiled/Cree/Nichia/Osram make or equivalent), programmable LED driver (Harvard/TCI/Lumotech/Philips/VOSSLOH Schwabe/Lightech make or equivalent), minimum 10kV surge protection rating i/c the cost of all accessories/components required for proper operation, fully flexible for future upgradation and easy replacements for maintenance purposes, bucket elevator charges as approved and directed by the Engineer Incharge.					
		c) 120 Lm/Watt					
		(vi) 120 Watt with 14400 Lumens	Each	18.00	53,307.60	959,537	
10	24/77	Supply and erection of electric energy meter, including meter testing fee, etc.					
		b) three phase, 4 wires:				Page 77	

#### DETAILED COST ESTIMATE

#### P-02 AWA ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)	
		ii) 3x50 Amp, 400 volts	Each	1.00	14,693.25	14,693	
11 24/105/iii		Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges, complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge					
		(iii) 25 KVA	Each	1.00	329,622.55	329,623	
12	24/70	Earthing of iron clad/ aluminum switches, etc. with G.I. wire No. 8 SWG in G.I. pipe 15 mm (½") dia, recessed or on surface of wall and floor, complete with 1.5 metre long G.I. pipe, 50 mm (2") dia with reducing socket 4 to 5 metre below ground level, and 2 metre away from building plinth.	Job	21.00	9,635.35	202,342	
			300	21.00	7,033.33	202,372	
		Sub Total Scheduled Items: (A)				4,799,684	

#### DETAILED COST ESTIMATE

#### P-02 AWA ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
No	Non Schedule Part-B					
13	N.S	Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.				
	(a)	LCP-3 Phase	No.	1.00	223,236	223,236
14	N.S	Shifting of 14 Nos. Wapda Electric Poles	Job			2,100,000
15	N.S	Electric Connection Charges	Each	1.00	350,000	350,000
		Total Cost (Part B)			Rs.	2,673,236
		Grand Total (Part A + Part B)			Rs.	7,472,920
		Grand Total Amount Rs.				22,270,706

#### **PUNJAB CITIES PROGRAM (PCP)**

# DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### P-02 AWA ROAD

#### CALCULATION OF QUANTITES

		_ ,, _					
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
1	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft.						
	(15 m) lead:- i) ordinary						
	For widening						
	RD 0+700 to 0+950	1	250	7.00	0.75	1,313	Cft
	3.750 05 0.750		230	7.00	Total	1,313	Cft
					Total.	1.31	%Cft
					10000	2.02	,,,,,,,,,
	Compaction of Earthwork						
2	Compaction of earthwork with power road roller, including ploughing, mixing, moistening earth to optimum moisture content in layers, etc. complete: i) 95% to 100% maximum modified AASHO dry density.						
	For widening				0.70		
	RD 0+700 to 0+950	1	250	7.00	0.50	875	Cft
					Total	875	Cft
					Total.	0.88	%oCf
	Sub Base Course						
3	Providing and laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Dina querry to site, actual compacted depth shall be considered for payment)						
	For widening						
	RD 0+700 to 0+950	1	250	7.00	0.33	578	Cft
			1		Total	578	Cft

#### **PUNJAB CITIES PROGRAM (PCP)**

# DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### P-02 AWA ROAD

#### CALCULATION OF QUANTITES

							1
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Water Bound Macadam						
4	Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sargodha querry to site, actual compacted depth shall be considered for payment)						
	Crushed stone aggregate from approved quarry						
	For Road						
	RD 0+700 to 0+950	2	250	7.00	0.33	1,155	Cft
				7.00	Total	1,155	Cft
					Total.	11.55	%Cft
	Tuff Paver						
5	Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope. complete in all respect. (50% Grey / 50% Coloured)						
	c) 80-mm thick						
	RD 0+000 to 0+700	1	700	15.00		10,500	Sft
	RD 0+700 to 0+950	1	250	17.00		4,250	Sft
	RD 0+950 to 1+750	1	800	16.00		12,800	Sft
					Total.	27,550	Sft
	Road Edging						
6	Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects.						
	RD 0+000 to 0+700	2	700			1,400	Rft
	RD 0+700 to 0+950	2	250			500	Rft
	RD 0+950 to 1+750	2	800			1,600	Rft
					Total.	3,500	Rft

#### **PUNJAB CITIES PROGRAM (PCP)**

# DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### P-02 AWA ROAD

#### CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	P.C.C (For Retaining Tuff Paver)						
7	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(f) Ratio 1: 2: 4						
	RD 0+000 to 0+700	2	700	0.33	0.50	231	Cft
	RD 0+700 to 0+950	2	250	0.33	0.50	83	Cft
	RD 0+950 to 1+750	2	800	0.33	0.50	264	Cft
					Total.	5.78	%Cft
8	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.						
	(a) G.I Sheet 14 SWG						
	CIRCULAR/TRIANGULAR						
	3 ft size	3	3.00	2.00		18	Sft
9	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover,hold fasts embeded in PCC 1:2:4 etc, complete in all respect						
	(b) 3 inch diameter	3	11			33	Rft
10	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.  a) High Intensity Prismatic (HIP) Tape					18	Sft
	a) Tigh intensity Trishlatic (Tiff ) Tape					10	Sit
	DRAINAGE SYSTEM						
	Dismantling						
1	c) Dismantling cement concrete 1:2:4 plain.						
	Manhole Neck	8	8.64	0.75	0.50	26	Cft
					Total	0.26	%Cft

#### PUNJAB CITIES PROGRAM (PCP)

# DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

## P-02 AWA ROAD

## CALCULATION OF QUANTITES

RO	A DS	NET	WORK
17()	ハーハフ	111111	

	KOADS NE	1 110.					
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Excavation						
2	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water fromtrenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:-						
	i) in ordinary soil.						
	Pipe Laying	5	25.00	2.50	2.50	781	Cft
					Total	781	Cft
					Total	0.78	%oCft
	P.C.C						
3	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(f) Ratio 1: 2: 4						
	Pipe Laying	5	13	1.50	1.50	141	Cft
	For manhole neck	8	8.64	0.75	0.50	26	Cft
	Existing Darin	2	2,450	0.75	0.25	919	Cft
					Total	1,086	Cft
					Total	10.86	%Cft
	Brick Work						
4	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3						
	For manhole neck	8	8.64	0.75	1.00	52	Cft
	Existing Darin	2	2,450	0.75	1.00	3,675	Cft
					Total	3,727	Cft
					Total	37.27	%Cft
5	Extra for pacca brick work in steining of wells or any other circular masonry.				Total	0.52	%Cft
6	Cement plaster 1:3 upto 20' (6.00 m) height:-						
	b) ½" (13 mm) thick						
	For manhole neck $(8 \times 2 = 16)$	16	8.64		1.00	138	Sft
	` '	4	2,450		0.50	4,900	Sft
					Total	5,038	Sft
					Total	50.38	%Sft

#### PUNJAB CITIES PROGRAM (PCP)

# DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### P-02 AWA ROAD

#### CALCULATION OF QUANTITES

		- ,, ,					
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	R.C.C Work						
7	Providing and laying reinforced cement concrete (i/c pre- stressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, complete						
	a).(i) Reinforced cement concrete in roof slab, beams, columns, lintels, girders and other structural members laid in situ or pre-cast laid in position, or pre-stressed members cast in situ, complete in all respect. Type C (nominal mix 1:2:4)						
		0.7	2,450	3.00	0.67	3,447.00	Cft
					Total	3,447.00	Cft
	Steel						
8	Fabrication of mild steel reinforcement for cement concrete, i/c cutting, bending, laying in position, making joints and fastening, i/c cost of bending wire and labour charges for bending of steel reinforcement (also includes removal of rust from deformed bars) Gade 40						
	Concrete Qty		3,447	Cft @	6.75	23,267	lbs/cft
						10,557	kg
					Total	105.57	Kg
	Kerb Stone						
9	Providing and fixing precast Edge Kerb Stone (4" to 6" thick), of 3500 PSI Compressive Strength, embedded in PCC 1:2:4 over lean concrete 1:4:8 etc. complete in all respect.						
	b) With Painting (i) 14" high	0.5	2,450			1,225	Rft
	(1) IT IIISII	0.5	2,430			-	
	Gully Grating Chamber				Total	1,225	Rft
10	Constructing standard gully grating chamber, 2'x2½' (610x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.					5.00	Each
11	Supplying and filling sand under floor; or plugging in wells.	5	25.00	2.50	1.00	3,13	%Cft

#### **PUNJAB CITIES PROGRAM (PCP)**

# DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### P-02 AWA ROAD

#### CALCULATION OF QUANTITES

PVC Pipe  Troviding, fixing, testing and commissioning of μ-PVC Unplasticized polyvinyl Chloride) Nikasi /waste pipe nake of dadex / Popular / Beta/ BBJ plain / socket nded conforming to code EN-1401 of specified SDR Standard Dimension Ratio) including the cost of pecials and Solvents complete in all respect as pproved and directed by the Engineer Incharge.  Type (SDR 41/SN-4)  wii) 8"(200 mm)  RPC Manhole Cover roviding and fixing RPC Manhole Cover		20.00	Width	Height	Qty.	Unit.
roviding, fixing, testing and commissioning of μ-PVC Unplasticized polyvinyl Chloride) Nikasi /waste pipe nake of dadex / Popular / Beta/ BBJ plain / socket nded conforming to code EN-1401 of specified SDR Standard Dimension Ratio) including the cost of pecials and Solvents complete in all respect as approved and directed by the Engineer Incharge.  Sype (SDR 41/SN-4)  Wii) 8"(200 mm)  RPC Manhole Cover roviding and fixing RPC Manhole Cover		20.00				
roviding, fixing, testing and commissioning of μ-PVC Unplasticized polyvinyl Chloride) Nikasi /waste pipe nake of dadex / Popular / Beta/ BBJ plain / socket nded conforming to code EN-1401 of specified SDR Standard Dimension Ratio) including the cost of pecials and Solvents complete in all respect as approved and directed by the Engineer Incharge.  Sype (SDR 41/SN-4)  Wii) 8"(200 mm)  RPC Manhole Cover roviding and fixing RPC Manhole Cover		20.00				
RPC Manhole Cover  troviding and fixing RPC Manhole Cover	5	20.00				
RPC Manhole Cover roviding and fixing RPC Manhole Cover	5	20.00				
roviding and fixing RPC Manhole Cover					100	Rft
E						
Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm 24" dia) and RPC manhole frame having dia meter 790 mm (Complete) Certified under ISO 9001-2015)					9	
Certified under 15O 9001-2013)	8				8	Each
CLECTRICAL WORKS						
cheduled Items (A)						
Excavation						
excavation in foundation of building, bridges and other tructures, including dagbelling, dressing, refilling round structure with excavated earth, watering and emming lead upto one chain (30 m) and lift upto 5 ft. 1.5 m)						
) By Manual						
) in ordinary soil.						
for pipe 50mm dia from TR to LCP and LCP to poles	1	2,250	1.00	2.50	5,625	Cft
	18	2.00	2.00	6.00	432	Cft
ight Poles				Total	6,057	Cft
ight Poles				Total	6.06	%oCft
real ()	ound structure with excavated earth, watering and mming lead upto one chain (30 m) and lift upto 5 ft5 m)  By Manual in ordinary soil.  or pipe 50mm dia from TR to LCP and LCP to poles	ound structure with excavated earth, watering and mming lead upto one chain (30 m) and lift upto 5 ft5 m)  By Manual in ordinary soil.  or pipe 50mm dia from TR to LCP and LCP to poles	ound structure with excavated earth, watering and mming lead upto one chain (30 m) and lift upto 5 ft.  5 m)  By Manual in ordinary soil. or pipe 50mm dia from TR to LCP and LCP to poles  1 2,250	ound structure with excavated earth, watering and mming lead upto one chain (30 m) and lift upto 5 ft.  5 m)  By Manual in ordinary soil. or pipe 50mm dia from TR to LCP and LCP to poles  1 2,250 1.00	ound structure with excavated earth, watering and mming lead upto one chain (30 m) and lift upto 5 ft.  .5 m)  By Manual in ordinary soil. or pipe 50mm dia from TR to LCP and LCP to poles  1 2,250 1.00 2.50 ght Poles 18 2.00 2.00 6.00 Total	ound structure with excavated earth, watering and mming lead upto one chain (30 m) and lift upto 5 ft.  5 m)  By Manual in ordinary soil. or pipe 50mm dia from TR to LCP and LCP to poles  1 2,250 1.00 2.50 5,625 ght Poles 18 2.00 2.00 6.00 432

#### **PUNJAB CITIES PROGRAM (PCP)**

# DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### P-02 AWA ROAD

#### CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	RCC Foundation for Poles						
2	Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in						
	position, etc.):-						
	(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-						
	3) Type C (nominal mix 1: 2: 4)						
	Light Poles	18	2.00	2.00	6.00	432	Cft
					Total	432.00	Cft
	Steel Work						
3	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-						
	(b) Deformed bars (Grade-40)		2.50Kg/C	<u> </u> 'ft		1,080	Kg
	(b) Deformed buts (Grade 40)		2.30Kg/C	11		1,000	115
					Total	10.80	Kg
					10001	10.00	8
4	Supply and erection PVC pipe for recessed wiring (main and sub-main) purpose, including bends, specials, etc. in floor, wall or trenches:-						
	i) 50 mm i/d						
	From LCP to Pole and pole to pole (Up + Down)	18	125.00			2,250	Rft
5	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaid G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):-						
	ii) 6 mm sq (7/0.044")						

#### PUNJAB CITIES PROGRAM (PCP)

# DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

## P-02 AWA ROAD CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
6	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire / trenches, etc. (rate for cable only):-						
	b) PVC insulated, PVC sheathed 3 core, 660/1100 volt cable:-						
	iii) 7/0.74 mm (7/0.029")						
	From Terminal Box to light fixture on pole (P+N+E)	18	40.00			720	Rft
	c) PVC insulated, PVC sheathed 4 core,						
	660/1100 volt non armoured cable:-						
	vi) 10 mm (7/0.052")	18	125.00			2,250	Rft
	vii) 16 mm (7/0.064")	1	100.00			100	Rft
7	Supplying,installation testing and commissioning of Octagonal shape electric street light pole, made of hot dipped 4.5 mm thick (7 SWG) galvanized steel ,tappered from 225 mm at bottom to 100 mm at top,with 1500 mmx60 mm dia. arm for luminaire installation, duly G.I.welded with 470x470x20 mm base plate with the help of 4 no triangular stiffeners 100x350x20 mm of GI sheet,with built in junction box with shutter,i/c the cost of nuts & J-rag bolts, duly fixed in prelaid concrete foundation, foundation will be paid additionally as approved and directed by the Engineer Incharge.						
	a) Single Arm						
	(i) 6 mtr height	18				18	Nos
8	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming to IP 65, Philips/ Osram /Thorn with corrosion resistant die casted aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection i/c the cost of all accessories/components required for proper operation, fully flexible for future upgradation and easy replacements for maintenance purposes, bucket elevator charges as approved and directed by the Engineer Incharge.						
	c) 120 Lm/Watt						
	(vi) 120 Watt with 14400 Lumens	18				18	Nos
9	Supply and erection of electric energy meter, including meter testing fee, etc.						
	b) three phase, 4 wires:					4 00	**
	ii) 3x50 Amp, 400 volts	1				1.00	Nos

#### **PUNJAB CITIES PROGRAM (PCP)**

# DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### P-02 AWA ROAD

#### CALCULATION OF QUANTITES

	ROADS NE	1 110					
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
10	Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges,complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge						
	(iii) 25 KVA	1				1.00	Nos.
11	Earthing of iron clad/aluminum switches, etc. with G.I. wire No. 8 SWG in G.I. pipe 15 mm (½") dia, recessed or on surface of wall and floor, complete with 1.5 metre long G.I. pipe, 50 mm (2") dia with reducing socket 4 to 5 metre below ground level, and 2 metre away from building plinth.	21				21.00	No.
12	Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.						
	LCP-3 Phase	1				1.00	Nos.
12	Clifeing of 14 New Words Floris D. I						
13 14	Shifting of 14 Nos. Wapda Electric Poles Electric Connection Charges	1				1.00	Each
14	Electric Conficction Charges	1				1.00	Lach

#### DETAILED COST ESTIMATE

#### P-07 WESTREN CIRCULAR ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ROAD WORK				
		Compaction of Existing Road Surface				
1	N.S	Ploughing and Compaction of Existing road surface upto 6" depth i/c dressing, leveling, supplying and spreading of stone screening (Khaka) and compaction to achieve to 100% maximum ASSHO dry density complete in all respects.	100Cft	22.00	5,808.29	127,782
					2,000	,,,,
		Excavation				
2	3/1	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:- i) ordinary	1000Cft	45.49	9,055.25	411,923
		Compaction of Earthwork				
3	3/25	Compaction of earthwork with power road roller, including ploughing, mixing, moistening earth to optimum moisture content in layers, etc. complete: i) 95% to 100% maximum modified AASHO dry density.	1000Cft	30.33	1,783.25	54,086
		Sub Base Course				

#### DETAILED COST ESTIMATE

#### P-07 WESTREN CIRCULAR ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)				
4	18/3/a/ (i) + 1/1	Providing and laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Dina querry to site, actual compacted depth shall be considered for payment)								
			100Cft	200.15	14,353.62	2,872,877				
5	18/4/a + 1/1	Water Bound Macadam  Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sargodha querry to site, actual compacted depth shall be considered for payment)	100Cft	264.50	28,734.26	7,600,211				
6	10/41	Tuff Paver  Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope. complete in all respect. (50% Grey / 50% Coloured) c) 80-mm thick (For Shoulder)	Sft	102,050.00	192.80	19,675,240				
		R.C.C Work								

#### DETAILED COST ESTIMATE

#### P-07 WESTREN CIRCULAR ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
7	6/6/a/i/3	Providing and laying reinforced cement concrete (i/c pre-stressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, complete				
		(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:- (2) Type B (nominal mix 1: 1½: 3)	P Cft	3,652.00	512.90	1,873,111
8	6/12/c	Steel  Fabrication of mild steel reinforcement for cement concrete, i/c cutting, bending, laying in position, making joints and fastening, i/c cost of bending wire and labour charges for bending of steel reinforcement (also includes removal of rust from deformed bars) Gade 40	100Kg	111.85	31,418.50	3,514,054
		Road Edging				
9	18/5	Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects.	Rft	7,400.00	58.65	434,010
		_				· · · · · · · · · · · · · · · · · · ·
10	6/5	P.C.C (For Retaining of Tuff Paver)  Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(f) Ratio 1: 2: 4	100Cft	12.21	38,271.80	467,299

#### DETAILED COST ESTIMATE

#### P-07 WESTREN CIRCULAR ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
11	18/25/a	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.				
		(a) G.I Sheet 14 SWG				
		CIRCULAR/TRIANGULAR				
		3 ft size	P.Sft	60.00	950.25	57,015
12	18/27/b	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover,hold fasts embeded in PCC 1:2:4 etc, complete in all respect				
		(b) 3 inch diameter	Rft	110.00	1,260.85	138,694
13	13/42/a	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all				
		a) High Intensity Prismatic (HIP) Tape	P. Sft	60.00	1,114.60	66,876
		Crush				
14	1/1	Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contratcor.	Cft	1,074.48	119.77	128,689
		Total Amount Rs.				37,421,866
						27,121,000
		DRAINAGE SYSTEM				
		Dismantling				
1	4/13	Dismantling brick work in lime or cement mortar.	100Cft	7.50	4,330.90	32,482
2	4/19/c	c) Dismantling cement concrete 1:2:4 plain.	100Cft	0.06	11,209.45	726

#### DETAILED COST ESTIMATE

#### P-07 WESTREN CIRCULAR ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Excavation				
3	3/7/i	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water fromtrenches, back filling and surplus excavated material disposed of and dressed				
		within 50 ft. (15 m) lead:-				
		i) in ordinary soil.	1000Cft	5.47	9,055.25	49,523
		P.C.C				
4	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(f) Ratio 1: 2: 4	100Cft	9.90	38,271.80	378,891
		Brick Work				
5	7/7/i	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3	100Cft	0.13	35,372.90	4,585
6	7/10	Extra for pacca brick work in steining of wells or any other circular masonry.	100Cft	0.13	2,896.80	375
		Plaster				
7	11/8/b	Cement plaster 1:3 upto 20' (6.00 m) height:-				
		b) ½" (13 mm) thick	100Sft	0.35	3,468.30	1,199
		Gully Grating Chamber				
8	21/8	Constructing standard gully grating chamber, 2'x2½' (610x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977,				
		complete in all respects.	Each	35.00	17,162.50	600,688
9	7/30	Supplying and filling sand under floor; or plugging in wells.	100Cft	21.88	2,944.60	64,413
			- 50 010	21.00	_,,	5 1,113

#### DETAILED COST ESTIMATE

#### P-07 WESTREN CIRCULAR ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		uPVC Pipe				
10	19/47	Providing, fixing, testing and commissioning of $\mu$ -PVC (Unplasticized polyvinyl Chloride) Nikasi /waste pipe make of dadex / Popular / Beta/ BBJ plain / socket ended conforming to code EN-1401 of specified SDR (Standard Dimension Ratio) including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge.				
		Type (SDR 41/SN-4)				
		(vii) 8"(200 mm)	Rft	875.00	451.30	394,888
		RPC Manhole Cover				
11	N.S	Providing and fixing RPC Manhole Cover Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (Complete) (Certified under ISO 9001-2015)	Each	2.00	10,065.00	20,130
		Crush				
12	1/1	Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contratcor.	Cft	871.20	119.77	104,342
		Manhole Cover				
13	MR	Old/existing Manhole cover and Frame complete set shift to MC store.	Set	2.00	500.00	1,000
14	MR	Deduction of used bricks from original quantity.	%oNos.	10.13	(4,800.00)	(48,600)
		Total Amount (Rs)				1,604,641

#### DETAILED COST ESTIMATE

#### P-07 WESTREN CIRCULAR ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ELECTRICAL WORKS				
		Scheduled Items (A)				
		Excavation				
1	3/21	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m)				
		a) By Manual				
		ii) in ordinary soil.	%oCft	10.43	10,712.60	111,732
		RCC Foundation for Poles				
2	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-				
		3) Type C (nominal mix 1: 2: 4)	Cft	744.00	456.85	339,896
		Steel Work				
3	6/12/b	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-				
		(b) Deformed bars (Grade-40)	100Kg	18.60	31,418.50	584,384

#### DETAILED COST ESTIMATE

#### P-07 WESTREN CIRCULAR ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Crush				
4	1/1	Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contratcor.	Cft	654.72	119.77	78,415
5	24/6	Supply and erection PVC pipe for recessed wiring (main and sub-main) purpose, including bends, specials, etc. in floor, wall or trenches:-				
		i) 50 mm i/d	Rft	3,875.00	188.45	730,244
6	24/12	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaid G.I. pipe/M.S. conduits /PVC pipe/G.I. wire/trenches, etc (rate for cable only):-				
		ii) 6 mm sq (7/0.044")	Rft	620.00	118.20	73,284
7	24/13	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire / trenches, etc. (rate for cable only):-				
		b) PVC insulated, PVC sheathed 3 core, 660/1100 volt cable:-				
		iii) 7/0.74 mm (7/0.029") c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-	Rft	1,240.00	105.65	131,006
		vi) 10 mm (7/0.052")	Rft	3,875.00	524.50	2,032,438
		vii) 16 mm (7/0.064")	Rft	100.00	643.55	64,355

#### DETAILED COST ESTIMATE

#### P-07 WESTREN CIRCULAR ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
8	24/68	Supplying, installation testing and commissioning of Tubular shape electric street light pole, made of hot dipped 3 mm thick (7 SWG) galvanized steel ,tappered from127 mm at bottom to 60 mm at top,with 1500 mmx60 mm dia. arm for luminaire installation, duly G.I.welded with 350x350x20 mm base plate with the help of 4 no triangular stiffeners 100x20x100 mm of GI sheet,with built in junction box with shutter,i/c the cost of nuts & Jrag bolts, duly fixed in prelaid concrete foundation, foundation will be paid additionally as approved and directed by the Engineer Incharge.				
		a) Single Arm				
		(i) 6 mtr height	Each	31.00	47,736.00	1,479,816
9	24/69/c	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming to IP 66 & IK 08 or above Philips/Osram/Thorn or equivalent with corrosion resistant die casted Aluminum housing, silicon gasket in special groove, UV stable & scratch resistant synthetic materials, thermally hardened glass complete with LED Chip (Philips Lumiled/Cree/Nichia/Osram make or equivalent), programmable LED driver (Harvard/TCI/Lumotech/Philips/VOSSLOH Schwabe/Lightech make or equivalent), minimum 10kV surge protection rating i/c the cost of all accessories/components required for proper operation, fully flexible for future upgradation and easy replacements for maintenance purposes, bucket elevator charges as approved and directed by the Engineer Incharge.				
		c) 120 Lm/Watt (vi) 120 Watt with 14400 Lumens	Each	31.00	53,307.60	1,652,536
10	24/77	Supply and erection of electric energy meter, including meter testing fee, etc.				

#### DETAILED COST ESTIMATE

#### P-07 WESTREN CIRCULAR ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ii) 3x50 Amp, 400 volts	Each	1.00	14,693.25	14,693
111	24/105/iii	Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating, 11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges, complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge				
		(iii) 25 KVA	Each	1.00	329,622.55	329,623
12	24/70	Earthing of iron clad/aluminum switches, etc. with G.I. wire No. 8 SWG in G.I. pipe 15 mm (½") dia, recessed or on surface of wall and floor, complete with 1.5 metre long G.I. pipe, 50 mm (2") dia with reducing socket 4 to 5 metre below ground level, and 2 metre away from building plinth.	Job	34.00	9,635.35	327,602
		Sub Total Scheduled Items: (A)				7,950,023
N	on Schedule	Part-B				

#### DETAILED COST ESTIMATE

#### P-07 WESTREN CIRCULAR ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
13	N.S	Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/ Off /Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.				
	(a)	LCP-3 Phase	No.	1.00	251,316	251,316
14	N.S	Shifting of 21 Nos. Wapda Electric Poles	Job			3,150,000
15	N.S	Electric Connection Charges	Each	1.00	350,000	350,000
		Total Cost (Part B)			Rs.	3,751,316
		Grand Total (Part A + Part B)			Rs.	11,701,339
		Grand Total Amount Rs.				50,727,847

#### PUNJAB CITIES PROGRAM (PCP)

#### DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS **SUPERVISION IN 16 CITIES OF PUNJAB**

## P-07 WESTREN CIRCULAR ROAD

#### CALCULATION OF QUANTITES

#### **ROADS NET WORK**

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Compaction of Existing Road Surface						
1	Ploughing and Compaction of Existing road surface upto 6" depth i/c dressing, leveling, supplying and spreading of stone screening (Khaka) and compaction to achieve to 100% maximum ASSHO dry density complete in all respects.						
	RD 0+300 to 0+500	1	200	22.00	0.50	2,200	Cft
	ND 01300 to 01300	1	200	22.00	Total	2,200	Cft
					Total	2,200	Cit
					Total.	22.00	%Cft
2	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:- i) ordinary						
	For widening						
	RD 0+000 to 0+300	1	300	5.50	0.75	1,238	Cft
	RD 0+500 to 1+800	1	1,300	15.00	0.75	14,625	Cft
	RD 1+800 to 2+200	1	400	18.00	0.75	5,400	Cft
	RD 2+200 to 3+900	1	1,700	19.00	0.75	24,225	Cft
					Total	45,488	Cft
					Total.	45.49	%Cft
	Compaction of Earthwork						
3	Compaction of earthwork with power road roller, including ploughing, mixing, moistening earth to optimum moisture content in layers, etc. complete: i) 95% to 100% maximum modified AASHO dry density.						
	For widening						
	RD 0+000 to 0+300	1	300	5.50	0.50	825	Cft
	RD 0+500 to 1+800	1	1,300	15.00	0.50	9,750	Cft
	RD 1+800 to 2+200	1	400	18.00	0.50	3,600	Cft
	RD 2+200 to 3+900	1	1,700	19.00	0.50	16,150	Cft
					Total	30,325	Cft
	I I						

#### PUNJAB CITIES PROGRAM (PCP)

# DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

## P-07 WESTREN CIRCULAR ROAD

#### CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Sub Base Course						
4	Providing and laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Dina querry to site, actual compacted depth shall be considered for payment)  For widening  RD 0+500 to 0+300  RD 0+500 to 1+800	1 1	300 1,300	5.50 15.00	0.33 0.33	545 6,435	Cft Cft
	RD 1+800 to 2+200	1	400	18.00	0.33	2,376	Cft
	RD 2+200 to 3+900	1	1,700	19.00	0.33 Total	10,659 20,015	Cft Cft
					Total.	200.15	%Cft
5	Water Bound Macadam  Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sargodha querry to site, actual compacted depth shall be considered for payment)						
	Crushed stone aggregate from approved quarry						
	For Road	1	200	5.50	0.22	~ 4 ~	G¢.
	RD 0+000 to 0+300	1	300	5.50	0.33	545	Cft
	RD 0+500 to 1+800	2	1,300	15.00	0.33	12,870	Cft
	RD 1+800 to 2+200	1	400	18.00	0.33	2,376	Cft
	RD 2+200 to 3+900	1	1,700	19.00	0.33 Total	10,659 26,450	Cft Cft
					Total.	264.50	%Cft

#### PUNJAB CITIES PROGRAM (PCP)

### DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS **SUPERVISION IN 16 CITIES OF PUNJAB**

#### P-07 WESTREN CIRCULAR ROAD

#### CALCULATION OF QUANTITES

	CALCULATION (						
	ROADS NE	T WO	RK				
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Tuff Paver						<u> </u>
6	Providing and laying Tuff pavers, having 7000 PSI,						
	crushing strength of approved manufacturer, over 2" to						
	3" sand cushion i/c grouting with sand in joints i/c						
	finishing to require slope. complete in all respect. (50% Grey / 50% Coloured)						
	c) 80-mm thick (For Shoulder)						
	RD 0+000 to 0+300	1	300	27.50		8,250	Sft
	RD 0+500 to 1+800	1	1,300	25.00		32,500	Sft
	RD 1+800 to 2+200	1	400	30.00		12,000	Sft
	RD 2+200 to 3+900	1	1,700	29.00		49,300	Sft
	2.200 00 0.700	-	1,700	27.00		17,500	Sit
					Total.	102,050	Sft
						·	
	R.C.C Work						
7	Providing and laying reinforced cement concrete (i/c pre-						
	stressed concrete), using coarse sand and screened	1					
	graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting,						
	compacting, curing, rendering and finishing exposed						
	surface, complete (but excluding the cost of steel						
	reinforcement, its fabrication and placing in position,						
	complete						
	(a)(iii) Reinforced cement concrete in slab of rafts / strip						
	foundation, base slab of column and retaining walls; etc						
	and footing beams, other structural members other than						
	those mentioned in 6(a) (i)&(ii) above not requiring						
	form work (i.e. horizontal shuttering) complete in all						
	respects:- (2) Type B (nominal mix 1: 1½: 3)						
	RD 0+300 to 0+500	1	200.00	22.00	0.83	3,652.00	Cft
	KD 0+300 to 0+300	1	200.00	22.00			
					Total.	3,652.00	Cft
	Steel						
8	Fabrication of mild steel reinforcement for cement						
	concrete, i/c cutting, bending, laying in position, making						
	joints and fastening, i/c cost of bending wire and labour						
	charges for bending of steel reinforcement (also includes						
	removal of rust from deformed bars) Gade 40						
	Concrete Qty		3,652	Cft @	6.75	24,651	lbs/cft
			2,322		2.7.0	11,185	kg
					Total	111.85	%Kg
	Road Edging						
						Page 1	02 <sub>60 of 116</sub>

#### **PUNJAB CITIES PROGRAM (PCP)**

# DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

## P-07 WESTREN CIRCULAR ROAD

## CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
7	Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all						
	respects.						
	RD 0+000 to 0+300	2	300			600	Rft
	RD 0+500 to 1+800	2	1,300			2,600	Rft
	RD 1+800 to 2+200	2	400			800	Rft
	RD 2+200 to 3+900	2	1,700			3,400	Rft
					Total.	7,400	Rft
	P.C.C (For Retaining of Tuff Paver)						
8	Cement concrete plain including placing, compacting,						
O	finishing and curing complete (including screening and						
	washing of stone aggregate):						
	(f) Ratio 1: 2: 4						
	RD 0+000 to 0+300	2	300	0.33	0.50	99	Cft
	RD 0+500 to 1+800	2	1,300	0.33	0.50	429	Cft
	RD 1+800 to 2+200	2	400	0.33	0.50	132	Cft
	RD 2+200 to 3+900	2	1,700	0.33	0.50	561	Cft
					Total.	12.21	%Cft
					Total.	12,21	70CIt
9	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.						
	(a) G.I Sheet 14 SWG						
	CIRCULAR/TRIANGULAR						
	3 ft size	10	3.00	2.00		60	Sft
10	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover, hold fasts embeded in PCC 1:2:4 etc, complete in all respect						
	(b) 3 inch diameter	10	11			110	Rft
11	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.						
	a) High Intensity Prismatic (HIP) Tape					60	Sft

#### PUNJAB CITIES PROGRAM (PCP)

# DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

## P-07 WESTREN CIRCULAR ROAD

#### CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	DRAINAGE SYSTEM						
	Dismantling						
1	Dismantling brick work in lime or cement mortar.						
		2	500.00	0.75	1.00	750	Cft
					Total	7.50	%Cft
2	c) Dismantling cement concrete 1:2:4 plain.						
	Manhole Neck	2	8.64	0.75	0.50	6	Cft
					Total	0.06	%Cft
<u> </u>	Excavation						
3	Earthwork excavation in open cutting upto 5'-0" (1.5 m)						
	depth for storm water channels, drains, sullage drains in						
	open areas, roads, streets, lanes, including under pinning						
	of walls and shoring to protect existing works,						
	shuttering and timbering the trenches, dressed to						
	designed level and dimensions, trimming, removal of surface water fromtrenches, back filling and surplus						
	excavated material disposed of and dressed within 50 ft.						
	(15 m) lead:-						
	i) in ordinary soil.						
	•						
	Pipe Laying	35	25.00	2.50	2.50	5,469	Cft
					Total	5,469	Cft
					Total	5.47	%oCft
	P.C.C						
4	Cement concrete plain including placing, compacting,						
	finishing and curing complete (including screening and						
	washing of stone aggregate):						
	(f) Ratio 1: 2: 4						
	Pipe Laying	35	13	1.50	1.50	984	Cft
	For manhole neck	2	8.64	0.75	0.50	6	Cft
					Total	990	Cft
					Total	9.90	%Cft
	Brick Work						
5	Pacca brick work other than building upto 10ft. (3 m)						
İ	Cement, sand mortar:- Ratio 1:3						
	For manhole neck	2	8.64	0.75	1.00	13	Cft
					Total	13	Cft
					Total	0.13	%Cft
	I						

**PUNJAB CITIES PROGRAM (PCP)** 

# DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

# P-07 WESTREN CIRCULAR ROAD CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
6	Extra for pacca brick work in steining of wells or any				Total	0.12	0/ 66
	other circular masonry.				Total	0.13	%Cft
7	Cement plaster 1:3 upto 20' (6.00 m) height:-						
	b) ½" (13 mm) thick						
	For manhole neck	4	8.64		1.00	35	Sft
					Total	35	Sft
					Total	0.35	%Sft
0	Gully Grating Chamber						
8	Constructing standard gully grating chamber, 2'x2½' (610x750 mm), with chinaware trap as per PHED						
	Drawing STD/PD No. 3 of 1977, complete in all						
	respects.	35				35.00	Each
9	Supplying and filling sand under floor; or plugging in						
,	wells.	35	25.00	2.50	1.00	21.88	%Cft
							,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	uPVC Pipe						
10	Providing, fixing, testing and commissioning of μ-PVC						
	(Unplasticized polyvinyl Chloride) Nikasi /waste pipe make of dadex / Popular / Beta/ BBJ plain / socket						
	ended conforming to code EN-1401 of specified SDR						
	(Standard Dimension Ratio) including the cost of						
	specials and Solvents complete in all respect as						
	approved and directed by the Engineer Incharge.						
	Type (SDR 41/SN-4)						
	(vii) 8"(200 mm)	35	25.00			875	Rft
	RPC Manhole Cover						
11	Providing and fixing RPC Manhole Cover						
	Manufactured with 100% Reinforced Plastic Composite						
	Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790						
	mm (Complete)						
	(Certified under ISO 9001-2015)	2				2	Each
	ELECTRICAL WORKS						
	Scheduled Items (A)						
	Excavation						
1	Excavation in foundation of building, bridges and other						
	structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and						
	ramming lead upto one chain (30 m) and lift upto 5 ft.						
	(1.5 m)						
	a) By Manual						

**PUNJAB CITIES PROGRAM (PCP)** 

# DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

## P-07 WESTREN CIRCULAR ROAD

#### CALCULATION OF QUANTITES

	ROADS NE	1 110					
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	ii) in ordinary soil.						
	For pipe 50mm dia from TR to LCP and LCP to poles	1	3,875	1.00	2.50	9,688	Cft
	Light Poles	31	2.00	2.00	6.00	744	Cft
					Total	10,432	Cft
					Total	10.43	%oCft
	RCC Foundation for Poles				10001	100.10	,00020
2	Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-						
	(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-						
	3) Type C (nominal mix 1: 2: 4)						
	Light Poles	31	2.00	2.00	6.00	744	Cft
	G. IW. I				Total	744.00	Cft
3	Steel Work  Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-						
	(b) Deformed bars (Grade-40)		2.50Kg/C	ft		1,860	Kg
					Total	18.60	Kg
4	Supply and erection PVC pipe for recessed wiring (main and sub-main) purpose, including bends, specials, etc. in floor, wall or trenches:- i) 50 mm i/d						
	From LCP to Pole and pole to pole (Up + Down)	31	125.00			3,875	Rft
5	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaid G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):-					D 1	06 <sub>64 of 116</sub>

#### PUNJAB CITIES PROGRAM (PCP)

# DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

## P-07 WESTREN CIRCULAR ROAD

#### CALCULATION OF QUANTITES

Sr.							
No	Description	No.	Length	Width	Height	Qty.	Unit.
	ii) 6 mm sq (7/0.044")						
	For two nos. Earthing lead	31	20.00			620	Rft
6	Supply and erection of copper conductor cables for						
	service connection, in prelaid pipe/G.I. wire / trenches,						
	etc. (rate for cable only):-						
	b) PVC insulated, PVC sheathed 3 core, 660/1100 volt cable:-						
	iii) 7/0.74 mm (7/0.029")						
	From Terminal Box to light fixture on pole (P+N+E)	31	40.00			1,240	Rft
	c) PVC insulated, PVC sheathed 4 core,	31	40.00			1,240	KII
	660/1100 volt non armoured cable:-						
	vi) 10 mm (7/0.052")	31	125.00			3,875	Rft
	vii) 16 mm (7/0.064")	1	100.00			100	Rft
	VII) 10 IIIII (7/0.004-)	1	100.00			100	Mit
7	Supplying, installation testing and commissioning of						
	Octagonal shape electric street light pole, made of hot						
	dipped 4.5 mm thick (7 SWG) galvanized steel						
	,tappered from 225 mm at bottom to 100 mm at top, with						
	1500 mmx60 mm dia. arm for luminaire installation,						
	duly G.I.welded with 470x470x20 mm base plate with						
	the help of 4 no triangular stiffeners 100x350x20 mm of						
	GI sheet, with built in junction box with shutter, i/c the						
	cost of nuts & J-rag bolts, duly fixed in prelaid concrete foundation, foundation will be paid additionally as						
	approved and directed by the Engineer Incharge.						
	approved and directed by the Engineer menarge.						
	a) Single Arm						
	(i) 6 mtr height	31				31	Nos
8	Supplying, installation and commissioning of LED						
	Cobra-head Luminaries of specified wattage and lumens						
	conforming to IP 65, Philips/ Osram /Thorn with						
	corrosion resistant die casted aluminum housing, silicon						
	gas kit, thermally hardened glass complete with LED						
	drivers, surge protection i/c the cost of all						
	accessories/components required for proper operation,						
	fully flexible for future upgradation and easy replacements for maintenance purposes, bucket elevator						
	charges as approved and directed by the Engineer						
	Incharge.						
	c) 120 Lm/Watt	21				2.1	N.T.
	(vi) 120 Watt with 14400 Lumens	31				31	Nos

#### PUNJAB CITIES PROGRAM (PCP)

## DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

### P-07 WESTREN CIRCULAR ROAD

### CALCULATION OF QUANTITES

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Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
9	Supply and erection of electric energy meter, including						
	meter testing fee, etc.						
	b) three phase, 4 wires:						
	ii) 3x50 Amp, 400 volts	1				1.00	Nos
10	Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges, complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge						
						1.00	
	(iii) 25 KVA	1				1.00	Nos.
11	Earthing of iron clad/aluminum switches, etc. with G.I. wire No. 8 SWG in G.I. pipe 15 mm (½") dia, recessed or on surface of wall and floor, complete with 1.5 metre long G.I. pipe, 50 mm (2") dia with reducing socket 4 to 5 metre below ground level, and 2 metre away from building plinth.					34.00	No.
12	Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.						
	LCP-3 Phase	1				1.00	Nos.
13	Shifting of 21 Nos. Wapda Electric Poles						
14	Electric Connection Charges	1				1.00	Each

#### DETAILED COST ESTIMATE

#### P-08 BANK OF NULLAH PALKHU ROAD

Sr. No	2nd BI-Annual- 2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ROAD WORK				
		Scarifying				
1	18/11	Scarifying old road surface including removal of debris within 1 chain (30 m).	100Cft	465.60	424.60	197,694
2	3/47	Jungle clearance and removing within 100 ft. (30 m). b) thick	1000 Sft.	205.80	509.50	104,855
		Excavation				
3		Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:- i) ordinary	1000Cft	8.95	9,055.25	81,044
		Borrow Earth				
4	3/17	Earthwork in ordinary soil for embankment including ploughing and mixing with blade grade or disc harrow or other suitable equipment and compaction by mechanical means at optimum moisture content and dressing to designed section, complete in all respects:- 90% to 95% maximum modified dry density as determined according to AASHTO T-180 method-D including Transportation of earth.	1000Cft	450.00	17,256.33	7,765,346
		Compaction of Earthwork				
5		Compaction of Earthwork with power road roller, including ploughing, mixing, moistening earth to optimum moisture content in layers, etc. complete: i) 95% to 100% maximum modified AASHO dry density.	100000	5.07	1 792 25	10.646
		denoity.	1000Cft	5.97	1,783.25	10,646

#### DETAILED COST ESTIMATE

#### P-08 BANK OF NULLAH PALKHU ROAD

Sr. No	2nd BI-Annual- 2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Sub Base Course				
6	18/3/a/ (i) + 1/1	Providing and laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed				
		stone aggregate from Dina querry to site, actual compacted depth shall be considered for payment)		39.39	14,353.62	565,389
		Water Bound Macadam				
7	18/4/a + 1/1	Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sargodha querry to site, actual compacted depth shall be considered for payment)		55.89	28,734.26	1,605,958
8	18/6	Prime Coat  Providing and laying bituminous priming coat, using 10 lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5 Kg kerosene and 0.5 Kg binder per square metre.		598.08	2,309.00	1,380,967
	40.22	Carpeting AWC				
9	18/10/a + 1/1	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick) (iv) 4.5% Bitumen	thickness	598.08	16,676.12	9,973,654

#### **DETAILED COST ESTIMATE**

#### P-08 BANK OF NULLAH PALKHU ROAD

	2nd BI-Annual-						
Sr. No	2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)	
		Paint For Traffic Lanes					
10	13/36	Painting Traffic Lane Marking of specified width (1.5mm thick), with Thermoplastic (TP) Paint including Glass Beads, complete in all respect, as approved and directed by Engineer incharge.					
		ii) 6" wide	Rft	11,640.00	56.35	655,914	
11	18/5	Road Edging  Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects.	Rft	1,312.00	58.65	76,949	
12	18/25/a	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.					
		(a) G.I Sheet 14 SWG					
		CIRCULAR/TRIANGULAR					
		3 ft size	P.Sft	42.00	950.25	39,911	
13	18/27/b	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover,hold fasts embeded in PCC 1:2:4 etc, complete in all respect					
		(b) 3 inch diameter	Rft	77.00	1,260.85	97,085	
14	13/42/a	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.					
		a) High Intensity Prismatic (HIP) Tape	P. Sft	42.00	1,114.60	46,813	
15	3/32	Turfing slopes of banks or lawns with grass sods including ploughing, laying, setting and watering (Turf got from within a distance of 5 miles (8 Km.) and maintenance for 15 days).	100Sft	914.58	1,698.40	1,553,323	
			100010	711.50	1,000.10	1,555,525	

#### DETAILED COST ESTIMATE

#### P-08 BANK OF NULLAH PALKHU ROAD

Sr. No	2nd BI-Annual- 2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
16	16/32	Grouting stone pitching or apron, etc. in:-				
		b) cement, sand mortar 1:8	100Sft	1,060.50	6,422.95	6,811,538
		Total Amount Rs.				30,967,086
			· · · · · · · · · · · · · · · · · · ·			

### ${\bf PUNJAB~CITIES~PROGRAM~(PCP)}$

## DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### P-08 BANK OF NULLAH PALKHU ROAD

#### CALCULATION OF QUANTITES

					1		
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Scarifying						
1	Scarifying old road surface including removal of debris within 1 chain (30 m).						
	RD 0+000 to 4+656	1	4,656	10.00		46,560	Sft
					Total	46,560	Sft
					Total.	465.60	%Sft
					10001	100.00	, 0,510
2	Jungle clearance and removing within 100 ft. (30 m).						
	b) thick	2	4,656	2.21		20,580	Sft
					Total.	205.80	%Sft
	Excavation						
3	Earthwork excavation in open cutting upto 5'-0" (1.5 m)						
5	depth for storm water channels, drains, sullage drains in						
	open areas, roads, streets, lanes, including under pinning						
	of walls and shoring to protect existing works, shuttering						
	and timbering the trenches, dressed to designed level and						
	dimensions, trimming, removal of surface water from						
	trenches, back filling and surplus excavated material						
	disposed of and dressed within 50 ft. (15 m) lead:-						
	i) ordinary						
	For widening						
	RD 0+000 to 4+000	2	4,000	1.00	0.75	6,000	Cft
	RD 4+000 to 4+656	1	656	6.00	0.75	2,952	Cft
	ND 41000 to 41050	1	030	0.00	Total	8,952	Cft
					10141	0,732	010
					Total.	8.95	%Cft
	Borrow Earth						
4	Earthwork in ordinary soil for embankment including						
-	ploughing and mixing with blade grade or disc harrow or						
	other suitable equipment and compaction by mechanical						
	means at optimum moisture content and dressing to						
	designed section, complete in all respects:-						
	90% to 95% maximum modified dry density as						
	determined according to AASHTO T-180 method-D						
	including Transportation of earth.						
		1	2,000	15.00	15.00	450,000	Cft
					Total.	450.00	%Cft

#### **PUNJAB CITIES PROGRAM (PCP)**

## DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### P-08 BANK OF NULLAH PALKHU ROAD

#### CALCULATION OF QUANTITES

_	1			1		1	
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Compaction of Earthwork						
5	Compaction of earthwork with power road roller,						
	including ploughing, mixing, moistening earth to						
	optimum moisture content in layers, etc. complete:						
	i) 95% to 100% maximum modified AASHO dry						
	density.						
	For widening	_					
	RD 0+000 to 4+000	2	4,000	1.00	0.50	4,000	Cft
	RD 4+000 to 4+656	1	656	6.00	0.50	1,968	Cft
					Total	5,968	Cft
					Total.	5.97	%oCft
	Sub Base Course						
6	Providing and laying sub-base course of stone product of						
	approved quality and grade including, placing, mixing,						
	spreading and compaction of sub base material to						
	required depth, camber and grade to achieve 98%						
	maximum dry density determined according to AASHTO T-180 method-D, including carriage of all						
	material to site of work complete in all respect as per						
	specifications and as directed by the engineer incharge.						
	(Crushed stone aggregate from Dina querry to site,						
	actual compacted depth shall be considered for payment)						
	arrana company						
	For widening						
	RD 0+000 to 4+000	2	4,000	1.00	0.33	2,640	Cft
	RD 4+000 to 4+656	1	656	6.00	0.33	1,299	Cft
					Total	3,939	Cft
					Total.	39.39	%Cft
	Water Bound Macadam						
7	Providing and laying base course of crushed stone						
	(Water Bound Macadam) of approved quality and grade						
	including, placing, mixing, spreading and compaction of						
	base course material to required depth, camber and grade						
	to achieve 100% maximum modified AASHTO dry						
	density, including carriage of all material to site of work						
	complete in all respect as per specifications and as						
	directed by the engineer incharge. (Crushed stone						
	aggregate from Sargodha querry to site, actual						
	compacted depth shall be considered for payment)						
	Crushed stone aggregate from approved quarry						
	For Road						
	RD 0+000 to 4+000	2	4,000	1.00	0.33	2,640	Cft
			, , , , , ,		<u>.                                    </u>		14 <sub>72 of 11</sub>

#### **PUNJAB CITIES PROGRAM (PCP)**

## DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### P-08 BANK OF NULLAH PALKHU ROAD CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	RD 0+000 to 4+656	1	656	6.00	0.33	1,299	Cft
	Leveling layer	1	500	10.00	0.33	1,650	Cft
					Total	5,589	Cft
					Total.	55.89	%Cft
	Prime Coat						
8	Providing and laying bituminous priming coat, using 10 lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5 Kg kerosene and 0.5 Kg binder per square metre.						
	RD 0+000 to 4+656	1	4,656	12.00		55,872	Sft
	RD 4+000 to 4+656	1	656	6.00		3,936	Sft
					Total	59,808	Sft
					Total.	598.08	%Sft
	Carpeting						
	AWC						
9	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick) (iv) 4.5% Bitumen						
	RD 0+000 to 4+656	1	4,656	12.00		55,872	Sft
	RD 4+000 to 4+656	1	656	6.00		3,936	Sft
					Total	59,808	Sft
					Total.	598.08	%Sft
	Paint For Traffic Lanes						
10	Painting Traffic Lane Marking of specified width (1.5mm thick), with Thermoplastic (TP) Paint including Glass Beads, complete in all respect, as approved and directed by Engineer incharge.						
	ii) 6" wide	2.5	4,656			11,640	Rft
	Road Edging						
11	Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects.						
	RD 4+000 to 4+656	2	656			1,312	Rft
					Total.	1,312	Rft
12	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.						

### Annexure02 - Cost Estimate PUNJAB CITIES PROGRAM (PCP)

## DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### P-08 BANK OF NULLAH PALKHU ROAD

#### CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	(a) G.I Sheet 14 SWG						
	CIRCULAR/TRIANGULAR						
	3 ft size	7	3.00	2.00		42	Sft
13	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover,hold fasts embedded in PCC 1:2:4 etc, complete in all respect						
	(b) 3 inch diameter	7	11			77	Rft
14	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.						
	a) High Intensity Prismatic (HIP) Tape					42	Sft
15	Turfing slopes of banks or lawns with grass sods including ploughing, laying, setting and watering (Turf got from within a distance of 5 miles (8 Km.) and maintenance for 15 days).						
	RD 0+000 to 2+156	2	2,156	21.21		91,458	Sft
					Total	914.58	% Sft
16	Grouting stone pitching or apron, etc. in:- b) cement, sand mortar 1:8 RD 2+156 to 4+656	2	2,500	21.21		106,050	Sft
					Total	1,060.50	% Sft

#### DETAILED COST ESTIMATE

#### P-08A RAILWAY COLONY ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ROAD WORK				
		Prime Coat				
1	18/6	Providing and laying bituminous priming coat, using 10 lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5 Kg kerosene and 0.5 Kg binder per square metre.	100Sft	139.49	2,309.00	322,082
		Carpeting AWC				
2	18/10/a + 1/1	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick)	Per inch thickness per 100Sft.			
		(iv) 4.5% Bitumen	100511.	139.49	16,676.12	2,326,152
		Paint For Traffic Lanes				
3	13/36	Painting Traffic Lane Marking of specified width (1.5mm thick), with Thermoplastic (TP) Paint including Glass Beads, complete in all respect, as approved and directed by Engineer incharge.				
		ii) 6" wide	Rft	1,924.00	56.35	108,417
		Painting new surface:-				
4	13/5/f	f) Preparing surface and painting of small detached articles, not exceeding one sq. ft. (Sq.m) of painted surface:-				
		i) priming coat.	100 Nos.	9.62	2,412.20	23,205
		ii) each subsequent coat of paint.	100 Nos.	9.62	1,466.50	14,108
5	18/25/a	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.				
		(a) G.I Sheet 14 SWG				
		CIRCULAR/TRIANGULAR				
		3 ft size	P.Sft	12.00	950.25	11,403

#### **DETAILED COST ESTIMATE**

#### P-08A RAILWAY COLONY ROAD

		ROADS NETWORK							
Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)			
6	18/27/b	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover,hold fasts embeded in PCC 1:2:4 etc, complete in all respect							
		(b) 3 inch diameter	Rft	22.00	1,260.85	27,739			
7	13/42/a	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.							
		a) High Intensity Prismatic (HIP) Tape	P. Sft	12.00	1,114.60	13,375			
		Total Amount Rs.				2,846,482			
		DRAINAGE SYSTEM Dismantling							
1	4/19/c	c) Dismantling cement concrete 1:2:4 plain.	100Cft	0.03	11,209.45	363			
2	3/7/i	Excavation  Earthwork excavation in open cutting upto 5'-0"  (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water fromtrenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:- i) in ordinary soil.	1000Cft	0.16	9,055.25	1,413			
		P.C.C							
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):							
		(f) Ratio 1: 2: 4	100Cft	0.31	38,271.80	11,864			
		Brick Work							

#### DETAILED COST ESTIMATE

#### P-08A RAILWAY COLONY ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
4	7/7/i	Pacca brick work other than building upto 10ft. (3				
		m) Cement, sand mortar:- Ratio 1:3	100Cft	0.06	35,372.90	2,292
5	7/10	Extra for pacca brick work in steining of wells or any other circular masonry.	100Cft	0.06	2,896.80	188
		Plaster				
6	11/8/b	Cement plaster 1:3 upto 20' (6.00 m) height:-				
		b) ½" (13 mm) thick	100Sft	0.17	3,468.30	599
		Gully Grating Chamber				
7	21/8	Constructing standard gully grating chamber, 2'x2½' (610x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	Each	1.00	17,162.50	17,163
			Buch	1.00	17,102.50	17,100
8	7/30	Supplying and filling sand under floor; or plugging in wells.	100Cft	0.63	2,944.60	1,840
		uPVC Pipe				
9	19/47	Providing, fixing, testing and commissioning of µ-PVC (Unplasticized polyvinyl Chloride)Nikasi /waste pipe make of dadex / Popular / Beta/ BBJ plain / socket ended conforming to code EN-1401 of specified SDR (Standard Dimension Ratio) including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge.				
		Type (SDR 41/SN-4)				
		(vii) 8"(200 mm)	Rft	20.00	451.30	9,026
		RPC Manhole Cover				
10	N.S	Providing and fixing RPC Manhole Cover Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (Complete) (Certified under ISO 9001-2015)				
			Each	1.00	10,065.00	10,065

#### **DETAILED COST ESTIMATE**

#### P-08A RAILWAY COLONY ROAD

2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
	Crush				
1/1	Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned				
	by the contratcor.	Cft	27.28	119.77	3,267
	Manhole Cover				
MR	Old/existing Manhole cover and Frame complete set shift to MC store.	Set	1.00	500.00	500
	Total Amount (Rs)				58,581
	Grand Total Amount Rs.				2,905,062
	Annual-2022 (July to Dec) Gujranwala	Annual-2022 (July to Dec) Gujranwala  Crush  1/1 Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contratcor.  Manhole Cover  MR Old/existing Manhole cover and Frame complete set shift to MC store.  Total Amount (Rs)	Annual-2022 (July to Dec) Gujranwala  Crush  1/1  Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contratcor.  Cft  Manhole Cover  MR  Old/existing Manhole cover and Frame complete set shift to MC store.  Set  Total Amount (Rs)	Annual-2022 (July to Dec) Gujranwala  Crush  1/1 Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contratcor.  Cft 27.28  Manhole Cover  MR Old/existing Manhole cover and Frame complete set shift to MC store.  Set 1.00  Total Amount (Rs)	Annual-2022 (July to Dec) Gujranwala  Crush  1/1 Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contratcor.  Manhole Cover  MR Old/existing Manhole cover and Frame complete set shift to MC store.  Total Amount (Rs)  Description  Unit Quantity  Crush  Cft 27.28  119.77

#### PUNJAB CITIES PROGRAM (PCP)

## DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

## P-08A RAILWAY COLONY ROAD CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Prime Coat						
1	Providing and laying bituminous priming coat, using 10 lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5 Kg kerosene and 0.5 Kg binder per square metre.						
	RD 0+000 to 0+962	1	962	14.50		13,949	Sft
	1.0 0 0 0 0 0 0 0 0 0	1	702	11.50	Total	13,949	Sft
					Total.	139.49	%Sft
	Carpeting						
	AWC						
2	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick) (iv) 4.5% Bitumen						
	RD 0+000 to 0+962	1	962	14.50		13,949	Sft
					Total	13,949	Sft
					Total.	139.49	%Sft
	Paint For Traffic Lanes						
3	Painting Traffic Lane Marking of specified width (1.5mm thick), with Thermoplastic (TP) Paint including Glass Beads, complete in all respect, as approved and directed by Engineer incharge.						
	ii) 6" wide	2	962			1,924	Rft
4	f) Preparing surface and painting of small detached articles, not exceeding one sq. ft. (Sq.m) of painted surface:-					13,949 13,949 139,49 13,949 139,49	
	i) priming coat.	1	962			9.62	100Nos.
	ii) each subsequent coat of paint.	1	962			9.62	100Nos.
5	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.						
	(a) G.I Sheet 14 SWG						
	CIRCULAR/TRIANGULAR	2	2.00	2.00		10	G0:
	3 ft size	2	3.00	2.00		12	Sft

#### PUNJAB CITIES PROGRAM (PCP)

## DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

## P-08A RAILWAY COLONY ROAD CALCULATION OF QUANTITES

	ROADS N						
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
6	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover,hold fasts embedded in PCC 1:2:4 etc, complete in all respect						
	(b) 3 inch diameter	2	11			22	Rft
7	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.						
	a) High Intensity Prismatic (HIP) Tape					12	Sft
	DRAINAGE SYSTEM						
	Dismantling						
1	c) Dismantling cement concrete 1:2:4 plain.						
	Manhole Neck	1	8.64	0.75	0.50	3	Cft
					Total	0.03	%Cft
					Total	0.03	/0C1t
	Excavation						
2	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water fromtrenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:- i) in ordinary soil.						
	Pipe Laying	1	25.00	2.50	2.50	156	Cft
					Total	156	Cft
	P.G.G				Total	0.16	%oCft
3	P.C.C  Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(f) Ratio 1: 2: 4						
	Pipe Laying	1	13	1.50	1.50	28	Cft
	For manhole neck	1	8.64	0.75	0.50	3	Cft
					Total	31	Cft
					Total	0.31	%Cft
	•			ı			

#### PUNJAB CITIES PROGRAM (PCP)

## DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

## P-08A RAILWAY COLONY ROAD CALCULATION OF QUANTITES

	ROADS N	JI VV					
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Brick Work						
4	Pacca brick work other than building upto 10ft. (3 m)						
	Cement, sand mortar:- Ratio 1:3						
	For manhole neck	1	8.64	0.75	1.00	6.48	Cft
					Total	6.48	Cft
					Total	0.06	%Cft
5	Extra for pacca brick work in steining of wells or any						
	other circular masonry.				Total	0.06	%Cft
6	Cement plaster 1:3 upto 20' (6.00 m) height:-						
	b) ½" (13 mm) thick						
	For manhole neck $(38 \times 2 = 76)$	2	8.64		1.00	17	Sft
	,				Total	17	Sft
					Total	0.17	%Sft
	Gully Grating Chamber						
7	Constructing standard gully grating chamber, 2'x2½' (610x750 mm), with chinaware trap as per PHED						
	Drawing STD/PD No. 3 of 1977, complete in all						
	respects.	1				1.00	Each
	,						
8	Supplying and filling sand under floor; or plugging in wells.	1	25.00	2.50	1.00	0.63	%Cft
	DV/C D						
	uPVC Pipe						
9	Providing, fixing, testing and commissioning of $\mu$ -PVC (Unplasticized polyvinyl Chloride)Nikasi /waste pipe make of dadex / Popular / Beta/ BBJ plain / socket ended conforming to code EN-1401 of specified SDR (Standard Dimension Ratio) including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge						
	Type (SDR 41/SN-4)						
	(vii) 8"(200 mm)	1	20.00			20	Rft
	RPC Manhole Cover						
10	Providing and fixing RPC Manhole Cover Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (Complete)						
	(Certified under ISO 9001-2015)	1				1.00	Each
						Page	123 81 of 11

## **CHOWKS**

Annexure<u>02 - Cost Estimate</u>

# PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### MC WAZIRABAD

### DETAILED COST ESTIMATE

#### **SUMMARY**

Sr. No.	Description	Amount (Rs.)
1	ROAD WORKS	
1.1	CP-02 TELEPHONE EXCHANGE CHOWK	6,645,119
1.2	CP-03 HAJI PURA CHOWK	7,202,532
	1) Total Amount. Rs.	13,847,651
2	DRAINAGE SYSTEM	
2.1	CP-03 HAJI PURA CHOWK	1,936,265
	2) Total Amount. Rs.	1,936,265
	Total Amount (R.)	15,783,915
	Say Millions	15.784

#### **DETAILED COST ESTIMATE**

#### **CP-02 TELEPHONE EXCHANGE CHOWK**

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ROAD WORK				
		Scarifying				
1	18/11	Scarifying old road surface including removal of debris within 1 chain (30 m).	100Sft	201.56	424.60	85,582
		Prime Cost				
2	18/6	Prime Coat  Providing and laying bituminous priming coat, using 10 lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5 Kg kerosene and 0.5 Kg binder per				
		square metre.	100Sft	201.56	2,309.00	465,402
		Carpeting AWC				
3	18/10/a + 1/1	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick) (iv) 4.5% Bitumen	Per inch thickness per 100Sft.	201.56	16,676.12	3,361,239
		Paint For Traffic Lanes				
4	13/36	Painting Traffic Lane Marking of specified width (1.5mm thick), with Thermoplastic (TP) Paint including Glass Beads, complete in all respect, as approved and directed by Engineer incharge.				
		ii) 6" wide	Rft	1,030.00	56.35	58,041
		Kerb Stone				
5	6/52/b	Providing and fixing precast Edge Kerb Stone (4" to 6" thick), of 3500 PSI Compressive Strength, embeded in PCC 1:2:4 over lean concrete 1:4:8 etc. complete in all respect.				
		b) With Painting	D.P.C	100.00	510.00	£1.000
		(i) 14" high	P.Rft	100.00	518.90	51,890

#### DETAILED COST ESTIMATE

#### **CP-02 TELEPHONE EXCHANGE CHOWK**

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Tuff Paver				
6	10/41	Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope. complete in all respect. (50% Grey / 50% Coloured)				
		c) 80-mm thick	Sft	12,746.00	192.80	2,457,429
		P.C.C (Between Asphalt and Tuff Paver)				
7	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(f) Ratio 1: 2: 4	100Cft	1.14	38,271.80	43,630
		Cat Eyes				
8	18/28	Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.				
		b) Aluminium Alloy				
		(1) Dual-Directional				
		(ii) 43x2=86 Glass beads a side	Each	100.00	693.90	69,390
9	18/25/a	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.				
		(a) G.I Sheet 14 SWG				
		CIRCULAR/TRIANGULAR				
		3 ft size	P.Sft	12.00	950.25	11,403

#### **DETAILED COST ESTIMATE**

#### **CP-02 TELEPHONE EXCHANGE CHOWK**

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
10	18/27/b	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover,hold fasts embeded in PCC 1:2:4 etc, complete in all respect				
		(b) 3 inch diameter	Rft	22.00	1,260.85	27,739
11	13/42/a	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.				
		a) High Intensity Prismatic (HIP) Tape	P. Sft	12.00	1,114.60	13,375
		Total Amount Rs.				6,645,119

Annexure02 - Cost Estimate PUNJAB CITIES PROGRAM (PCP)

## DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### **CP-02 TELEPHONE EXCHANGE CHOWK**

#### CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Scarifying						
1	Scarifying old road surface including removal of debris						
	within 1 chain (30 m).						
	RD 0+000 TO 0+264	1	264	50.00		13,200	Sft
	RD 0+000 TO 0+148	1	148	47.00		6,956	Sft
					Total	20,156	Sft
					Total.	201.56	%Sft
	Prime Coat						
2	Providing and laying bituminous priming coat, using 10						
	lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5					6,956	
	Kg kerosene and 0.5 Kg binder per square metre.						
	RD 0+000 TO 0+264	1	264	50.00		13,200	Sft
	RD 0+000 TO 0+148	1	148	47.00			Sft
					Total		Sft
						· · · · · · · · · · · · · · · · · · ·	
					Total.	201.56	%Sft
	AWG						
	AWC						
3	Providing and laying plant premixed bituminous carpet,						
	including compaction and finishing to required camber,						
	grade and density. (2 inch thick) (iv) 4.5% Bitumen						
	RD 0+000 TO 0+264	1	264	50.00		13,200	Sft
	RD 0+000 TO 0+148	1	148	47.00			Sft
					Total	20,156	Sft
					Total.	201 56	%Sft
	Paint For Traffic Lanes				I otal.	401.50	/0011
4	Painting Traffic Lane Marking of specified width						
	(1.5mm thick), with Thermoplastic (TP) Paint including						
	Glass Beads, complete in all respect, as approved and						
	directed by Engineer incharge.						
	RD 0+000 TO 0+264	2.5	264			660	Rft
	RD 0+000 TO 0+148	2.5	148			370	Rft
					Total.		
	1	1	i i	1	717 - 4 - 1	1,030	Rft

PUNJAB CITIES PROGRAM (PCP)

## DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### **CP-02 TELEPHONE EXCHANGE CHOWK**

#### CALCULATION OF QUANTITES

-	I .						
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
5	Providing and fixing precast Edge Kerb Stone (4" to 6"						
	thick), of 3500 PSI Compressive Strength, embeded in						
	PCC 1:2:4 over lean concrete 1:4:8 etc. complete in all						
	respect.						
	b) With Painting						
	(i) 14" high	1	100			100	Rft
					Total.	100	Rft
	Tuff Paver						
6	Providing and laying Tuff pavers, having 7000 PSI,						
	crushing strength of approved manufacturer, over 2" to						
	3" sand cushion i/c grouting with sand in joints i/c						
	finishing to require slope. complete in all respect. (50% Grey / 50% Coloured)						
	c) 80-mm thick						
	RD 0+000 TO 0+264	1.5	264	13.50		5,346	
	RD 0+000 TO 0+148	2	148	25.00		7,400	
					Total.	12,746	Sft
	P.C.C (Between Asphalt and Tuff Paver)						
7	Cement concrete plain including placing, compacting,						
<b>'</b>	finishing and curing complete (including screening and						
	washing of stone aggregate):						
	(f) Ratio 1: 2: 4						
	RD 0+000 TO 0+264	1.5	264	0.33	0.50	65	Cft
	RD 0+000 TO 0+148	2	148	0.33	0.50	49	Cft
					Total.	1.14	%Cft
	Cat Eyes						
8	Providing & fixing Cat Eyes of size 4"x4"x3/4" duly						
	casted with specified material having plastic strip						
	containing mini retro-reflective glass beads of color						
	white /red/ yellow having specifid reflections, quality &						
	shape i/c the cost of self built in12mm dia x120mm long						
	steel zinc plate dnail, fixing to road with epoxy/hammering with separate nail complete.						
	b) Aluminium Alloy						
	(1) Dual-Directional						
	(ii) 43x2=86 Glass beads a side	100				100	Each

Annexure02 - Cost Estimate PUNJAB CITIES PROGRAM (PCP)

## DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### **CP-02 TELEPHONE EXCHANGE CHOWK**

#### CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
9	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.						
	(a) G.I Sheet 14 SWG						
	CIRCULAR/TRIANGULAR						
	3 ft size	2	3.00	2.00		12	Sft
10	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover,hold fasts embeded in PCC 1:2:4 etc, complete in all respect						
	(b) 3 inch diameter	2	11			22	Rft
11	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.						
	a) High Intensity Prismatic (HIP) Tape					12	Sft

#### **DETAILED COST ESTIMATE**

#### CP-03 HAJI PURA CHOWK

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ROAD WORK				
		Scarifying				
1	18/11	Scarifying old road surface including removal of				
		debris within 1 chain (30 m).	100Sft	320.36	424.60	136,025
		Prime Coat				
2	18/6	Providing and laying bituminous priming coat, using 10 lbs. kerosene oil and 10 lbs. binder per				
		100 Sft. or 0.5 Kg kerosene and 0.5 Kg binder per				
		square metre.	100Sft	320.36	2,309.00	739,711
		Compating				
		Carpeting AWC				
3	18/10/a	Providing and laying plant premixed bituminous	Per inch			
	+	carpet, including compaction and finishing to	thickness			
	1/1	required camber, grade and density. (2 inch thick)	per			
		(iv) 4.5% Bitumen	100Sft.	320.36	16,676.12	5,342,362
		D. A.E. TO GO. I				
4	12/26	Paint For Traffic Lanes				
4	13/36	Painting Traffic Lane Marking of specified width				
		(1.5mm thick), with Thermoplastic (TP) Paint				
		including Glass Beads, complete in all respect, as				
		approved and directed by Engineer incharge.				
		ii) 6" wide	Rft	2,793.00	56.35	157,386
	C /50 /1	Kerb Stone				
5	6/52/b	Providing and fixing precast Edge Kerb Stone (4"				
		to 6" thick), of 3500 PSI Compressive Strength,				
		embeded in PCC 1:2:4 over lean concrete 1:4:8 etc. complete in all respect.				
		b) With Painting	DDG	450.00	510.00	222 505
		(i) 14" high	P.Rft	450.00	518.90	233,505

#### **DETAILED COST ESTIMATE**

#### CP-03 HAJI PURA CHOWK

No Gulyrawska							
Providing and laying Tuff pavers, having 7000   PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope. complete in all respect. (50% Grey / 50% Coloured)    P.C.C (For Retaining Tuff Paver)		Annual-2022 (July to Dec)	Description	Unit	Quantity		Amount (Rs.)
PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope. complete in all respect. (50% Grey / 50% Coloured)    Coloured   P.C.C (For Retaining Tuff Paver)			Tuff Paver				
over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope, complete in all respect. (50% Grey / 50% Coloured)    Community   P.C.C (For Retaining Tuff Paver)   P.C.C (For Retaining Tuff Paver)	6	10/41	Providing and laying Tuff pavers, having 7000				
in joints i/c finishing to require slope, complete in all respect. (50% Grey / 50% Coloured)  c) 80-mm thick  P.C.C (For Retaining Tuff Paver)  7 6/5 Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):  (f) Ratio 1: 2: 4  100Cft  Cat Eyes  8 18/28 Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.  b) Aluminium Alloy  (1) Dual-Directional  (ii) 43x2=86 Glass beads a side  Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR							
all respect. (50% Grey / 50% Coloured)  c) 80-mm thick  P.C.C (For Retaining Tuff Paver)  7 6/5 Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):  (f) Ratio 1: 2: 4  Cat Eyes  8 18/28 Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in 12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.  b) Aluminium Alloy  (1) Dual-Directional  (ii) 43x2=86 Glass beads a side  Fach 125.00 693.90  18/25/a Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR							
c) 80-mm thick  P.C.C (For Retaining Tuff Paver)  6/5 Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):  (f) Ratio 1: 2: 4  100Cft  Cat Eyes  8 18/28 Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.  b) Aluminium Alloy  (1) Dual-Directional  (ii) 43x2=86 Glass beads a side  Fach 125.00 693.90  9 18/25/a Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR							
P.C.C (For Retaining Tuff Paver)  7 6/5 Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):  (f) Ratio 1: 2: 4 100Cft 0.75 38,271.80  Cat Eyes  8 18/28 Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.  b) Aluminium Alloy  (1) Dual-Directional  (ii) 43x2=86 Glass beads a side Each 125.00 693.90  9 18/25/a Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR			all respect. (50% Grey / 50% Coloured)				
P.C.C (For Retaining Tuff Paver)  7 6/5 Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):  (f) Ratio 1: 2: 4 100Cft 0.75 38,271.80  Cat Eyes  8 18/28 Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.  b) Aluminium Alloy  (1) Dual-Directional  (ii) 43x2=86 Glass beads a side Each 125.00 693.90  9 18/25/a Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR			c) 80-mm thick	Sft	1 935 00	192.80	373,068
Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):    (f) Ratio 1: 2: 4   100Cft   0.75   38,271.80			c) 00-min tinex	Sit	1,733.00	172.00	373,000
compacting, finishing and curing complete (including screening and washing of stone aggregate):  (f) Ratio 1: 2: 4  Cat Eyes  8 18/28 Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.  b) Aluminium Alloy  (1) Dual-Directional  (ii) 43x2=86 Glass beads a side  Each  125.00  693.90  9 18/25/a  Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR			P.C.C (For Retaining Tuff Paver)				
(including screening and washing of stone aggregate):  (f) Ratio 1: 2: 4  Cat Eyes  8 18/28 Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.  b) Aluminium Alloy  (1) Dual-Directional  (ii) 43x2=86 Glass beads a side  Each  125.00  693.90  18/25/a  Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR	7	6/5	Cement concrete plain including placing,				
aggregate):  (f) Ratio 1: 2: 4  100Cft  0.75  38,271.80  Cat Eyes  Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.  b) Aluminium Alloy  (1) Dual-Directional  (ii) 43x2=86 Glass beads a side  Each  125.00  693.90  9  18/25/a  Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR							
Cat Eyes  Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.  b) Aluminium Alloy  (1) Dual-Directional  (ii) 43x2=86 Glass beads a side  Each  125.00  693.90  9 18/25/a Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR							
Cat Eyes  8 18/28 Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.  b) Aluminium Alloy (1) Dual-Directional (ii) 43x2=86 Glass beads a side  Each 125.00 693.90  9 18/25/a Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG CIRCULAR/TRIANGULAR							
8 18/28 Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.  b) Aluminium Alloy  (1) Dual-Directional  (ii) 43x2=86 Glass beads a side  Each  125.00 693.90  9 18/25/a Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR			(f) Ratio 1: 2: 4	100Cft	0.75	38,271.80	28,704
8 18/28 Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.  b) Aluminium Alloy  (1) Dual-Directional  (ii) 43x2=86 Glass beads a side  Each  125.00 693.90  9 18/25/a Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR			Cat Evas				
duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.  b) Aluminium Alloy  (1) Dual-Directional  (ii) 43x2=86 Glass beads a side  Each  125.00  693.90  9 18/25/a Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR	8	18/28	Ÿ				
strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.    b) Aluminium Alloy		10/20					
of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.  b) Aluminium Alloy (1) Dual-Directional (ii) 43x2=86 Glass beads a side  Each  125.00  693.90  9  18/25/a  Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR							
built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.  b) Aluminium Alloy (1) Dual-Directional (ii) 43x2=86 Glass beads a side  Each 125.00 693.90  9 18/25/a Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG CIRCULAR/TRIANGULAR							
dnail, fixing to road with epoxy/ hammering with separate nail complete.  b) Aluminium Alloy  (1) Dual-Directional  (ii) 43x2=86 Glass beads a side  Each  Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR			reflections, quality & shape i/c the cost of self				
separate nail complete.  b) Aluminium Alloy  (1) Dual-Directional  (ii) 43x2=86 Glass beads a side  Each  125.00  693.90  9 18/25/a Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR							
b) Aluminium Alloy  (1) Dual-Directional  (ii) 43x2=86 Glass beads a side  Each  125.00  693.90  9 18/25/a Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR							
(1) Dual-Directional (ii) 43x2=86 Glass beads a side  Each  Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR			separate nail complete.				
9 18/25/a Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR			b) Aluminium Alloy				
9 18/25/a Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR			1 1				
Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR			(ii) 43x2=86 Glass beads a side	Each	125.00	693.90	86,738
Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR	g	18/25/9	Providing fabrication and fixing note mounted				
size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR		10/23/u	0 1				
supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR			, ,				
of vertical post and painting) etc complete in all respect.  (a) G.I Sheet 14 SWG  CIRCULAR/TRIANGULAR			•				
(a) G.I Sheet 14 SWG CIRCULAR/TRIANGULAR							
CIRCULAR/TRIANGULAR			respect.				
			(a) G.I Sheet 14 SWG				
3 ft size							
			3 ft size	P.Sft	24.00	950.25	22,806

#### **DETAILED COST ESTIMATE**

#### CP-03 HAJI PURA CHOWK

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
10	18/27/b	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover,hold fasts embeded in PCC 1:2:4 etc, complete in all respect				
		(b) 3 inch diameter	Rft	44.00	1,260.85	55,477
11	13/42/a	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.				
		a) High Intensity Prismatic (HIP) Tape	P. Sft	24.00	1,114.60	26,750
		Total Amount Rs.				7,202,532
		Drainage System				
		Excavation				
1	3/7/i	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water fromtrenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:- i) in ordinary soil.	1000Cft	2.59	9,055.25	23,453
		n a a				
2	6/5	P.C.C  Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(i) Ratio 1: 4: 8	100Cft	0.67	29,598.20	19,831

#### **DETAILED COST ESTIMATE**

#### CP-03 HAJI PURA CHOWK

_						
Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		R.C.C Work				
3	6/6/a/i/3	Providing and laying reinforced cement concrete (i/c pre-stressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, complete				
		(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-				
		(2) Type B (nominal mix 1: 1½: 3)	Cft	240.00	512.90	123,096
		a).(i) Reinforced cement concrete in roof slab, beams, columns, lintels, girders and other structural members laid in situ or pre-cast laid in position, or pre-stressed members cast in situ, complete in all respect.  (2) Type B (nominal mix 1: 1½: 3)	P Cft	845.00	612.05	517,182
		Steel				
4	6/12/c	Fabrication of mild steel reinforcement for cement concrete, i/c cutting, bending, laying in position, making joints and fastening, i/c cost of bending wire and labour charges for bending of steel reinforcement (also includes removal of rust from deformed bars) Gade 60	100Kg	39.38	31,808.25	1,252,702
		Total Amount Rs.				1,936,265
		Total Amount Rs. (1+2)				9,138,796

#### **PUNJAB CITIES PROGRAM (PCP)**

## DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### CP-03 HAJI PURA CHOWK

#### CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Scarifying						
1	Scarifying old road surface including removal of debris within 1 chain (30 m).						
	RD 0+000 TO 0+425	1	425	52.00		22,100	Sft
	RD 0+000 TO 0+100	1	100	30.00		3,000	Sft
	RD 0+000 TO 0+127	2	127	24.00		6,096	Sft
	RD 0+000 TO 0+040	1	40	21.00		840	Sft
					Total	32,036	Sft
					Total.	320.36	%Sft
	Prime Coat						
2	Providing and laying bituminous priming coat, using 10 lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5 Kg kerosene and 0.5 Kg binder per square metre.						
	RD 0+000 TO 0+425	1	425	52.00		22,100	Sft
	RD 0+000 TO 0+100	1	100	30.00		3,000	Sft
	RD 0+000 TO 0+127	2	127	24.00		6,096	Sft
	RD 0+000 TO 0+040	1	40	21.00		840	Sft
					Total	32,036	Sft
					Total.	320.36	%Sft
	AWC						
3	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick) (iv) 4.5% Bitumen						
	RD 0+000 TO 0+425	1	425	52.00		22,100	Sft
	RD 0+000 TO 0+100	1	100	30.00		3,000	Sft
	RD 0+000 TO 0+127	2	127	24.00		6,096	Sft
	RD 0+000 TO 0+040	1	40	21.00		840	Sft
					Total	32,036	Sft
					Total.	320.36	%Sft
	Paint For Traffic Lanes						
4	Painting Traffic Lane Marking of specified width (1.5mm thick), with Thermoplastic (TP) Paint including Glass Beads, complete in all respect, as approved and directed by Engineer incharge.						
	RD 0+000 TO 0+425	5	425			2,125	Rft
						250	Rft
	RD 0+000 TO 0+100	2.5	100			2.30	IXII

### Annexure02 - Cost Estimate PUNJAB CITIES PROGRAM (PCP)

## DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### CP-03 HAJI PURA CHOWK

#### CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	RD 0+000 TO 0+040	2.5	40			100	Rft
					Total.	2,793	Rft
5	Providing and fixing precast Edge Kerb Stone (4" to 6" thick), of 3500 PSI Compressive Strength, embeded in PCC 1:2:4 over lean concrete 1:4:8 etc. complete in all respect.						
	b) With Painting						
	(i) 14" high						
	RD 0+000 TO 0+425	2	225			450	Rft
					Total.	450	Rft
	Tuff Paver						
6	Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope. complete in all respect. (50% Grey / 50% Coloured)						
	c) 80-mm thick						
	RD 0+000 TO 0+100	1	100	13.00		1,300	Sft
	RD 0+000 TO 0+127	1	127	5.00		635	Sft
					Total.	1,935	Sft
	P.C.C (For Retaining Tuff Paver)						
7	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(f) Ratio 1: 2: 4						
	RD 0+000 TO 0+100	2	100	0.33	0.50	33	Cft
	RD 0+000 TO 0+127	2	127	0.33	0.50	42	Cft
					Total.	0.75	%Cft
	G . P						
	Cat Eyes						

#### PUNJAB CITIES PROGRAM (PCP)

## DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### CP-03 HAJI PURA CHOWK

#### **CALCULATION OF QUANTITES**

	ROADS NE	1 110					
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
8	Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.						
	b) Aluminium Alloy (1) Dual-Directional						
	(ii) 43x2=86 Glass beads a side	125				125	Each
9	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.						
	(a) G.I Sheet 14 SWG						
	CIRCULAR/TRIANGULAR						
	3 ft size	4	3.00	2.00		24	Sft
10	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover,hold fasts embeded in PCC 1:2:4 etc, complete in all respect						
	(b) 3 inch diameter	4	11			44	Rft
11	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.  a) High Intensity Prismatic (HIP) Tape					24	Sft
	Drainage System						
	Excavation						
1	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water fromtrenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:- i) in ordinary soil.						
	Culvert	1	40	9.25	7.00	2,590	Cft
	Current	1		7.23	7.00		38 <sub>96 of 11</sub>

### Annexure02 - Cost Estimate PUNJAB CITIES PROGRAM (PCP)

## DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

#### CP-03 HAJI PURA CHOWK

#### CALCULATION OF QUANTITES

Sr.	Description	No	Longth	Width	Haight	Otro	I Imit
No	Description	No.	Length	Width	Height	Qty.	Unit.
					Total	2,590	Cft
					Total	2.59	%oCft
	P.C.C						
2	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(i) Ratio 1: 4: 8						
	Culvert	2	40	3.33	0.25	67	Cft
					Total	0.67	%Cft
	R.C.C Work						
3	Providing and laying reinforced cement concrete (i/c pre- stressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, complete						
	(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-						
	(2) Type B (nominal mix 1: 1½: 3)	2	40	3.00	1.00	240	Cft
					Total	240.00	Cft
	a).(i) Reinforced cement concrete in roof slab, beams, columns, lintels, girders and other structural members laid in situ or pre-cast laid in position, or pre-stressed members cast in situ, complete in all respect. Type C (nominal mix 1:2:4)						
	Wall	2	40.00	1.00	6.00	480.00	Cft
	Top Slab	1	40.00	8.50	1.00	340.00	Cft
	Parapet Wall	2	10.00	0.50	2.50	25.00	Cft
					Total	845.00	Cft

Annexure02 - Cost Estimate PUNJAB CITIES PROGRAM (PCP)

## DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

### CP-03 HAJI PURA CHOWK

### CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
4	Fabrication of mild steel reinforcement for cement concrete, i/c cutting, bending, laying in position, making joints and fastening, i/c cost of bending wire and labour charges for bending of steel reinforcement (also includes removal of rust from deformed bars) Gade 60						
	Concrete Qty		1,085	Cft @	8.00	8,680	lbs/cft
						3,938	kg
					Total	39.38	Kg

Annexure02 - Co	st Estimate
	ENVIRONMENTAL HEALTH SAFETY BUDGET

## DETAILED COST ESTIMATE ENVIRONMENTAL HEALTH SAFETY BUDGET

Sr No	Description	Unit	Quantity	Unit Rate (Rs.)	Amount Rs.
	Labor Safety				
1	Face Masks (3 PLY)	Nos	28.00	700.00	19,600
2	Safety Gum Shoes	Nos	28.00	1,350.00	37,800
3	Hand Gloves	Nos	28.00	245.00	6,860
4	First Aid Box	1,00	20.00	2.0.00	3,000
	(Including essential Medicine)	Nos	7.00	5,000.00	35,000
5	Safety Hard Helmets MSA	Nos	28.00	2,000.00	56,000
6	Safety Goggles	Nos	28.00	550.00	15,400
7	Reflective Safety Vests	Nos	28.00	550.00	15,400
8	Infrared Thermometer				,
	(Benetech GM-2200 OR equivalent)	Nos	1.00	45,000.00	45,000
				Sub Total	231,060
	Working Site Safety				
1	Reflective Safety Signs Boards	Nos	7.00	10,000.00	70,000
2	Reflective Safety Barricading Tape	Nos	21.00	1,500.00	31,500
3	Emergency Portable Light	Nos	8.00	5,000.00	40,000
4	Solid Waste Collection Drums	Nos	8.00	5,000.00	40,000
5	Fire Extinguishers DCP	Nos	16.00	5,000.00	80,000
6	Reflective Safety PVC Cones (18 inch)	Nos	28.00	1,200.00	33,600
7	Road Guiding Portable Delineators with Chain	Nos	28.00	2,500.00	70,000
	5			·	•
				Sub Total	365,100
	Others				
1	Pole Hanging Waste Bins	Nos.	10.00	10,000	100,000
2	Water Sprinkling				
	(Dust Abatement)	L.S	1.00	200,000	200,000
3	Roadside Plantation	L.S	1.00	50,000	50,000
4	Environmental Analytical Assessments (Ambient Air Quality Testing, Noise Testing, Vehicular Emissions Testing/Generators, Surface	<b>.</b>	1.00	250,000	270 000
~	Water & Ground Water Testing)	L.S	1.00	250,000	250,000
5	Hiring of Environmentalist	1.0	1.00	250,000	250.000
	(03 Months Budget)	L.S	1.00	250,000	250,000
6	Labor Campsite Management	L.S	1.00	200,000	200,000
				Sub Total	1,050,000
	Total Amount (Rs)				1,646,160

**RATE ANALYSIS** 

### EARTH WORK LEAD CHART

Rate Analysis Road- 1

Sr. No.	2nd BI-Annual- 2022 (July to Dec) Gujranwala	Description	Lead	Unit.	Qty	Rate (Rs)	Amount (Rs)
1	3/5/i	Earthowrk in ordinary soil for embankments lead upto 100 ft. (30 m), including ploughing and mixing with blade grade or disc harrow or other suitable equipment, and compaction by mechanical means at optimum moisture content and dressing to designed section, complete in all respects:-					
		i) 95% to 100% maximum modified AASHO dry density.	1	1000Cft	1	9,552.55	9,552.55
2	3/17a.b.c	Carriage					
		upto ¼ mile (400 m).	1	1000 Cft	1	4,341.40	4,341.40
		for every 330 ft. (100 m) additional lead or part thereof, beyond ¼ mile (400 m) upto one mile. (1.6 Km.)	12	1000 Cft	1	40.25	483.00
		for every ¼ mile (400 m) additional lead or part thereof, beyond one mile (1.6 Km.) upto 5 mile (8 Km).	8.5	1000 Cft	1	338.75	2,879.38
		for every ½ mile (800 m) additional lead or part thereof, beyond 5 miles (8 Km).	0	1000 Cft	1	320.70	-
		Total Amount 1,000 (Rs.).					17,256.33
		Total Amount Per Cft					17.26

Rate Analysis Road- 2

**Description**Providing and laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and

compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Dina querry to site, actual compacted depth shall be considered for payment)

considered for payment) Crush Stone 90 KM 2nd BI-Annual-Sr. 2022 (July to Lead Rate Amount **Description** Unit Qty Dec) (Km) (Rs) (Rs) No. <u>Gujranwala</u> 1 Material i) Pit run or bed run gravel. 100 Cft 7,545.00 7,545.00 18-3 a(i) 1 1 2 Carriage 1st KM 100 Cft 1 1.20 299.40 359.28 2nd KM 100 Cft 1 1.20 145.45 174.54 3rd KM 100 Cft 1 1.20 117.00 140.40 4th KM 100 Cft 1.20 85.40 102.48 5th KM 100 Cft 1 1.20 80.25 96.30 1/1 6th KM 100 Cft 1.20 79.10 94.92 1 100 Cft 1.20 89.16 7th KM 1 74.30 8th KM 100 Cft 1 1.20 73.60 88.32 9th KM 100 Cft 1.20 69.60 83.52 1 10th KM 100 Cft 1 1.20 65.75 78.90 80.00 From 11 km to 200 km 100 Cft 1.20 57.30 5,500.80 Total. 14,353.62 14,353.62 **Total Amount per 100 Cft** 

**Total Cost for Per Cft** 

143.54

### Rate Analysis Road - 3

Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sargodha querry to site, actual compacted depth shall be considered for payment)

							200 KM
Sr. No.	2nd BI-Annual- 2022 (July to Dec) Gujranwala	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs.)
1	18/4(a)	Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from sargodha querry to site, actual compacted depth shall be considered for payment)			1	14,122.50	14,122.50
2	1/1	Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contratcor.					
	_	1st KM	100 Cft	1	1.22	299.40	365.27
		2nd KM	100 Cft	1	1.22	145.45	177.45
	-	3rd KM	100 Cft	1	1.22	117.00	142.74
	=	4th KM	100 Cft	1	1.22	85.40	104.19
	-	5th KM	100 Cft	1	1.22	80.25	97.91
		6th KM	100 Cft	1	1.22	79.10	96.50
	-	7th KM	100 Cft	1	1.22	74.30	90.65
	-	8th KM	100 Cft	1	1.22	73.60	89.79
	-	9th KM	100 Cft	1	1.22	69.60	84.91
	1	10th KM	100 Cft	1	1.22	65.75	80.22
		From 11 km to 200 km	100 Cft	190.00	1.22	57.30	13,282.14
		Total.					28,734.26
		Total Amount per 100 Cft					28,734.26
							40=41
		Total Cost for Per Cft					287.34

### Rate Analysis Road - 4

AWC

Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick)

(iv) 4.5% Bitumen

							232 Km
Sr. No.	2nd BI-Annual- 2022 (July to Dec) Gujranwala	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs.)
1	18/10/a	Providing and laying plant premixed bituminous	Per inch				
	10/10/α	carpet, including compaction and finishing to	thickness				
		required camber, grade and density. (2 inch	per				
			100Sft.				
		thick)					
		(iv) 4.5% Bitumen			1.00	15,187.40	15,187.40
2		Carriage of 100 cft of all materials like stone					
		aggregate spawl kanker lime surkhi etc or 150 cft of					
		timber by truck or by any other means owned by the					
		contratcor.					
		1., VM	100.00	1	0.1042	200.40	27.22
		1st KM 2nd KM	100 Cft 100 Cft	1	0.1243 0.1243	299.40 145.45	37.22 18.08
	1/1	3rd KM	100 Cit	1	0.1243	117.00	14.54
	1/1	4th KM	100 Cft	1	0.1243	85.40	10.62
		5th KM	100 Cft	1	0.1243	80.25	9.98
		6th KM	100 Cft	1	0.1243	79.10	9.83
		7th KM	100 Cft	1	0.1243	74.30	9.24
		8th KM	100 Cft	1	0.1243	73.60	9.15
		9th KM	100 Cft	1	0.1243	69.60	8.65
		10th KM	100 Cft	1	0.1243	65.75	8.17
		From 11 km to 200 km	100 Cft	190	0.1243	57.30	1,353.25
		Total.					16,676.12
		Total Amount per 100 Sft					16,676.12
		_					
		Total Cost for Per Sft					166.76

#### Rate Analysis Road - 5

Ploughing and Compaction of Existing road surface upto 6" depth i/c dressing, leveling, supplying and spreading of stone screening (Khaka) and compaction to achieve to 100% maximum ASSHO dry density complete in all respects.

### MRS 2nd Bi-Annual July 2022 to Dec 2022

	Taking = 100CFT		Unit rat	e =Per 100 (	CFT
Sr. No.	Details	Qty	Unit	Rate (Rs)	Amount (Rs)
A	<u>Material</u>				
1	Ploughing with tractor up to 6" depth for 100 Cft (Input Rate EQ-18)	1	P.Hour	1,608.00	1,608.00
2	Cost of Stone Screening (Khaka) at quarry for 100 Cft = (Input Rate 18.005)	17	%CFT	4,836.00	822.12
3	Labour charges for spreading of Khaka dressing and levelling etc skilled 2 No's for 1.5 Hours (Input Rate lb-024)		P.Day	1,250.00	468.75
4	Compaction of existing road surface with 12 to roller and watering etc. for 100Cft (Input Rate EQ-05)	0.75	P.Hour	3,660.00	2,745.00
				Total	5,643.87
	Add 20% C	ontracto	r Profit on	Item No.2	164.42
		Comp	osite Rate	Per 100Cft	5,808.29

Rate Analysis Road - 6

Description

Providing and fixing RPC Manhole Cover Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (Complete) (Certified under ISO 9001-2015)

Man	hole Co	ver						Unit.	Each
Sr.	Ref Input	Detail				r 100 Rft			
No.	Rate				Qty		Rate Per Unit		Amount (Rs.)
	Page								
	No112								
1	A	RPC Manhole Cover			1.00	No	7000	No	7,000.00
		Carriage							700
								Total	7,700.00
		LABOUR							,
2	LB-024	Skilled Cooly			0.50	Nos.	1,250.00	per day	625.00
								Total.	625.00
		Sundries	10	%					62.50
							Tota	l Rs.	687.50
							Total	(1+2)	8,387.50
		Contractor's Profit	20	%					1,677.50
		Total							10,065
		ITEM RATES							
		Composite rate Set						Rs.	10,065

		Rate Analysis Road - 7	1			
						200 KM
Sr. No.	2nd BI-Annual- 2022 (July to Dec) Gujranwala	Description	Unit	Lead (Km)	Rate (Rs)	Amount (Rs.)
1	1/1	Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contratcor.				
		1st KM 2nd KM	100 Cft 100 Cft	1	299.40 145.45	299.40 145.45
	-	3rd KM	100 Cft	1	117.00	117.00
		4th KM 5th KM	100 Cft 100 Cft	1	85.40 80.25	85.40 80.25
	_	6th KM	100 Cit	1	79.10	79.10
	1	7th KM	100 Cft	1	74.30	74.30
	-	8th KM	100 Cft	1	73.60	73.60
		9th KM	100 Cft	1	69.60	69.60
		10th KM	100 Cft	1	65.75	65.75
		From 11 km to 200 km	100 Cft	190.00	57.30	10,887.00
		Total.				11,976.85
		Total Amount per 100 Cft				11,976.85
		Total Cost for Per Cft				119.77

Rate Analysis Road - 8

Description

Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.

LCP	)	T						Unit.	Each
Sr.	Ref Input	Detail				Unit F	Rate (British	System) p	er Each
No.	Rate	Detail			Qty	7	Rate Pe	er Unit	Amount (Rs.)
1	MR	LCP			1.00	No	186,030	No.	186,030
								Total	186,030
		Contractor's Profit	20	%					37,206
		Total							223,236
		ITEM RATES							
		Composite rate Set						Rs.	223,236

Rate Analysis Road - 9
Description

Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.

	I						Unit.	Each
Ref	7.0				Unit R	Rate (British	System) p	er Each
nput Rate				Qty	7	Rate Pe	r Unit	Amount (Rs.)
MR	LCP			1.00	No	209,430	No.	209,430
							Total	209,430
	Contractor's Profit	20	%					41,886
	Total							251,316
	ITEM RATES							
	Composite rate Set						Rs.	251,316
		Total  ITEM RATES	Contractor's Profit 20 %  Total  ITEM RATES					

Rate Analysis Road - 10

Description

Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.

LCF	•	I						Unit.	Each
Sr.	Ref	Dodošl				Unit I	Rate (British	System) p	er Each
No.	Input Rate			Qty	7	Rate Pe	er Unit	Amount (Rs.)	
1	MR	LCP			1.00	No	270,855	No.	270,855
								Total	270,855
		Contractor's Profit	20	%					54,171
		Total							325,026
		ITEM RATES							
		Composite rate Set						Rs.	325,026
		composite rate set						145.	

### **Analysis of Rate for Pole**

#### Description

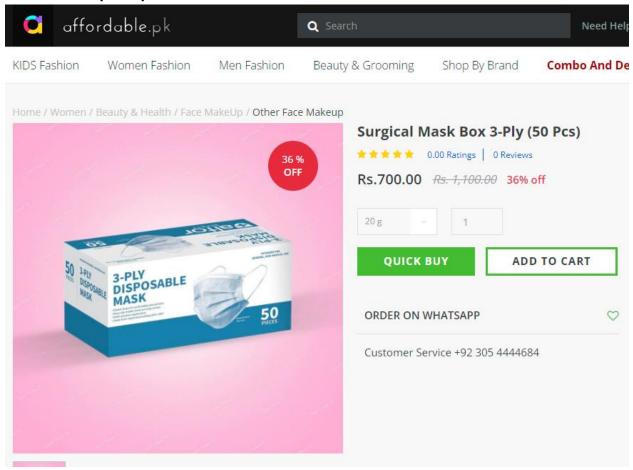
Supply Installation testing and Comissioning of 20'/6 Mtrs high Tubular Section Road Light Pole made of MS, Hot dip Galvanized including cost of base plate with 4 Nos J-bolt, as shown on dwg. Terminal box with cover, 2amp single pole Mcb, 3 phase connector complete in all resheet.

Unit. Each

Sr.	Ref		Detail	Unit Rate (British System) per Eac					
No.	Input Rate				Qty		Rate Per Unit		Amount (Rs.)
1	MR	20'/6 m Light Pole		-	1.00	No	39,780	No.	39,780
								Total	39,780
		Contractor's Profit		20 %					7,956
		Total							47,736
		ITEM RATES							
		Composite rate Set						Rs.	47,736

#### **Cost for PPEs from different Sources**

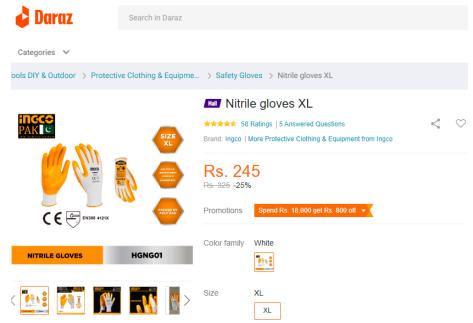
## 1. Face Masks (3PLY)



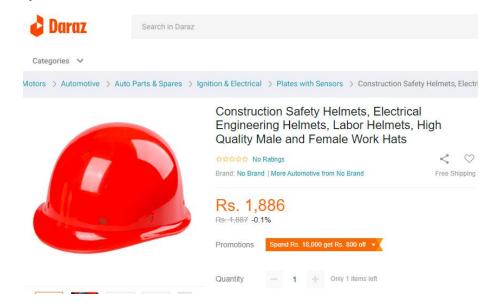
## 2. Safety Gum Shoes



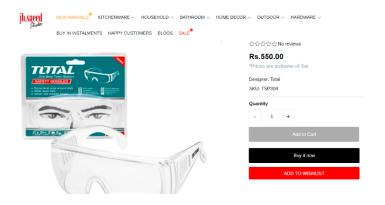
#### 3. Hand Gloves



### 4. Safety Hard helmets



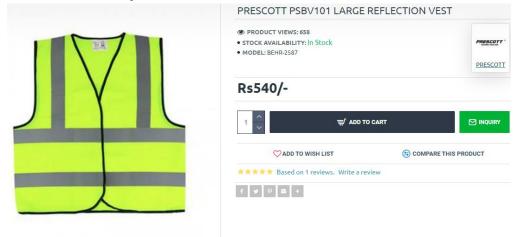
### 5. Safety Goggles



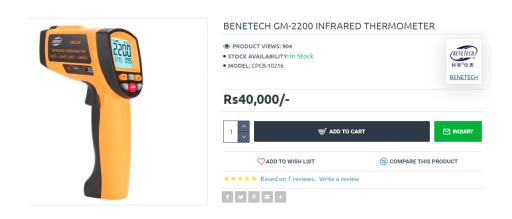
#### **Product Specification:**

- Conforms to ANSI Z87.1 and CE EN166
- Full-view full-slice structure prevents UV and withstands impact
- · Fit to wearing the corrective glasses, also can be used as visitors glasses
- Can defend against splash particles in the round
- · Packed by double blister

## 6. Reflective Safety Vest



### 7. Infrared Thermometer



## 8. Fire Extinguishers



## 9. PVC Cones and Delineators



## **10.Delineators with Chain**









#### PRICE SCHEDULE SHEET

QUOTE NO.	DATE	OFFER VALIDITY
QT-167-2K22	October 17, 2022	October 24, 2022

CLIENT:- Jers Consultancy (Pvt) Ltd.

24 Civic St, Township Twp Commercial Area,

Lahore - Pakistan.

SR. #	DESCRIPTION	QTY	UNIT	UNIT RATE	AMOUNT Rs.			
1	20/6 Mtrs. High Hot Dip Galvanized Pole with Base Plate etc. (Single Arm)	1	No.	39,780.00	39,780.00			
7	20'/6 Mtrs. High Hot Dip Galvanized Pole with Base Plate etc. (Double Arm)	1	No.	42,705.00	42,705.00			
	TOTAL AMOUNT Rs: -							

For Ali Engineering Services

MOHSIN PERVAIZ Head Planning Div. **ALI SHAFQAT**Director Operations

TABLE - 9.14
Wazirabad (5.72 km)
Calculation of Financial Internal Rate of Return

Million Rs.

	PRO.	JECT ECONOMIC (	COSTS	Project	Net Benefits Pattern at Economic Prices				
Years	Investment	0 & M	Total	Financial					
			Costs	Revenue	(a)	(b)	(c)	(d)	
1	187.00	0.00	187.00	0.00	-187.00	-187.00	-205.70	-205.70	
2		0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3		0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4		0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5		0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6		0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7		0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8		0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9		0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10		0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Total :	187.00	0.00	187.00	0.00	-187.00	-187.00	-205.70	-205.70	

DISCOUNT RATES	PRESENT WO	RTH OF COST	Present Worth of Revenue	NET PRESENT WORTH			
10 %	170.00	170.00	0.00	-170.00	-170.00	-187.00	-187.00
12 %	166.96	166.96	0.00	-166.96	-166.96	-183.66	-183.66
18 %	158.47	158.47	0.00	-158.47	-158.47	-174.32	-174.32
20 %	155.83	155.83	0.00	-155.83	-155.83	-171.42	-171.42
FINANCIAL INTERNAL RATE	OF RETURN 12% [	OR		#NUM!	#NUM!	#NUM!	#NUM!
BENEFIT COST / RATIO AT :	12 % D.R		0.00				

<sup>\*</sup> A factor of 0.9 has been used for Capital Cost and O&M Cost in the Economics Terms.

<sup>(</sup>a) Base Case assuming 10 Years period of analysis.

<sup>(</sup>b) Benefits decreased by 10 %

<sup>(</sup>c) Cost over-run by 10 %

<sup>(</sup>d) Benefit reduction and cost over-run both occuring simultaneously.

## TENTATIVE PROJECT IMPLEMENTATION SCHEDULE FOR IMPROVEMENT & CONSTRUCTION OF ROADS IN Wazirabad CITY YEAR (2022-2023)

Road & Chowk No.	Road & Chowk Name	JAN-23	FEB-23	MAR-23	APR-23	MAY-23	JUNE-23	JULY-23	AUG-23	SEPT-23	OCT-23
P1	Arif Shaheed Road & Railway Crossing Road										
P2	Awa Road										
СРЗ	CP-3 Haji Pura Chowk										
P7	Western Circular Road										
P8	Bank of Nallah Palkhu Road & RailwayLine Road										
CP2	CP-2 Telephone Exchange Chowk										

## Annexure-E EIA Report

#### **Environmental & Social Screening Checklist**

## Instructions:

Environmental and Social Focal Persons (ESFPs) nominated by the MCs for PCP environmental and social management, will use this checklist in field for environmental and social screening and categorization of each and every sub-project proposed to be executed under the Program.

Deputy Program Officers-Environmental and Social Management deputed by PMDFC in regional offices will technically assist and support the ESFPs/MCs in filling in of this Checklist

It is to be attached with the main document of sub-projects at planning stage and will be duly signed by the relevant BSPP and endorsed by the respective DPO-ESM

This checklist focuses on environmental issues and social concerns. To ensure that social dimensions are adequately considered, Involuntary Resettlement Screening Checklist will also be used

(iii) The purpose of this E&S Screening Checklists is to identify potential "Negative" impacts of environmental and social attributes or to enhance the existing environmental & social benefits. Use the "remarks" section to discuss any anticipated mitigation measures;

Name of ESFP: Wagar Hhmad
Name of MC: Wazirabad
Sub-Project Sector: Roads
Sub-Project Title: Rehabilitation of Road G. TRoad to Bypas Road Vice
Sub-Project Title: Rehabilitation of Road G. T Road is By pass Road Via Sub-Project Categorization: Slaughlin house (Bank of Wallah Patkho).

E-2 S-2

Date of Screening: 30-9-2021.

Anticipated Project Activities

Preparation of Sub-Stade

Preparation of grade

Preparation of Sub-base & base

st of Supprojects

appletion Time/Duration

62-3 months

**Estimated Cost of Subprojects** 

Tentative Completion Time/Duration

1 In all MCs, ESFPs are notified by Local government, MO (I&S) are focal persons for environmental sector and MO(P) are focal persons for

**Estimated Labor for Subproject** 

social sectors.

<sup>&</sup>lt;sup>2</sup> It is meant as PC-I and/or engineering estimates of sub-project

Screening Questions	Yes	No	Remarks
A. Project Siting	1		
Is the Sub-Project area adjacent to or within any of the following	lowing	:	
Environmentally sensitive areas?			
Legally protected Area		/	Noi Observe
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project <sup>3</sup>		/	NoI Observed. 4(Nallahphalkl
Estuarine		/	4
Special area for protecting biodiversity		/	4
Buffer zone of protected area		/	u
Mangroves Forest		/	Ų
Man-made forest /game reserve, orchid /crops or any other area of environmental importance		/	crops.
Socially sensitive /important areas/communities/ people	e?		
PCRs and or any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, Gordwarah, Temple, Fort, archeological/historical site) within 100 m of the proposed subproject <sup>4</sup>		/	Not Observe.
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project <sup>5</sup>			ч
Any graveyard of local community (Muslims or Christians)			i./
Any demographic or socio-economic aspects of the sub- project area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments <sup>6</sup> of the society and women or children)?			1'
Already existing infrastructure <sup>7</sup> (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		/	No infrasture to be impacl
B. Potential Environmental Impacts Will the Sub-Project cause			J
Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?		/	Dot antrapoled
2. Cutting of trees?			
3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?			и

<sup>&</sup>lt;sup>3</sup> Ibio

<sup>&</sup>lt;sup>4</sup> According to Environmental Assessment Guidelines adopted by Punjab EPA

<sup>5</sup> Ibid

<sup>&</sup>lt;sup>6</sup>due to caste, creed, religion or gender e.g. transgender

<sup>&</sup>lt;sup>7</sup>Sewerage /Drainage system, Water supply lines, tube-wells, WAPDA/Telephone transmission lines/electric poles, Railway tracks, Gas pipelines, Roads, Shops/Plazas, Banks, Industry, Disposal stations etc.

4. Generation of wastewater during construction or operation?	9
5. Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of waste water?	
6. Alteration of surface water hydrology of waterways resulting in increased sediment in streams/rivers or due to increased soil erosion at construction site?	4
7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?	
8. Over pumping of ground water, leading to salinization and ground subsidence?	Vo overpumping involu
9. Serious contamination of soil due to construction works?	1 Nol'antiapaled
10. Aggravation of solid waste problems in the area?	1 4
11. Generation of hazardous waste?	1 4
12. Increased air pollution due to sub-project construction and operation?	by wali Sprinkling.
13. Noise and vibration due to sub-project construction or operation?	/ work activini can cause but impail nextigible
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/liquid?	
15. Use of chemicals during construction?	4
C: Potential Social Impacts Will the Sub-Project cause	
1. Impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?	
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)	No involvation
3. Disproportionate impacts on the poor, women and children and or other vulnerable groups 8(mentioned above)?	1 Not auticipate
4. Temporary impediments in movements of people/transport and animals?	

<sup>&</sup>lt;sup>8</sup> Women, Children, Women headed households, People in old age, people having disabilities, socially isolated community groups and or people living below the poverty line

5.	Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?	/	contractor well hime local labor
6.	Social conflicts if workers from other areas are hired?	/	4
7.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	/	Não antiapoles
8.	Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?	\	4
9.	Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?	/	<b>\$</b>
10.	Any impact on sensitive receptors (mentioned above)	/	Ų
11.	Any impact of negative nature on already existing infrastructure including public amenities		ц

A.M.O(185) Prepared By:

Wagar Ahmedy Name:

Signature:

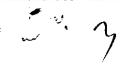
Date THE BIANK PADOPACE IN 163 Municipal Committee Wazirabad

Endorsed By: DPO - ESSs.

Name: Tehmura Kivan

Signature: Tyle:

Date: 30-9-2021.



#### **Environmental & Social Screening Checklist**

#### Instructions:

Environmental and Social Focal Persons (ESFPs) nominated by the MCs for PCP environmental and social management, will use this checklist in field for environmental and social screening and categorization of each and every sub-project proposed to be executed under the Program.

Deputy Program Officers-Environmental and Social Management deputed by PMDFC in regional offices will technically assist and support the ESFPs/MCs in filling in of this Checklist

It is to be attached with the main document2 of sub-projects at planning stage and will be duly signed by the relevant ESFP and endorsed by the respective DPO-ESM

This checklist focuses on environmental issues and social concerns. To ensure that social dimensions are adequately considered, Involuntary Resettlement Screening Checklist will also be used

(iii) The purpose of this E&S Screening Checklists is to identify potential "Negative" impacts of environmental and social attributes or to enhance the existing environmental & social benefits. Use the "remarks" section to discuss any anticipated mitigation measures.

Name of ESFP: Wagyar Ahmad.

Name of MC: Way rahed Sub-Project Sector: Road.

Sub-Project Title: Rehablitation of Road from Chank Grun Kotha is Salk.
Sub-Project Categorization:

Sub-Project Categorization:

S-2

Date of Screening:

30-9-2021

Anticipated Project Activities

Preparation of Subgrade Preparation of Subbase Preparation of base Finishing works.

Estimated Cost of Subprojects

Completion Time/Duration 2-2 mon/h

Estimated Labor for Subproject 15-20

1 In all MCs, ESFPs are notified by Local government; MO (I&S) are focal persons for environmental sector and MO(P) are focal persons for social sectors.

<sup>&</sup>lt;sup>2</sup> It is meant as PC-I and/or engineering estimates of sub-project



Screening Questions	Yes	No	Remarks
A. Project Siting		<u> </u>	<u> </u>
Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?			
Legally protected Area		/	
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project <sup>3</sup>		/	
Estuarine		1	
Special area for protecting biodiversity		/	
Buffer zone of protected area		/	
Mangroves Forest		/	
Man-made forest /game reserve, orchid /crops or any other area of environmental importance			
Socially sensitive /important areas/communities/ people?			
PCRs and or any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, Gordwarah, Temple, Fort, archeological/historical site) within 100 m		X	Muslim Graveyard. Mosque Tagner.
of the proposed subproject <sup>4</sup> Sensitive receptors (Schools, colleges, hospitals and			<i>γ</i>
clinics) within 100 meter of the proposed sub project <sup>5</sup>		/	
Any graveyard of local community (Muslims or Christians)			Muslim Graveford.
Any demographic or socio-economic aspects of the sub- project area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments <sup>6</sup> of the society and women or children)?		/	
Already existing infrastructure <sup>7</sup> (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		/	No import antiapated on existing infrastructura,
B. Potential Environmental Impacts Will the Sub-Project cause			1 1
Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?		/	impail is negligible as area Sill has no biodiversity
2. Cutting of trees?			No Free culling inche
3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?		/	Not anticipated
4. Generation of wastewater during construction or operation?		/	"
5. Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of waste water?		/	"

<sup>3</sup> Ibid

<sup>&</sup>lt;sup>4</sup> According to Environmental Assessment Guidelines adopted by Punjab EPA

<sup>&</sup>lt;sup>5</sup> Ibid.

<sup>&</sup>lt;sup>6</sup>due to caste, creed, religion or gender e.g. transgender

<sup>&</sup>lt;sup>7</sup>Sewerage /Drainage system, Water supply lines, tube-wells, WAPDA/Telephone transmission lines/electric poles, Railway tracks, Gas pipelines, Roads, Shops/Plazas, Banks, Industry, Disposal stations etc.

6.	Alteration of surface water hydrology of waterways resulting in increased sediment in streams/rivers or due to increased soil erosion at construction site?		\$	Not autiapaled
7.	Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		/	No surfacebody found in variable of project area.
8.	Over pumping of ground water, leading to salinization and ground subsidence?		1	No over pumping involved
9.	Serious contamination of soil due to construction works?		/	No anticipated
10.	Aggravation of solid waste problems in the area?	1		ynot properly managed can
11.	Generation of hazardous waste?		/	Not anticipated
12.	Increased air pollution due to sub-project construction and operation?	/		Construction machinery 4 excavation can cause
13.	Noise and vibration due to sub-project construction or operation?	/		maihineny & construction Vehicle can cause
14.	Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/liquid?		/	Contractor vill ensure Proper management of Solid/ liguid waste
15.	Use of chemicals during construction?		7.	Not use
	Potential Social Impacts Il the Sub-Project cause			
1.	Impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?		1	Not observed
2.	Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)		/	No involuntary resultime
3.	Disproportionate impacts on the poor, women and children and or other vulnerable groups 8(mentioned above)?		/	Noi anticipale
4.	Temporary impediments in movements of people/transport and animals?	$\checkmark$	X	Not high impect
5.	Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		/	local labor will e hired by contractor
6.	Social conflicts if workers from other areas are hired?		/	ц
7.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?		/	Contactor wint ensure PPES 4 1452 plans

<sup>&</sup>lt;sup>8</sup> Women, Children, Women headed households, People in old age, people having disabilities, socially isolated community groups and or people living below the poverty line

8.	Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?	/	Not anticipaled
9.	Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?	/	Not antrapaled
10.	Any impact on sensitive receptors (mentioned above)	/	· u

Prepared By:

Name:

Signature:

Date: ASSISTANT MUNICIPAL OFFICER MS Municipal Committee

Wazirabad

11. Any impact of negative nature on already existing infrastructure including public amenities

Endorsed By: DDO-ESSS.

Name: Tehrmine kiran

Signature: Tyla

Date: 30-6-2021

#### **Environmental & Social Screening Checklist**

#### Instructions:

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It is to be attached with the main document<sup>2</sup> of sub-projects at planning stage and will be duly signed by the relevant ESFP and endorsed by the respective DPO-ESM

This checklist focuses on environmental issues and social concerns. To ensure that social dimensions are adequately considered, Involuntary Resettlement Screening Checklist will also be used

(iii) The purpose of this E&S Screening Checklists is to identify potential "Negative" impacts of environmental and social attributes or to enhance the existing environmental & social benefits. Use the "remarks" section to discuss any anticipated mitigation measures.

The Control of the Co			
Name of ESFP: Wagar Ahm Name of MC: Waznabad	nad.		
Sub-Project Sector: Roads. Sub-Project Title: Rehablilation		Park to	Dhounkal Road Road
Sub- Project Categorization:	E-1	S-1	
	E-2	S-2_	
	<b>E-3</b>	(S-3)	

Date of Screening:

30-9-202

Anticipated Project Activities

Preparalum of Sub-grade

Preparalum of grade

Preparalum of Sub-base 4 base

Estimated Cost of Subprojects

Tentative Completion Time/Duration

Estimated Labor for Subproject

25-30 persons

<sup>1</sup> In all MCs, ESFPs are notified by Local government, MO (I&S) are focal persons for environmental sector and MO(P) are focal persons for social sectors.

<sup>&</sup>lt;sup>2</sup> It is meant as PC-I and/or engineering estimates of sub-project

Screening Questions	Yes	No	Remarks				
A. Project Siting	L						
Is the Sub-Project area adjacent to or within any of the following:							
Environmentally sensitive areas?							
Legally protected Area		1	Not observel,				
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project <sup>3</sup>		/	4				
Estuarine		/	4				
Special area for protecting biodiversity		/	"				
Buffer zone of protected area		/	4				
Mangroves Forest		/	ll .				
Man-made forest /game reserve, orchid /crops or any other area of environmental importance			l)				
Socially sensitive /important areas/communities/ people	e?						
PCRs and or any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, Gordwarah, Temple, Fort, archeological/historical site) within 100 m of the proposed subproject <sup>4</sup>		/	У				
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project <sup>5</sup>			lı				
Any graveyard of local community (Muslims or Christians)			4				
Any demographic or socio-economic aspects of the sub- project area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments <sup>6</sup> of the society and women or children)?		/	4				
Already existing infrastructure <sup>7</sup> (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		/	to be impact.				
B. Potential Environmental Impacts Will the Sub-Project cause			J				
Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?		/	Not anliapated				
2. Cutting of trees?		/	<i>U V</i>				
3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?		/	7				

<sup>&</sup>lt;sup>3</sup> Ibid.

<sup>&</sup>lt;sup>4</sup> According to Environmental Assessment Guidelines adopted by Punjab EPA <sup>5</sup> Ibid.

<sup>&</sup>lt;sup>6</sup>due to caste, creed, religion or gender e.g. transgender

<sup>&</sup>lt;sup>7</sup>Sewerage /Drainage system, Water supply lines, tube-wells, WAPDA/Telephone transmission lines/electric poles, Railway tracks, Gas pipelines, Roads, Shops/Plazas, Banks, Industry, Disposal stations etc.

ater during construction or	/	U	
rom construction site or due	/	1	
ediment in streams/rivers or	/	No Surface water Jourd	
es from worker-based camps	/	Not antiapaled	
	/	No overpromping invol	ne)
of soil due to construction	/	Not anticipated	
ste problems in the area?	/	4	
waste?		"	
	/	Dusi pollulion can be miligate invouth wal	લ્ટ
to sub-project construction	/	rocheish	ı
		Des antiapaled	
construction?		<u>,</u>	
/cultural areas; disfiguration ial loss/damage to Physical	/		
ent and/or economic	/	Mo involuntary resellent involved	
	/	Desarticipaled Altrate sou ti juil	
	1 /		
Transfer of the second of the	e to sub-project construction  preeding habitats for diseases and by mosquitoes and rodents  g construction?  pacts  L/cultural areas; disfiguration tial loss/damage to Physical Rs)?  Interpresent lement of people?	water/ground water due to from construction site or due all of waste water?  ater hydrology of waterways sediment in streams/rivers or osion at construction site?  be water quality due to silt tes from worker-based camps onstruction?  ground water, leading to subsidence?  of soil due to construction  aste problems in the area?  stion due to sub-project tion?  to to sub-project construction  breeding habitats for diseases and by mosquitoes and rodents  g construction?  acts  l/cultural areas; disfiguration tial loss/damage to Physical Rs)?  Intary resettlement of people?  tent and/or economic fill Involuntary Resettlement  acts on the poor, women and	water/ground water due to rome construction site or due al of waste water?  ater hydrology of waterways sediment in streams/rivers or pasion at construction site?  The water quality due to silt tes from worker-based camps construction?  Bround water, leading to subsidence?  For soil due to construction  For soil due to construction  For swaste?  For one to sub-project construction  For swaste?  For one to sub-project construction  For sub-project const

<sup>&</sup>lt;sup>8</sup> Women, Children, Women headed households, People in old age, people having disabilities, socially isolated community groups and or people living below the poverty line

		 	,
5.	Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?	/	contract will ensure total labor huis
6.	Social conflicts if workers from other areas are hired?	/	ц
7.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	/	ppts will be used by labor
8.	Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?	/	Dal anticipabil
9.	Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?	/	4
10.	Any impact on sensitive receptors (mentioned above)	/	4
11.	Any impact of negative nature on already existing infrastructure including public amenities		

Prepared By: A.M.O(I&S),
Name: Wayar Ahmed
Signature: wagan

Date: 30-09-2021 ASSISTANT MUNICIPAL OFFICER 1865. Municipal Committee

Wazirabad

Tehmina Kiran DPO - ESSS Tyle, 30-9-2021

Name:

Signature:

Date:

#### **Environmental & Social Screening Checklist**

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This checklist focuses on environmental issues and social concerns. To ensure that social dimensions are adequately considered, Involuntary Resettlement Screening Checklist will also be used

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Name of ESFP: Wagar Ahmad.
Name of MC: Wazrabad.

Sub-Project Sector: Roads

Sub-Project Title: Re haltalioi of Road from Bank of Ponjab his Sub-Project Categorization: Karlway N. 3 amabad (Arif Shaheed Road)

Sub-Project Categorization:

Date of Screening:

30-9-2021

**Anticipated Project Activities** 

Preparation of Substance Preparation of Substance Preparation of Substance Loyang of Appell.

**Estimated Cost of Subprojects** 

Completion Time/Duration

02-3months

**Estimated Labor for Subproject** 

15-20 .

<sup>1</sup> In all MCs, ESFPs are notified by Local government; MO (I&S) are focal persons for environmental sector and MO(P) are focal persons for social sectors.

<sup>&</sup>lt;sup>2</sup> It is meant as PC-I and/or engineering estimates of sub-project

Screening Questions	Yes	No	Remarks
A. Project Siting		l	
Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?			
Legally protected Area		· /	
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project <sup>3</sup>			
Estuarine		/	
Special area for protecting biodiversity		/	
Buffer zone of protected area		/	
Mangroves Forest		/	
Man-made forest /game reserve, orchid /crops or any other area of environmental importance			
Socially sensitive /important areas/communities/ people?			
PCRs and or any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, Gordwarah, Temple, Fort, archeological/historical site) within 100 m of the proposed subproject <sup>4</sup>			
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project <sup>5</sup>			EFA School System
Any graveyard of local community (Muslims or Christians)			
Any demographic or socio-economic aspects of the sub- project area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments <sup>6</sup> of the society and women or children)?		/	
Already existing infrastructure <sup>7</sup> (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		/	
B. Potential Environmental Impacts Will the Sub-Project cause			
Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?		/	rut observed
2. Cutting of trees?			ų.
3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?		/	4
4. Generation of wastewater during construction or operation?		/	,
5. Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of waste water?		/	4

<sup>&</sup>lt;sup>3</sup> Ibid.

<sup>&</sup>lt;sup>4</sup> According to Environmental Assessment Guidelines adopted by Punjab EPA

<sup>&</sup>lt;sup>5</sup> Ibid

<sup>&</sup>lt;sup>6</sup>due to caste, creed, religion or gender e.g. transgender

<sup>&</sup>lt;sup>7</sup>Sewerage /Drainage system, Water supply lines, tube-wells, WAPDA/Telephone transmission lines/electric poles, Railway tracks, Gas pipelines, Roads, Shops/Plazas, Banks, Industry, Disposal stations etc.

4.	Generation of wastewater during construction or operation?		/	
5.	Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of waste water?		/	
6.	Alteration of surface water hydrology of waterways resulting in increased sediment in streams/rivers or due to increased soil erosion at construction site?			
7.	Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		1	
8.	Over pumping of ground water, leading to salinization and ground subsidence?		1	
9.	Serious contamination of soil due to construction works?		1	No hazardous chemical would be used during construction. if not manage property. Solid wall cause researce.
10.	Aggravation of solid waste problems in the area?	/		if not manage property. Solid wast
11.	Generation of hazardous waste?		/	
12.	Increased air pollution due to sub-project construction and operation?		,	air pollulion at moderale const is anticipate: contractor will lojhow EMP Strictly: noise pollulion can be generali Contractor will follow entp.
13.	Noise and vibration due to sub-project construction or operation?	/		noise poilulier en Be generali Contra « Co will follow en P ,
14.	Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/liquid?		/	Horizator will ensure proper olimosal of Soid & 1:9 md
15.	Use of chemicals during construction?		/	
	Potential Social Impacts I the Sub-Project cause			
1.	Impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?		/	
2.	Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)		/	No involudant resslend
3.	Disproportionate impacts on the poor, women and children and or other vulnerable groups <sup>8</sup> (mentioned above)?		/	
4.	Temporary impediments in movements of people/transport and animals?	<b>✓</b>	,	Allwhate roule is available odjacent will this road

<sup>&</sup>lt;sup>8</sup> Women, Children, Women headed households, People in old age, people having disabilities, socially isolated community groups and or people living below the poverty line

5.	Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			local labor will be hind.
6.	Social conflicts if workers from other areas are hired?			at tocal tand.
7.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?			
8.	Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?		<b>/</b>	
9.	Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?	C	/	
10.	Any impact on sensitive receptors (mentioned above)		/	
11.	<ul> <li>Any impact of negative nature on already existing infrastructure including public amenities</li> </ul>			No impact is anticipated

Endorsed By:

Name:

Date:

Signature:

A.M.O (I&S) Prepared By:

wagar Alpmed Name:

Signature:

Date:

ASSISTANT MODICIPAL U. ... Municipal for an a have asset

Page 178

DPO-ESSS.
Tehmine Kivan.
Tyle?
30-a-2021.

**Environmental & Social Screening Checklist** 

#### Instructions;

Environmental and Social Focal Persons (ESFPs) nominated by the MCs for PCP environmental and social management, will use this checklist in field for environmental and social screening and categorization of each and every sub-project proposed to be executed under the Program.

Deputy Program Officers-Environmental and Social Management deputed by PMDFC in regional offices will technically assist and support the ESFPs/MCs in filling in of this Checklist

It is to be attached with the main document? of sub-projects at planning stage and will be duly signed by the relevant ESFP and endorsed by the respective DPO-ESM

This checklist focuses on environmental issues and social concerns. To ensure that social dimensions are adequately considered. Involuntary Resettlement Screening Checklist will also be used

(iii) The purpose of this E&S Screening Checklists is to identify potential "Negative" impacts of environmental and social attributes or to enhance the existing environmental & social benefits. Use the "remarks" section to discuss any anticipated mitigation measures.

Name	e of ESFP:	Magar	Ahmad
			1

Name of MC:

Wazirabad

Sub-Project Sector: Roads.

Sub-Project Title: Widening and Improvement of Road from Veternily

Sub-Project Categorization: Pill & G.T. Road via Railway Station

Sub-Project Categorization: Pill & G.T. Road via Railway Station

Date of Screening:

30-9-2021.

Anticipated Project Activities

Estimated Cost of Subpr

Tentative Completion Time/Duration

**Estimated Labor for Subproject** 

20-25 porson.

<sup>1</sup> In all MCs, ESFPs are notified by Local government, MO (I&S) are focal persons for environmental sector and MO(P) are focal persons for

<sup>&</sup>lt;sup>2</sup> It is meant as PC-I and/or engineering estimates of sub-project

Screening Questions	Yes	No	Remarks
A. Project Siting	l		
Is the Sub-Project area adjacent to or within any of the following	owing	:	
Environmentally sensitive areas?		/	
Legally protected Area		/	Noi Observed.
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project <sup>3</sup>		/	ii .
Estuarine			4
Special area for protecting biodiversity		\	H
Buffer zone of protected area		1	U
Mangroves Forest		7	ų
Man-made forest /game reserve, orchid /crops or any other area of environmental importance	-		υ
Socially sensitive /important areas/communities/ people	e?		,
PCRs and or any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, Gordwarah, Temple, Fort, archeological/historical site) within 100 m of the proposed subproject <sup>4</sup>		_	Not observed.
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project <sup>5</sup>			Primary School, THQ , welling
Any graveyard of local community (Muslims or Christians)		/	4
Any demographic or socio-economic aspects of the sub- project area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments <sup>6</sup> of the society and women or children)?		/	4
Already existing infrastructure <sup>7</sup> (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		/	и
B. Potential Environmental Impacts Will the Sub-Project cause			
Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?		/	NoI anticipaled
2. Cutting of trees?			4
3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?		/	y

<sup>3</sup> Ibio

<sup>&</sup>lt;sup>4</sup> According to Environmental Assessment Guidelines adopted by Punjab EPA

<sup>5</sup> Ibid

 $<sup>^6\</sup>mathrm{due}$  to caste, creed, religion or gender e.g. transgender

<sup>&</sup>lt;sup>7</sup>Sewerage /Drainage system, Water supply lines, tube-wells, WAPDA/Telephone transmission lines/electric poles, Railway tracks, Gas pipelines, Roads, Shops/Plazas, Banks, Industry, Disposal stations etc.

/	ч
/	ч
/	No Surface wale- bady found.
/	Not autiapaled
1	4
/	ц
/	и
/	4
/	Dusipollulion com miligal by waln sprinkling
/	Loghgibh upart
	Vor anticipated
	и
/	De involverlang resellent involved.
/	Not autroipaled
	/

<sup>&</sup>lt;sup>8</sup> Women, Children, Women headed households, People in old age, people having disabilities, socially isolated community groups and or people living below the poverty line

5.	Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?	/	Contractor will ensure hirring of local fabor
6.	Social conflicts if workers from other areas are hired?	1	4
7.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	/	PPEs would be used by labor
8.	Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?	/	Not autrapaled
9.	Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?	/	7
10.	Any impact on sensitive receptors (mentioned above)	/	4
11.	Any impact of negative nature on already existing infrastructure including public amenities	/	

Prepared By: A.M.O (145)

Name:

Signature:

Date: Municipal Committee

Wazirabad

Endorsed By:

Name:

Signature:

Date:

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