Local Government & Community Development Department

Punjab Cities Program
Improvement and Rehabilitaton of Roads and Chowks
in MC Gojra

PC-I

EstimatedCost PKR 132.38Million

November 2022

Municipal Committee Gojra

JERS CONSULTANCY (PVT) LTD
(Formely Jers Engineering Consultants)
24-Civic Center, Quaid-e-Azam Town, Township, Lahore (Pakistan)
Tel: +92 42 35113123, +92 42 35113124
Fax: +92 42 35113125
E-mail: info@jers.com.pk, mail@jers.com.pk
Web: http://www.jers.com.pk

Punjab Cities Program

PC-I for Improvement of Roads & Chowks Project in Gojra City

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PC-I FORM
for
Improvement & Rehabilitation of Roads and Chowks Project in Gojra City

Project Serial Number

Sector : ***Local Government & Community Development Department***
Sub Sector: ***Social***

<table>
<tr><td>1. Name of the project</td><td>Punjab Cities Program
Improvement & Rehabilitation of Roads & Chowks Project in Gojra city</td></tr>
<tr><td>2.Location</td><td>Gojra was given the status of a Tehsil Headquarter and affiliated with newly established district Toba Tek Singh in 1982.The town of Gojra is located at 72°-41’ East and 31°-9' North. The city is located at 50 km from Faisalabad, 170 km from Lahore and 32 km north of Toba Tek Singh. The climate of the city is hot in summer and cold in winter.
Location map of the city is attached in Annexure-A</td></tr>
<tr><td colspan="2">3. Authorities responsible for</td></tr>
<tr><td>i- Sponsoring</td><td>Government of the Punjab (through World Bank funding)</td></tr>
<tr><td>ii- Execution</td><td>Municipal Committee Gojra</td></tr>
<tr><td>iii- Operation and Maintenance</td><td>Municipal Committee Gojra</td></tr>
<tr><td>iv-Concerned Provincial Department</td><td>Local Government and Community Development Department Punjab</td></tr>
<tr><td>4a.Plan Provision</td><td></td></tr>
<tr><td>i. If the project is included in medium term/five year plan, specify actual allocation</td><td>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.
<table>
<tr><td>Total loan from World Bank</td><td>USD 200.00 million</td></tr>
<tr><td>Component-1 Infrastructure development (PforR)</td><td>USD 180.00 million USD</td></tr>
<tr><td>Component-2 Technical Assistance</td><td>USD 20.00 million</td></tr>
<tr><td>MCs share (20% of PforR component) equivalent to:</td><td>USD 36.00 million</td></tr>
<tr><td>Total Program cost</td><td>USD 236.00 million</td></tr>
</table></td></tr>
</table>

		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.
ii- If not included in the current plan, what warrants its inclusion and how it is now proposed to be accommodated		Not applicable
iii If the project is proposed to be financed out of block provision indicate.		The Project is being financed by World Bank as Donor along with 20% co-financing from the Program Units and is not proposed to be financed out of block allocation.
4b- Provision in the current year PSDP/ADP		PKR.100.00 million under ADP 2021-22 General Serial No 2521 for Component-2 of the Program i-e Technical Assistance as described above.
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 Gojra 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, justification, technical parameters and technology 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. The major reason of unsatisfactory service delivery is the lack of proper maintenance of the municipal infrastructure in all sectors causing consumer dissatisfaction at one end and degradation of the infrastructure on the other end apart from very low revenue recovery as the consumers are reluctant to pay because of deteriorated service delivery. 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. The only way to keep the infrastructure in operational and functional condition for better travelling and recreational facilities to the inhabitants

<table>
<tr><td></td><td>of the city and the surrounding areas, is to improve the roads, chowks and important cross roads</td></tr>
<tr><td>ii. Description of the subproject-</td><td>The project comprises of improvement of 02 Nos damaged roads with total length of 2.29 Km in the city. Detail of these roads has been given in the table below.</td></tr>
<tr><td>iii Detail of civil works, equipment & machinery and other physical facilities</td><td>The detail of roads and chowks to be improved, rehabilitated or constructed in the city, is given below
<table>
<tr><td colspan="4">Improvement and construction of roads</td></tr>
<tr><td>S. N.</td><td>Name of road</td><td>From-To</td><td>Detail of works involved</td></tr>
<tr><td>1</td><td>Sammundri Road, Hussain & Ansar Colony Road</td><td>Railway Crossing Chowk via Takia Phomin Sian Chowk Via Ansar Colony to Filtration Plant</td><td>• Geometric Improvement
• Rehabilitation of Existing Pavement Structure
• Pavement Marking
• Street Lighting
• Improvement of drainage system</td></tr>
<tr><td>2</td><td>Chemni Peer road</td><td>Sammundri road to Railway Track Road</td><td>• Geometric Improvement
• Rehabilitation of Existing Pavement Structure
• Street Lighting
• Improvement of drainage system</td></tr>
<tr><td colspan="4"></td></tr>
</table></td></tr>
<tr><td>iv Indicate governess issues of the sector relevant to the project and strategy to resolve them</td><td>• Municipal Committee Gojra 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.</td></tr>
</table>

7- Capital Cost of Project

The summary of the works included in the project is given below;

S. No	Name of road	Cost (PKR million)
1	Sammundri Road, Hussain & Ansar Colony Road and	47.87
2	Chemni Peer road	29.05
3	Drainage System	4.7
4	Electrical Works	41.16
5	Environment Health Safety Budget	0.84
	Total	**123.72**
6	Contingencies @2%	2.47
7	Punjab Sales Tax @5%	6.18
	Grand Total	**132.38**

See **Annexure-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 determining the estimates be provided.

The cost estimates have been framed on the basis of bill of quantities actually required at site and unit rates from the Market Rate System (MRS) issued by the Government of Punjab (District Toba Tek Singh 2nd biannual of year 2022).

For items not available in the MRS, the same have been analyzed as per prevailing 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	Sammundri Road, Hussain & Ansar Colony Road.	100%
2	Chemni Peer Road.	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	Sammundri Road, Hussain & Ansar Colony Road	47.87	47.87
2	Chemni Peer road	29.05	29.05
3	Drainage System	4.77	4.77
4	Electrical Works	41.16	41.16
5	Environment Health Safety Budget	0.84	0.84
	Total	**123.72**	**123.72**
6	Contingencies @2%	2.47	2.47
7	Punjab Sales Tax @5%	6.18	6.18
	Grand Total	**132.38**	**132.38**

8-**Annual recurrent cost after completion of the project and source of financing**

The roads & chowks are already being repaired and maintained by the Municipal Committee Gojra out of its own financial resources. No additional cost will be required after completion of the improvement and up gradation of the roads and chowks, rather the repairs cost will be reduced for the initial years. However, the efficiency of the infrastructure and service delivery level will be improved after completion of the project.

9- **Demand & Supply Analysis**

i- Existing Capacity of services

Existing supply level

- 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.
- Municipal Committee Gojra 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&M cost of services. This has further degraded the situation and the service delivery level is further deteriorating.

ii- Projected Demand for 10 years	• Traffic is increasing day by day in Gojra city. Projected traffic of 2 project roads for 10 year is 20.97 million. Project roads of MC Gojra needs to be improved to save the travel time and better riding quality. • 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. • 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.
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	The nature of supply and demand gap has been explained in the preceding paras which concludes; • 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. • The existing infrastructure has poor efficiency resulting in unsatisfactory service delivery level. • 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:

Sr. #	Road Name	From and To	Pavement Type	ROW	Carriageway Type	Metaled Width	Length (km)
1	Sammundri Road, Hussain & Ansar Colony Road	Takla Phomin Sian chowk to Ansar colony filteration plant	Asphalt Concrete & tuff paver	37 ft single varies	Single	30 ft single varies	1.43
2	Chemni Peer road	Sammundri road to railway track road	Tuff Paver	20 ft single (Varies)	Single	-	0.86

2. Roads and chowk are designed for 10-year life.
3. These roads will carry out the 201.978 Million traffic cumulatively for 10 years.
4. Improvement of these roads and chowk will decrease the travel time of commuters which will ultimately improve the economy of city.

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. organization and program management.	USD 20 million
20% share of Municipalities is equivalent to	USD 36 million
Total funds available for Infrastructure Development	USD 216 million
This project will be funded under this financing.	

b) Equity

A. Loan/grant to MC

The amount of loan converted to grant to Gojra Unit will be **PKR. (105.90) million**. The financing of the project will be as given below:

Grant to Unit for the year 2022-2023 (80% of cost of PC-I)	PKR 105.90million
20% Co-finance by MC (20% of the cost of PC-I)	PKR 26.47 million
Total available funds	PKR 132.38 million

B. Project Cost PKR 132.38 million

*The loan is from World Bank to Government of Pakistan/Punjab which will trickle down to Gojra Unit as grant.

c) Grants		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.
d) Weighted cost of capital		Nil
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. • Gojra 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. Environmental Impact negative/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.

<table>
<tr><td></td><td>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.</td></tr>
<tr><td>iv. Quantifiable project outputs</td><td>The quantifiable project out puts have been given above in Sr. No-9 (V). The social benefits to the citizen have been described at Sr. No-11(ii).</td></tr>
<tr><td>v. Unit cost analysis</td><td>The unit cost analysis is produced below;
<table><tr><td>Project capital cost</td><td>PKR 131.38 million</td></tr><tr><td>Population of the city in year 2023</td><td>276,925 persons</td></tr><tr><td>Unit capital cost per capita</td><td>PKR 478</td></tr></table>
• Unit R&M cost: – The Repair & maintenance cost is already being borne by Gojra Unit and there will be no increase in this cost. Due to improvement of the infrastructure R&M cost will reduce for at least 5 years after completion of the project.</td></tr>
<tr><td>vi. Employment generation (direct and indirect)</td><td><u>Employment Analysis</u>
Direct Employment
a) Planning and Design of projects
The planning and design of the project has been entrusted to local consultants who have appointed staff and experts in road and related disciplines along with their support staff. The consultants 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
PMDFC has the project monitoring and supervisory role and the company has enough experts and staff to complete this assignment. PMDFC has already deployed under mentioned staff for these projects:
• Civil Engineers
• Accounts, administration and audit personnel
• Urban planners
• GIS experts</td></tr>
</table>

	• Support staff like computer operators, 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*** Gojra 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 on project cost and viability	The impact of delay in project implementation will; • Result in increased project cost due to escalation in cost of material and labor. • Delay the benefits to the target group • Result in further deterioration of the infrastructure and the service delivery level.
12-Implementation Schedule	
a) Indicate starting and completion date of the project	The project is anticipated to commence by January 2023 and to be completed by April 2023 with project implementation period of 4 months.
b) Item wise/year wise schedule in line chart	The Gant chart has been attached at **Annexure-D**
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 Municipal Committee Gojra 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 Gojra 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.

S #	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	01	Bachelor Degree in Civil engineering with minimum 8 years' experience in site supervision and execution for projects of similar nature
3	Site Inspectors	01	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.

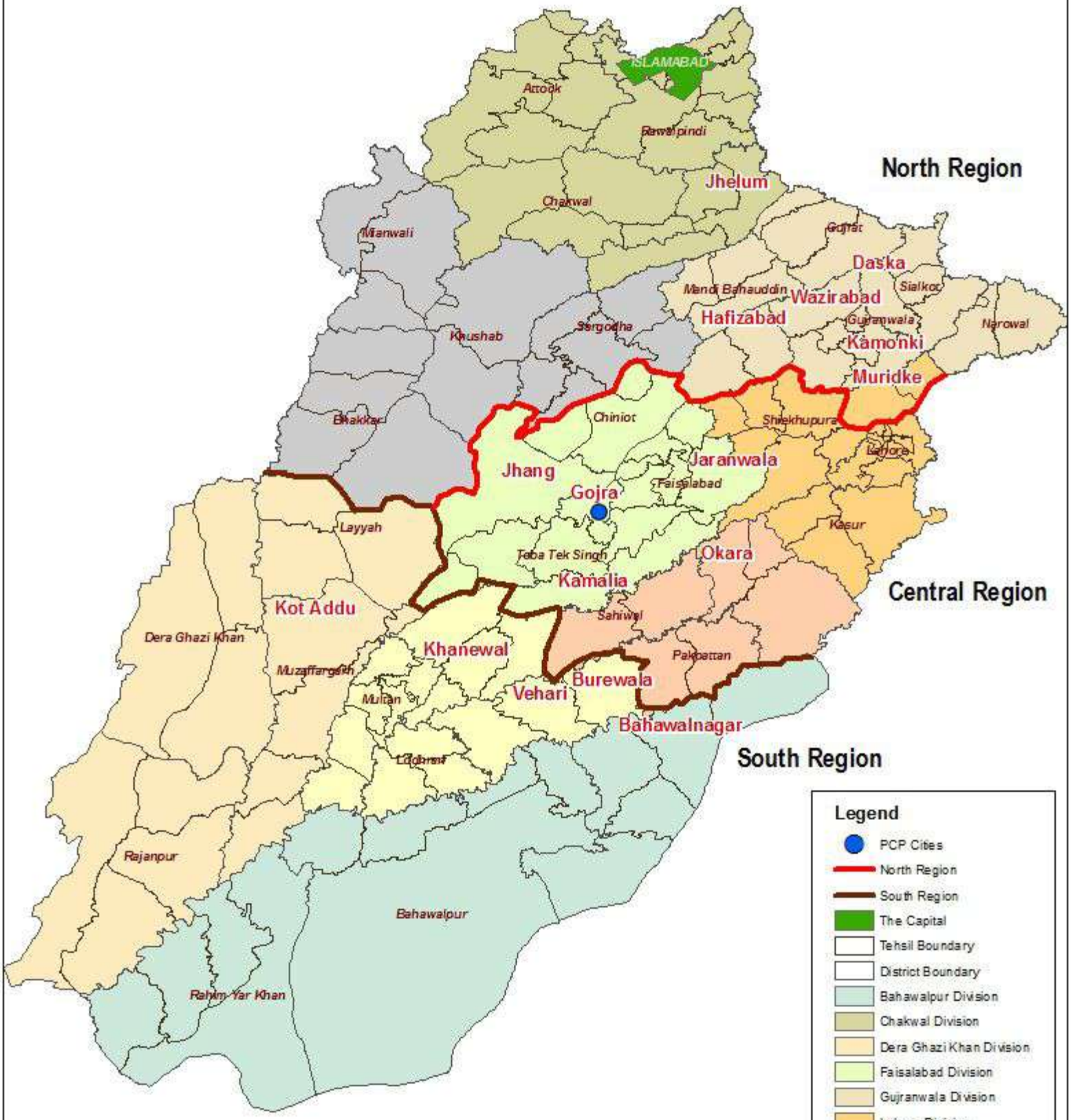
14-Additional projects /decisions required to optimize the investment being undertaken		**1) Shortage & frequent transfers of Provincially appointed staff** MC is facing shortage in provincially appointed and locally appointed cadres. This will seriously affect the pace of progress of the program and the implementation of the infrastructure projects may be delayed. Provincial Government should fill up the vacant staff immediately for optimizing the investments in MC. **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.
15-Certificate		Certified that the project proposal has been prepared on the basis of guidelines provided by the Planning Commission for the preparation of PC-I for social sectors projects.

Prepared by	JERS Consultancy (Pvt) Ltd	Signatures	
Checked by	Municipal Officer (I&S) Municipal Committee Gojra	Signatures	
	Chief Officer Municipal Committee Gojra	Signatures	
	Administrator Municipal Committee Gojra	Signatures	
Vetted by	Senior Program Officer PMDFC	Signatures	

Annexure-A
Location Map

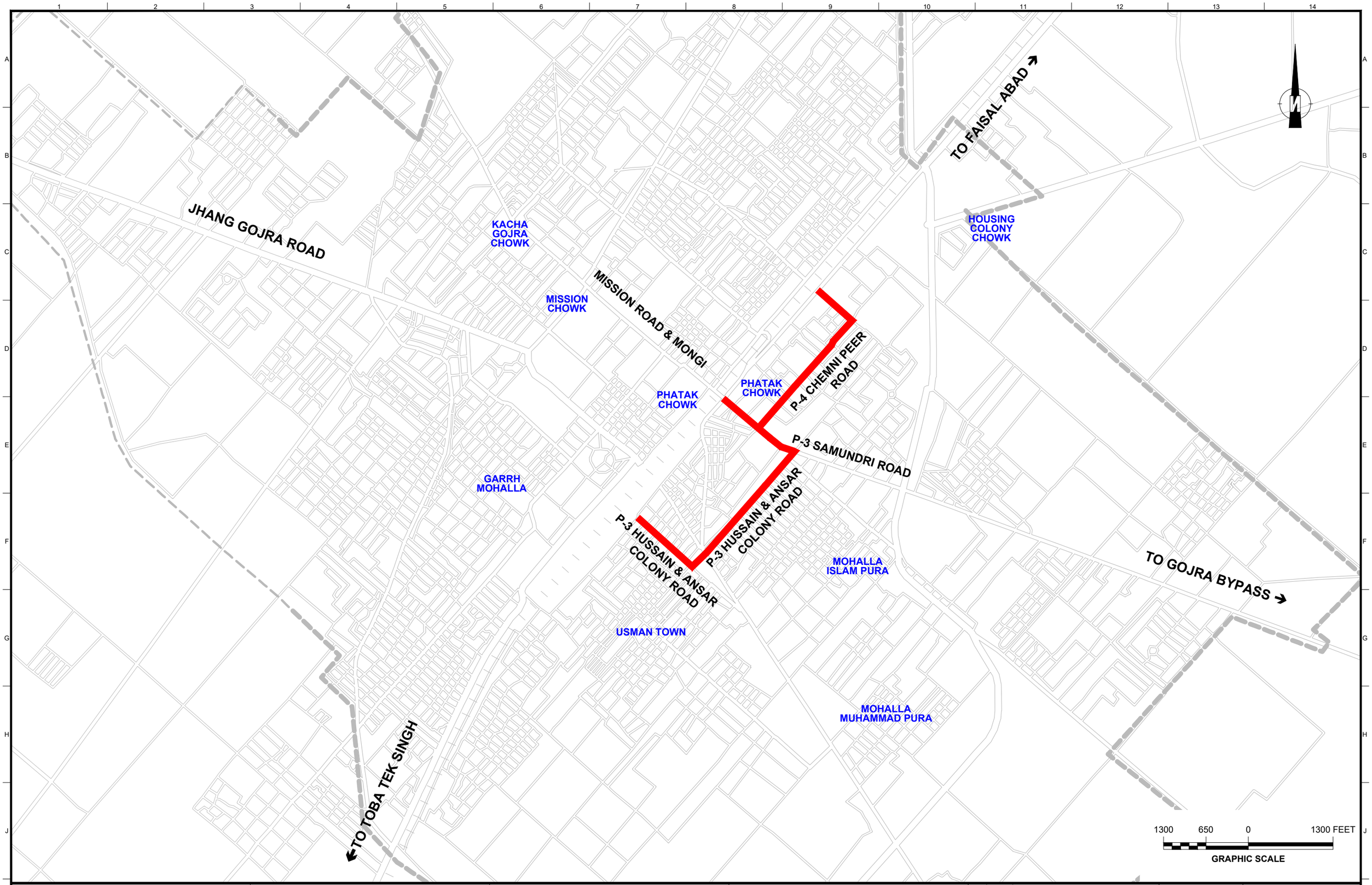
Location Map
(Punjab Cities Program)

ANNEXURE - A



HELP BUILD PMDFC HEALTHY CITIES

Local Government & Community Development Department, Governmnet of The Punjab



CLIENT:

HELP BUILD PMDFC HEALTHY CITIES

PUNJAB MUNICIPAL DEVELOPMENT FUND COMPANY (PMDFC)

CONSULTANTS:

JERS CONSULTANCY (PVT) LTD

24-Civic Center, Quaid-e-Azam Town, Township, Lahore (Pakistan)
Tel: +92 42 35113123, +92 42 35113124
Fax: +92 42 35113125
E-mail: info@jers.com.pk, mail@jers.com.pk
Web: http://www.jers.com.pk

PROJECT:

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

DRAWING TITLE:

PROJECT KEY PLAN (P-03 & P-04) (GOJRA)

REV.	DATE	DESCRIPTION
-	-	-

DRAWN BY: Adeel
CHECKED BY: Umer
DATE: November,2022

DRAWING NO: SV-01
SCALE: UNIT=FEET 1"=1300'
SHEET: -
JOB NO: 488-01

Annexure-B
Cost Estimate

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

ROAD WORKS

MC GOJRA

DETAILED COST ESTIMATE

SUMMARY

Sr. No.	Description	Amount (Rs.)
1	ROAD WORKS	76,934,292
2	STORMWATER DRAINAGE SYSTEM	4,777,377
3	ELECTRICAL WORKS	41,164,049
4	ENVIRONMENTAL HEALTH SAFETY BUDGET	848,950
	Total Amount (Rs.)	**123,724,669**
	Contingencies @ 2%	2,474,493
	PRA Charges @ 5%	6,186,233
	Total Amount. Rs.	**132,385,396**

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

INFRASTRUCTURE WORK

MC GOJRA

DETAILED COST ESTIMATE

SUMMARY

Sr. No.	Description	Amount (Rs.)
1	**ROAD WORKS**	
1.1	P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD (1.43 Km)	47,875,656
1.2	P-4 CHEMNI PEER ROAD (0.87 Km)	29,058,637
	1) Total Amount. Rs.	**76,934,292**
2	**STORMWATER DRAINAGE SYSTEM**	
2.1	P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD	2,902,555
2.2	P-4 CHEMNI PEER ROAD	1,874,822
	2) Total Amount. Rs.	**4,777,377**
3	**ELECTRICAL WORKS**	
3.1	P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD	25,639,620
3.2	P-4 CHEMNI PEER ROAD	15,524,429
	3) Total Amount. Rs.	**41,164,049**
4	**ENVIRONMENTAL HEALTH SAFETY BUDGET**	**848,950**
	Total Amount (Rs.) "1+2+3+4"	**123,724,669**
	Say Millions	**123.72**

ROAD WORKS

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

DETAILED COST ESTIMATE

P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD

ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	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	464.50	423.30	196,623
		Excavation				
2	3/7	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	101.60	9,016.70	916,097
		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	50.80	1,783.25	90,589
		Sub Base Course				
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 Sargodha querry to site, actual compacted depth shall be considered for payment)	100Cft	335.28	15,720.30	5,270,702
		Water Bound Macadam				

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DETAILED COST ESTIMATE

P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD

ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
5	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	375.54	23,137.16	8,688,927
		Prime Coat				
6	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	37.50	2,293.45	86,004
7	18/7	Providing and laying bituminous tack coat, using 10 lbs. of bitumen per 100 Sft (0.49 Kg of bitumen per sq.m.)	100Sft	464.50	1,039.65	482,917
		Carpeting				
		AWC				
8	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.	502.00	15,907.42	7,985,525
		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	3,350.00	56.20	188,270
		Kerb Stone				
10	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.				

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DETAILED COST ESTIMATE

P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD

ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		b) With Painting				
		(i) 14" high	P.Rft	500.00	516.90	258,450
		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	Sft	112,661.00	194.90	21,957,629
		Road Edging				
12	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	9,412.00	52.80	496,954
		P.C.C (Between Asphalt and Tuff Paver) (and 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	19.95	38,178.90	761,669
		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				
		(ii) 43x2=86 Glass beads a side	Each	336.00	693.80	233,117

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DETAILED COST ESTIMATE

P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD

ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
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				
		CIRCULAR/TRIANGULAR				
		3 ft size	P. Sft	60.00	948.15	56,889
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	1,259.95	138,595
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	1,111.65	66,699
		Total Amount Rs.				**47,875,656**

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DETAILED COST ESTIMATE

P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD

ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		DRAINAGE SYSTEM				
		Dismantling				
1	4/19/c	c) Dismantling cement concrete 1:2:4 plain.	100Cft	0.58	11,174.60	6,517
		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.	1000Cft	4.75	9,016.70	42,829
		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	22.23	38,178.90	848,717
		Brick Work				
4	7/7/i	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3	100Cft	20.82	32,796.10	682,699
5	7/10	Extra for pacca brick work in steining of wells or any other circular masonry.	100Cft	1.17	2,683.20	3,130
		Plaster				
6	11/8/b	Cement plaster 1:3 upto 20' (6.00 m) height:-				
		b) ½" (13 mm) thick	100Sft	29.31	3,424.50	100,374
		Gully Grating Chamber				
7	21/8	Constructing standard gully grating chamber, 3'x2½' (900x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	Each	38.00	16,561.10	629,322

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DETAILED COST ESTIMATE

P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD

ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
8	7/30	Supplying and filling sand under floor; or plugging in wells.	100Cft	19.00	2,943.30	55,923
		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	760.00	451.15	342,874
		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	18.00	10,065.00	181,170
		Manhole Cover				
11	MR	Old/existing Manhole cover and Frame complete set shift to MC store.	Set	18.00	500.00	9,000
		Total Amount (Rs)				**2,902,555**

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DETAILED COST ESTIMATE
P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD
ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	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	30.62	10,677.75	326,953
		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	2,184.00	457.75	999,726
		Steel Work				
3	6/12/c	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):-				
		('c) Deformed bars (Grade-40)	100Kg	54.60	31,394.70	1,714,151
4	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	11,375.00	185.85	2,114,044

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P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD

ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
5	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	1,820.00	117.70	214,214
6	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")	Rft	3,640.00	105.15	382,746
		c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-				
		vi) 10 mm (7/0.052")	Rft	11,375.00	523.85	5,958,794
		vii) 16 mm (7/0.064")	Rft	100.00	642.90	64,290
7	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 & 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	91.00	47,736.00	4,343,976

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DETAILED COST ESTIMATE

P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD

ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
8	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	91.00	53,295.00	4,849,845
9	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	14,659.25	14,659

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DETAILED COST ESTIMATE

P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD

ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
10	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	329,487.70	329,488
11	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	94.00	9,592.65	901,709
		Sub Total Scheduled Items: (A)				**22,214,594**
Non Schedule		**Part-B**				

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DETAILED COST ESTIMATE

P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD

ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
12	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
13	N.S	Shifting of 18 Nos. Wapda Electric Poles	Job			2,700,000
14	N.S	Electric Connection Charges	Each	1.00	400,000	400,000
		Total Cost (Part B)			**Rs.**	**3,425,026**
		Grand Total (Part A + Part B)			**Rs.**	**25,639,620**
		Grand Total Amount Rs.				**76,417,830**

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P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

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+650	1	650	29.00		18,850	Sft
	RD 0+650 to 1+340	1	690	40.00		27,600	Sft
					Total	46,450	Sft
					Total.	**464.50**	**%Sft**
	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 from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:-						
	For Tuff Paver Shoulders & Road						
	RD 0+000 to 0+650	2	650	4.00	1.00	5,200	Cft
	RD 0+650 to 1+340	2	690	4.00	1.00	5,520	Cft
	RD 1+340 to 1+900	1	560	30.00	1.00	16,800	Cft
	RD 1+900 to 3+130	1	1,230	37.50	1.00	46,125	Cft
	RD 3+130 to 3+300	1	170	18.00	1.00	3,060	Cft
	RD 3+300 to 3+600	1	300	24.00	1.00	7,200	Cft
	RD 3+600 to 4+706	1	1,106	16.00	1.00	17,696	Cft
					Total	101,601	Cft
					Total.	**101.60**	**%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 Tuff Paver Shoulders & Road						
	RD 0+000 to 0+650	2	650	4.00	0.50	2,600	Cft
	RD 0+650 to 1+340	2	690	4.00	0.50	2,760	Cft
	RD 1+340 to 1+900	1	560	30.00	0.50	8,400	Cft
	RD 1+900 to 3+130	1	1,230	37.50	0.50	23,063	Cft

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P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	RD 3+130 to 3+300	1	170	18.00	0.50	1,530	Cft
	RD 3+300 to 3+600	1	300	24.00	0.50	3,600	Cft
	RD 3+600 to 4+706	1	1,106	16.00	0.50	8,848	Cft
					Total	50,801	Cft
					Total.	**50.80**	**%oCft**
	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 Sargodha querry to site, actual compacted depth shall be considered for payment)						
	For Tuff Paver Shoulders & Road						
	RD 0+000 to 0+650	2	650	4.00	0.33	1,716	Cft
	RD 0+650 to 1+340	2	690	4.00	0.33	1,822	Cft
	RD 1+340 to 1+900	1	560	30.00	0.33	5,544	Cft
	RD 1+900 to 3+130	1	1,230	37.50	0.33	15,221	Cft
	RD 3+130 to 3+300	1	170	18.00	0.33	1,010	Cft
	RD 3+300 to 3+600	1	300	24.00	0.33	2,376	Cft
	RD 3+600 to 4+706	1	1,106	16.00	0.33	5,840	Cft
					Total	33,528	Cft
					Total.	**335.28**	**%Cft**
	Water Bound Macadam						
5	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						

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P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD
CALCULATION OF QUANTITES
ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	For Tuff Paver Shoulders & Road						
	RD 0+000 to 0+650	2	650	4.00	0.33	1,733	Cft
	RD 0+650 to 1+340	2	690	4.00	0.33	1,840	Cft
	RD 1+340 to 1+900	1	560	30.00	0.33	5,600	Cft
	RD 1+900 to 3+130	1	1,230	37.50	0.33	15,375	Cft
	RD 3+130 to 3+300	1	170	18.00	0.33	1,020	Cft
	RD 3+300 to 3+600	1	300	24.00	0.33	2,400	Cft
	RD 3+600 to 4+706	1	1,106	26.00	0.33	9,585	Cft
					Total	37,554	Cft
					Total.	**375.54**	**%Cft**
	Prime Coat						
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.						
	Approach Roads	5	30	25.00		3,750	Sft
					Total	3,750	Sft
					Total.	**37.50**	**%Sft**
7	Providing and laying bituminous tack coat, using 10 lbs. of bitumen per 100 Sft (0.49 Kg of bitumen per sq.m.)						
	RD 0+000 to 0+650	1	650	29.00		18,850	Sft
	RD 0+650 to 1+340	1	690	40.00		27,600	Sft
					Total	46,450	Sft
					Total.	**464.50**	**%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+650	1	650	29.00		18,850	Sft
	RD 0+650 to 1+340	1	690	40.00		27,600	Sft
	Approach Roads	5	30	25.00		3,750	Sft
					Total	50,200	Sft
					Total.	**502.00**	**%Sft**

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB
P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY 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+650	2.5	650			1,625	Rft
	RD 0+650 to 1+340	2.5	690			1,725	Rft
					Total.	**3,350**	**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						
	RD 1+900 to 3+130	1	500			500	Rft
					Total.	**500**	**Rft**
	Tuff Paver						
11	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+650	2	650	4.00		5,200	Sft
	RD 0+650 to 1+340	2	690	4.00		5,520	Sft
	RD 1+340 to 1+900	1	560	30.00		16,800	Sft
	RD 1+900 to 3+130	1	1,230	37.50		46,125	Sft
	RD 3+130 to 3+300	1	170	18.00		3,060	Sft
	RD 3+300 to 3+600	1	300	24.00		7,200	Sft
	RD 3+600 to 4+706	1	1,106	26.00		28,756	Sft
					Total.	**112,661**	**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+650	2	650			1,300	Rft
	RD 0+650 to 1+340	2	690			1,380	Rft
	RD 1+340 to 1+900	2	560			1,120	Rft

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P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD
CALCULATION OF QUANTITES
ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	RD 1+900 to 3+130	2	1,230			2,460	Rft
	RD 3+130 to 3+300	2	170			340	Rft
	RD 3+300 to 3+600	2	300			600	Rft
	RD 3+600 to 4+706	2	1,106			2,212	Rft
					Total.	**9,412**	**Rft**
	P.C.C (Between Asphalt and Tuff Paver) (and 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+650	4	650	0.33	0.50	429	Cft
	RD 0+650 to 1+340	4	690	0.33	0.50	455	Cft
	RD 1+340 to 1+900	2	560	0.33	0.50	185	Cft
	RD 1+900 to 3+130	2	1,230	0.33	0.50	406	Cft
	RD 3+130 to 3+300	2	170	0.33	0.50	56	Cft
	RD 3+300 to 3+600	2	300	0.33	0.50	99	Cft
	RD 3+600 to 4+706	2	1,106	0.33	0.50	365	Cft
					Total	1,995	Cft
					Total.	**19.95**	**%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	336				**336**	**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						

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P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	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**
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	18	8.64	0.75	0.50	58.32	Cft
					Total	**0.58**	**%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.						
	Pipe Laying	38	20.00	2.50	2.50	4,750	Cft
					Total	4,750	Cft
					Total	**4.75**	**%oCft**

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P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
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	38	10	1.50	1.50	855	Cft
	For manhole neck	18	8.64	0.75	0.50	58	Cft
	Drain Benching	1	2,620	2.00	0.25	1,310	Cft
					Total	2,223	Cft
					Total	**22.23**	**%Cft**
4	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3						
	For manhole neck	18	8.64	0.75	1.00	117	Cft
	Drain	2	2,620	0.75	0.50	1,965	Cft
					Total	2,082	Cft
					Total	**20.82**	**%Cft**
5	Extra for pacca brick work in steining of wells or any other circular masonry.				**Total**	**1.17**	**%Cft**
6	Cement plaster 1:3 upto 20' (6.00 m) height:-						
	b) ½" (13 mm) thick						
	For manhole neck (26 x 2 = 52)	36	8.64		1.00	311	Sft
	Drain	2	2,620		0.50	2,620	Sft
					Total	2,931	Sft
					Total	**29.31**	**%Sft**
	Gully Grating Chamber						
7	Constructing standard gully grating chamber, 3'x2½' (900x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	38				**38.00**	**Each**
8	Supplying and filling sand under floor; or plugging in wells.	38	20.00	2.50	1.00	**19.00**	**%Cft**

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P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD
CALCULATION OF QUANTITES
ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	uPVC Pipe						
9	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)	38	20.00			**760**	**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)	18				**18**	**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	11,375	1.00	2.50	28,438	Cft
	Light Poles	91	2.00	2.00	6.00	2,184	Cft
					Total	30,622	Cft
					Total	**30.62**	**%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.):-						

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P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	(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	91	2.00	2.00	6.00	2,184	Cft
					Total	**2,184.00**	**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):-						
	('c) Deformed bars (Grade-40)		2.50Kg/Cft			**5,460**	**Kg**
					Total	**54.60**	**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)	91	125.00			**11,375**	**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	91	20.00			**1,820**	**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)	91	40.00			**3,640**	**Rft**
	c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-						

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P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD
CALCULATION OF QUANTITES
ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	vi) 10 mm (7/0.052")	91	125.00			**11,375**	**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	91				**91**	**Nos**
8	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conformimg 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						
	(v) 90 Watt with 10800 Lumens	91				**91**	**Nos**
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**

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P-3 SAMUNDRI, HUSSAIN & ANSAR COLONY ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

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.	94				**94.00**	**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 18 Nos. Wapda Electric Poles						
14	Electric Connection Charges	1				**1.00**	**Each**

PUNJAB CITIES PROGRAM (PCP)
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DETAILED COST ESTIMATE

P-4 CHEMNI PEER ROAD

ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ROAD WORK				
		Excavation				
1	3/7	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	44.58	9,016.70	401,964
		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	29.72	1,783.25	52,998
		Sub Base 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 Sargodha querry to site, actual compacted depth shall be considered for payment)	100Cft	196.14	15,720.30	3,083,380

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DETAILED COST ESTIMATE

P-4 CHEMNI PEER ROAD

ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Water Bound Macadam				
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	299.89	23,137.16	6,938,601
		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				
		(i) 14" high	P.Rft	500.00	516.90	258,450
		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	89,967.25	194.90	17,534,617
		Road Edging				
7	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	5,678.00	52.80	299,798
		P.C.C (For Retaining Tuff paver)				
8	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	9.37	38,178.90	357,736

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DETAILED COST ESTIMATE

P-4 CHEMNI PEER ROAD

ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
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	30.00	948.15	28,445
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	55.00	1,259.95	69,297
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	30.00	1,111.65	33,350
		Total Amount Rs.				**29,058,637**

PUNJAB CITIES PROGRAM (PCP)
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DETAILED COST ESTIMATE

P-4 CHEMNI PEER ROAD

ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		DRAINAGE SYSTEM				
		Dismantling				
1	4/19/c	c) Dismantling cement concrete 1:2:4 plain.	100Cft	0.52	11,174.60	5,793
		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.	1000Cft	3.00	9,016.70	27,050
		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	10.92	38,178.90	416,914
		Brick Work				
4	7/7/i	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3	100Cft	16.04	32,796.10	525,946
5	7/10	Extra for pacca brick work in steining of wells or any other circular masonry.	100Cft	1.04	2,683.20	2,782
		Plaster				
6	11/8/b	Cement plaster 1:3 upto 20' (6.00 m) height:-				
		b) ½" (13 mm) thick	100Sft	22.76	3,424.50	77,959
		Gully Grating Chamber				
7	21/8	Constructing standard gully grating chamber, 3'x2½' (900x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	Each	24.00	16,561.10	397,466
8	7/30	Supplying and filling sand under floor; or plugging in wells.	100Cft	12.00	2,943.30	35,320

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DETAILED COST ESTIMATE

P-4 CHEMNI PEER ROAD

ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		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	480.00	451.15	216,552
		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	16.00	10,065.00	161,040
		Manhole Cover				
11	MR	Old/existing Manhole cover and Frame complete set shift to MC store.	Set	16.00	500.00	8,000
		Total Amount (Rs)				**1,874,822**

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB
DETAILED COST ESTIMATE
P-4 CHEMNI PEER ROAD
ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	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	18.51	10,677.75	197,645
		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	1,320.00	457.75	604,230
		Steel Work				
3	6/12/c	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):-				
		('c) Deformed bars (Grade-40)	100Kg	33.00	31,394.70	1,036,025
4	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	6,875.00	185.85	1,277,719

PUNJAB CITIES PROGRAM (PCP)
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DETAILED COST ESTIMATE

P-4 CHEMNI PEER ROAD

ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
5	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	1,100.00	117.70	129,470
6	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")	Rft	2,200.00	105.15	231,330
		c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-				
		vi) 10 mm (7/0.052")	Rft	6,875.00	523.85	3,601,469
		vii) 16 mm (7/0.064")	Rft	100.00	642.90	64,290
7	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 & 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	55.00	47,736.00	2,625,480

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

DETAILED COST ESTIMATE

P-4 CHEMNI PEER ROAD

ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
8	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	55.00	53,295.00	2,931,225
9	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	14,659.25	14,659
10	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	329,487.70	329,488

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

DETAILED COST ESTIMATE

P-4 CHEMNI PEER ROAD

ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
11	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	58.00	9,592.65	556,374
		Sub Total Scheduled Items: (A)				**13,599,403**
	Non Schedule	**Part-B**				
12	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
13	N.S	Shifting of 8 Nos. Wapda Electric Poles	Job			1,200,000
14	N.S	Electric Connection Charges	Each	1.00	400,000	400,000
		Total Cost (Part B)			**Rs.**	**1,925,026**
		Grand Total (Part A + Part B)			**Rs.**	**15,524,429**
		Grand Total Amount Rs.				**46,457,888**

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

P-4 CHEMNI PEER ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	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 from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:-						
	For Tuff Paver Shoulders & Road						
	RD 0+000 to 1+100	1	1,100	22.25	0.75	18,356	Cft
	RD 1+100 to 2+170	1	1,070	23.00	0.75	18,458	Cft
	RD 2+170 to 2+470	1	300	15.75	0.75	3,544	Cft
	RD 2+470 to 2+839	1	369	15.25	0.75	4,220	Cft
					Total	44,578	Cft
					Total.	**44.58**	**%Cft**
	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 Tuff Paver Shoulders & Road						
	RD 0+000 to 1+100	1	1,100	22.25	0.50	12,238	Cft
	RD 1+100 to 2+170	1	1,070	23.00	0.50	12,305	Cft
	RD 2+170 to 2+470	1	300	15.75	0.50	2,363	Cft
	RD 2+470 to 2+839	1	369	15.25	0.50	2,814	Cft
					Total	29,719	Cft
					Total.	**29.72**	**%oCft**

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

P-4 CHEMNI PEER ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	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 Sargodha querry to site, actual compacted depth shall be considered for payment)						
	For Tuff Paver Shoulders & Road						
	RD 0+000 to 1+100	1	1,100	22.25	0.33	8,077	Cft
	RD 1+100 to 2+170	1	1,070	23.00	0.33	8,121	Cft
	RD 2+170 to 2+470	1	300	15.75	0.33	1,559	Cft
	RD 2+470 to 2+839	1	369	15.25	0.33	1,857	Cft
					Total	19,614	Cft
					Total.	**196.14**	**%Cft**
	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 Tuff Paver Shoulders & Road						
	RD 0+000 to 1+100	1	1,100	32.25	0.33	11,825	Cft
	RD 1+100 to 2+170	1	1,070	35.00	0.33	12,483	Cft
	RD 2+170 to 2+470	1	300	25.75	0.33	2,575	Cft
	RD 2+470 to 2+839	1	369	25.25	0.33	3,106	Cft
					Total	29,989	Cft
					Total.	**299.89**	**%Cft**

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB
P-4 CHEMNI PEER ROAD
CALCULATION OF QUANTITES
ROADS NET WORK

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	500			500	Rft
					Total.	**500**	**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 1+100	1	1,100	32.25		35,475	Sft
	RD 1+100 to 2+170	1	1,070	35.00		37,450	Sft
	RD 2+170 to 2+470	1	300	25.75		7,725	Sft
	RD 2+470 to 2+839	1	369	25.25		9,317	Sft
					Total.	**89,967**	**Sft**
	Road Edging						
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 1+100	2	1,100			2,200	Rft
	RD 1+100 to 2+170	2	1,070			2,140	Rft
	RD 2+170 to 2+470	2	300			600	Rft
	RD 2+470 to 2+839	2	369			738	Rft
					Total.	**5,678**	**Rft**
	P.C.C (For Retaining Tuff paver)						
8	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 1+100	2	1,100	0.33	0.50	363	Cft
	RD 1+100 to 2+170	2	1,070	0.33	0.50	353	Cft
	RD 2+170 to 2+470	2	300	0.33	0.50	99	Cft

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

P-4 CHEMNI PEER ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	RD 2+470 to 2+839	2	369	0.33	0.50	122	Cft
					Total	937	Cft
					Total.	**9.37**	**%Cft**
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	5	3.00	2.00		**30**	**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	5	11			**55**	**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					**30**	**Sft**
	DRAINAGE SYSTEM						
	Dismantling						
1	c) Dismantling cement concrete 1:2:4 plain.						
	Manhole Neck	16	8.64	0.75	0.50	51.84	Cft
					Total	**0.52**	**%Cft**

PUNJAB CITIES PROGRAM (PCP)
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P-4 CHEMNI PEER ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

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	24	20.00	2.50	2.50	3,000	Cft
					Total	3,000	Cft
					Total	**3.00**	**%oCft**
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	24	10	1.50	1.50	540	Cft
	For manhole neck	16	8.64	0.75	0.50	52	Cft
	Drain	1	2,000	1.00	0.25	500	Cft
					Total	1,092	Cft
					Total	**10.92**	**%Cft**
4	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3						
	For manhole neck	16	8.64	0.75	1.00	104	Cft
	Drain	2	2,000	0.75	0.50	1,500	Cft
					Total	1,604	Cft
					Total	**16.04**	**%Cft**
5	Extra for pacca brick work in steining of wells or any other circular masonry.				**Total**	**1.04**	**%Cft**
6	Cement plaster 1:3 upto 20' (6.00 m) height:-						
	b) ½" (13 mm) thick						
	For manhole neck (26 x 2 = 52)	32	8.64		1.00	276	Sft
	Drain	2	2,000		0.50	2,000	Sft

PUNJAB CITIES PROGRAM (PCP)
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P-4 CHEMNI PEER ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
					Total	2,276	Sft
					Total	**22.76**	**%Sft**
	Gully Grating Chamber						
7	Constructing standard gully grating chamber, 3'x2½' (900x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	24				**24.00**	**Each**
8	Supplying and filling sand under floor; or plugging in wells.	24	20.00	2.50	1.00	**12.00**	**%Cft**
	uPVC Pipe						
9	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)	24	20.00			**480**	**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)	16				**16**	**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.						

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P-4 CHEMNI PEER ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	For pipe 50mm dia from TR to LCP and LCP to poles	1	6,875	1.00	2.50	17,188	Cft
	Light Poles	55	2.00	2.00	6.00	1,320	Cft
					Total	18,508	Cft
					Total	**18.51**	**%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:-						
	(2) Type B (nominal mix 1: 1½: 3)						
	Light Poles	55	2.00	2.00	6.00	1,320	Cft
					Total	**1,320.00**	**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):-						
	('c) Deformed bars (Grade-40)		2.50Kg/Cft			**3,300**	**Kg**
					Total	**33.00**	**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)	55	125.00			**6,875**	**Rft**

PUNJAB CITIES PROGRAM (PCP)
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P-4 CHEMNI PEER ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
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	55	20.00			**1,100**	**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)	55	40.00			**2,200**	**Rft**
	c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-						
	vi) 10 mm (7/0.052")	55	125.00			**6,875**	**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	55				**55**	**Nos**

PUNJAB CITIES PROGRAM (PCP)
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P-4 CHEMNI PEER ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
8	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conformimg 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						
	(v) 90 Watt with 10800 Lumens	55				**55**	**Nos**
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						
	(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.	58				**58.00**	**No.**

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

P-4 CHEMNI PEER ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
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 8 Nos. Wapda Electric Poles						
14	Electric Connection Charges	1				**1.00**	**Each**

ENVIRONMENTAL HEALTH SAFETY BUDGET

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

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	10.00	700.00	7,000
2	Safety Gum Shoes	Nos	10.00	1,350.00	13,500
3	Hand Gloves	Nos	10.00	245.00	2,450
4	First Aid Box (Including essential Medicine)	Nos	2.00	5,000.00	10,000
5	Safety Hard Helmets MSA	Nos	10.00	2,000.00	20,000
6	Safety Goggles	Nos	10.00	550.00	5,500
7	Reflective Safety Vests	Nos	10.00	550.00	5,500
8	Infrared Thermometer (Benetech GM-2200 OR equivalent)	Nos	1.00	45,000.00	45,000
				Sub Total	**108,950**
	Working Site Safety				
1	Reflective Safety Signs Boards	Nos	3.00	10,000.00	30,000
2	Reflective Safety PVC Cones (18 inch)	Nos	10.00	1,200.00	12,000
3	Road Guiding Portable Delineators with Chain	Nos	10.00	1,500.00	15,000
4	Reflective Safety Barricading Tape	Nos	10.00	1,500.00	15,000
5	Emergency Portable Light	Nos	2.00	5,000.00	10,000
6	Solid Waste Collection Drums	Nos	2.00	5,000.00	10,000
7	Fire Extinguishers DCP	Nos	4.00	7,000.00	28,000
				Sub Total	**120,000**
	Others				
1	Pole Hanging Waste Bins	Nos.	2.00	10,000	20,000
2	Water Sprinkling (Dust Abatement)		1.00	100,000	100,000
3	Roadside Plantation		1.00	50,000	50,000
4	Environmental Analytical Assessments (Ambient Air Quality Testing, Noise Testing, Vehicular Emissions Testing/Generators, Surface Water & Ground Water Testing)		1.00	250,000	250,000
5	Labor Campsite Management		1.00	200,000	200,000
				Sub Total	**620,000**
	Total Amount (Rs)				**848,950**

RATE ANALYSIS

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

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 Sargodha querry to site, actual compacted depth shall be considered for payment)

Crush Stone **125 KM**

Sr. No.	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs)
1		**Material**					
	18-3 a(i)	i) Pit run or bed run gravel.	100 Cft	1	1	6,513.00	6,513.00
2		**Carriage**					
		1st KM	100 Cft	1	1.20	299.40	359.28
		2nd KM	100 Cft	1	1.20	145.25	174.30
		3rd KM	100 Cft	1	1.20	116.85	140.22
		4th KM	100 Cft	1	1.20	85.30	102.36
	1/1	5th KM	100 Cft	1	1.20	80.20	96.24
		6th KM	100 Cft	1	1.20	79.00	94.80
		7th KM	100 Cft	1	1.20	74.25	89.10
		8th KM	100 Cft	1	1.20	73.50	88.20
		9th KM	100 Cft	1	1.20	69.55	83.46
		10th KM	100 Cft	1	1.20	65.70	78.84
		From 11 km to 200 km	100 Cft	115	1.20	57.25	7,900.50
		Total.					**15,720.30**
		Total Amount per 100 Cft					**15,720.30**
		Total cast for Per Cft					**157.20**

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

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)

125 KM

Sr. No.	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	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)	100 Cft		1	13,776.40	13,776.40
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	145.25	177.21
		3rd KM	100 Cft	1	1.22	116.85	142.56
		4th KM	100 Cft	1	1.22	85.30	104.07
		5th KM	100 Cft	1	1.22	80.20	97.84
		6th KM	100 Cft	1	1.22	79.00	96.38
		7th KM	100 Cft	1	1.22	74.25	90.59
		8th KM	100 Cft	1	1.22	73.50	89.67
		9th KM	100 Cft	1	1.22	69.55	84.85
		10th KM	100 Cft	1	1.22	65.70	80.15
		From 11 km to 200 km	100 Cft	115	1.22	57.25	8,032.18
		Total.					**23,137.16**
		Total Amount per 100 Cft					**23,137.16**
		Total cast for Per Cft					**231.37**

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

Rate Analysis Road - 4

ABC

Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick)
(iii) 4% Bitumen

125 Km

Sr. No.	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs.)
1	18/10/a	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick) (iii) 4% Bitumen	per inch thickness per 100Sft.		1.00	13,994.70	13,994.70
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.					
	1/1	1st KM	100 Cft	1	0.1243	299.40	37.22
		2nd KM	100 Cft	1	0.1243	145.25	18.05
		3rd KM	100 Cft	1	0.1243	116.85	14.52
		4th KM	100 Cft	1	0.1243	85.30	10.60
		5th KM	100 Cft	1	0.1243	80.20	9.97
		6th KM	100 Cft	1	0.1243	79.00	9.82
		7th KM	100 Cft	1	0.1243	74.25	9.23
		8th KM	100 Cft	1	0.1243	73.50	9.14
		9th KM	100 Cft	1	0.1243	69.55	8.65
		10th KM	100 Cft	1	0.1243	65.70	8.17
		From 11 km to 200 km	100 Cft	115	0.1243	57.25	818.36
		Total.					**14,948.42**
		Total Amount per 100 Sft					**14,948.42**
		Total cast for Per Sft					**149.48**

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

Rate Analysis Road - 5

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

125 Km

Sr. No.	2nd BI-Annual-2022 (July to Dec) Toba Tek Singh	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs.)
1	18/10/a	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.		1.00	14,953.70	14,953.70
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.					
	1/1	1st KM	100 Cft	1	0.1243	299.40	37.22
		2nd KM	100 Cft	1	0.1243	145.25	18.05
		3rd KM	100 Cft	1	0.1243	116.85	14.52
		4th KM	100 Cft	1	0.1243	85.30	10.60
		5th KM	100 Cft	1	0.1243	80.20	9.97
		6th KM	100 Cft	1	0.1243	79.00	9.82
		7th KM	100 Cft	1	0.1243	74.25	9.23
		8th KM	100 Cft	1	0.1243	73.50	9.14
		9th KM	100 Cft	1	0.1243	69.55	8.65
		10th KM	100 Cft	1	0.1243	65.70	8.17
		From 11 km to 200 km	100 Cft	115	0.1243	57.25	818.36
		Total.					**15,907.42**
		Total Amount per 100 Sft					**15,907.42**
		Total cast for Per Sft					**159.07**

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

Rate Analysis Road - 6

Description

Dismantling / Demolishing of existing Tuff Paver as directed by Engineer's Incharge, Complete in all respect

Dismantling of Tuff Paver **Unit.** **100 Sft**

Sr. No.	Ref Input Rate	Detail	Unit Rate (British System) per 100 Sft						
			Qty			Rate Per Unit			Amount (Rs.)
		LABOUR							
2	LB-015	Cooly un-skilled			0.75	Nos.	965.00	per day	723.75
								Total.	**723.75**
		Sundries	10	%					72.38
							Total Rs.		**796.13**
		Contractor's Profit	20	%					159.23
		Total							**955.35**
		ITEM RATES							
		Composite rate per 100 Sft						Rs.	**955.35**
		Composite rate per Sft						Rs.	**9.56**

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

Rate Analysis Road - 7

Description

Dismantling / Demolishing of existing kerb stone as directed by Engineer's Incharge, Complete in all respect

Dismantling Kerb stone **Unit.** **100 Rft**

Sr. No.	Ref Input Rate	Detail	Unit Rate (British System) per 100 Rft			
			Qty		Rate Per Unit	Amount (Rs.)
		LABOUR				
2	LB-015	Cooly un-skilled	2.00	Nos.	962.00 per day	1,924.00
					Total.	**1,924.00**
		Sundries	10	%		192.40
					Total Rs.	**2,116.40**
		Contractor's Profit	20	%		423.28
		Total				**2,539.68**
		ITEM RATES				
		Composite rate per 100 Rft			Rs.	**2,539.68**
		Composite rate per Rft			Rs.	**25.40**

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

Rate Analysis Road - 8

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)

Manhole Cover — **Unit.** **Each**

Sr. No.	Ref Input Rate	Detail	Unit Rate (British System) per Each			
			Qty		Rate Per Unit	Amount (Rs.)
	Page No112					
1	A	RPC Manhole Cover	1.00	No	7000 No	7,000.00
		Carriage				700
					Total Rs.	**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
					Total 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**

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

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.

LCP **Unit.** **Each**

Sr. No.	Ref Input Rate	Detail	Unit Rate (British System) per Each						
					Qty		Rate Per 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**

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

Analysis of Rate for Pole -9

Description

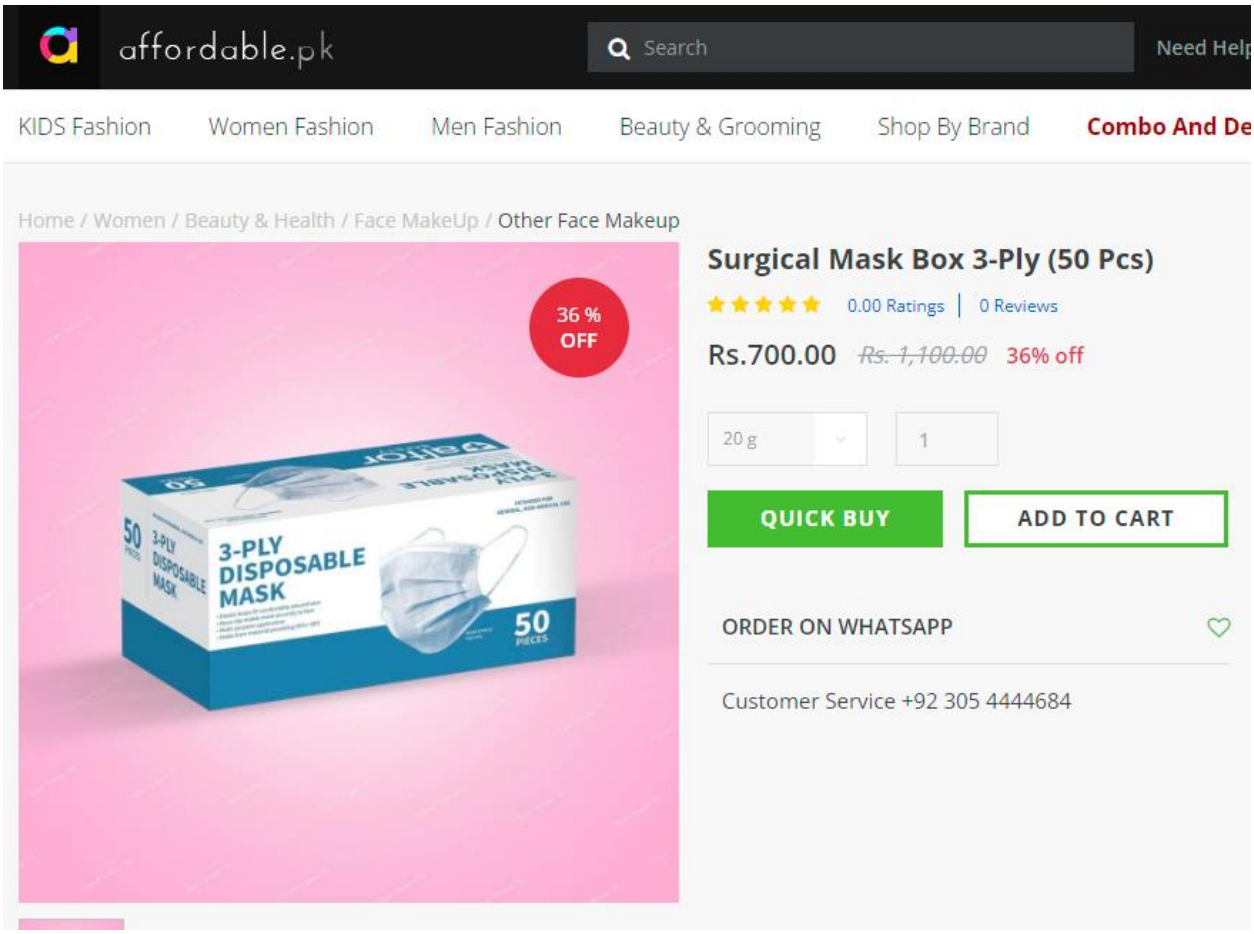
Supply Installation testing and Comissioning of 20'/6 Mtrs high Tubular Section Road Light Pole made of MS, Hot dip Galvanized including cost of base plate with 4 Nos J-bolt, as shown on dwg. Terminal box with cover, 2amp single pole Mcb, 3 phase connector complete in all resheet.

Unit. **Each**

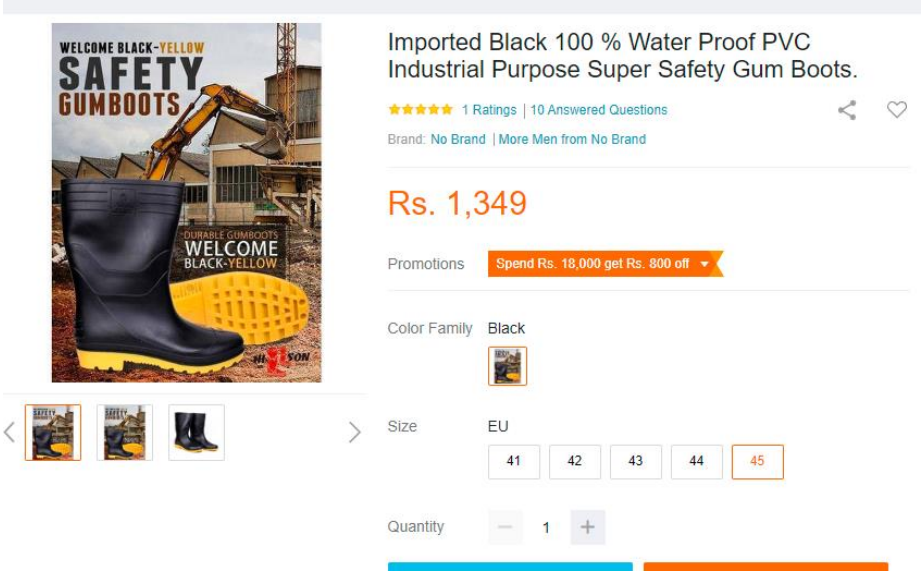
Sr. No.	Ref Input Rate	Detail	Unit Rate (British System) per Each			
			Qty	Rate Per Unit		Amount (Rs.)
1	MR	20'/6 m Light Pole	1.00 No	39,780	No.	39,780
					Total	**39,780**
		Contractor's Profit	20 %			7,956
		Total				**47,736**
		ITEM RATES				
		Composite rate Set			Rs.	**47,736**

Cost for PPEs from different Sources

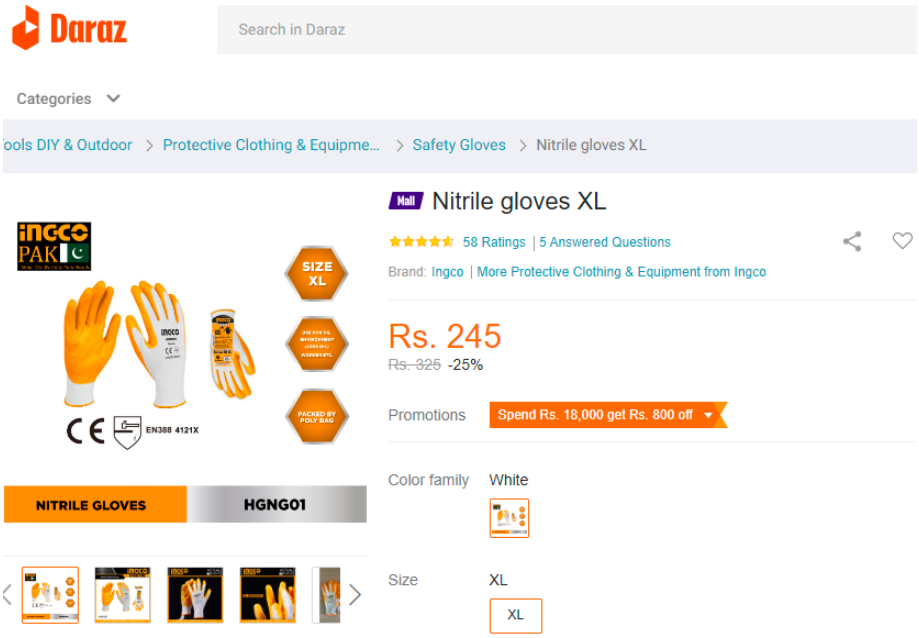
1. **Face Masks (3PLY)**



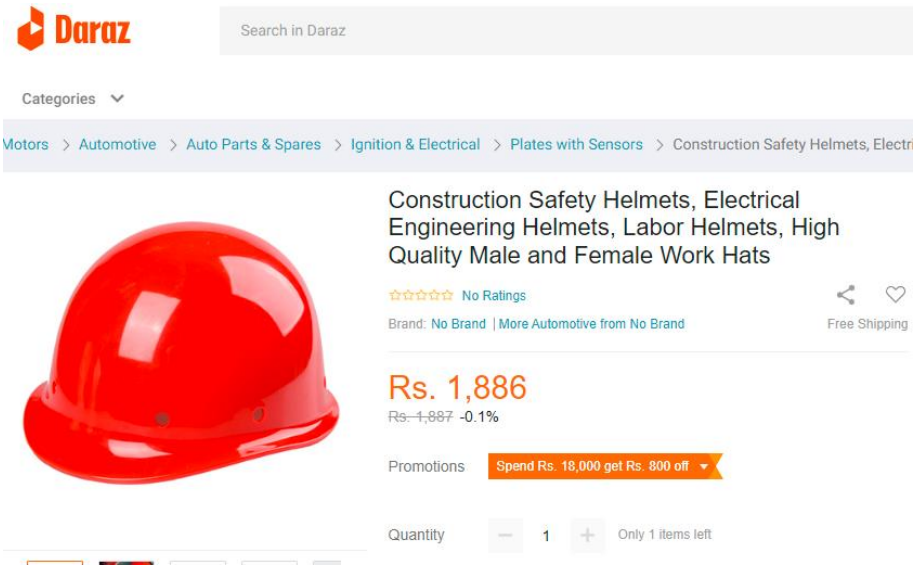
2. **Safety Gum Shoes**



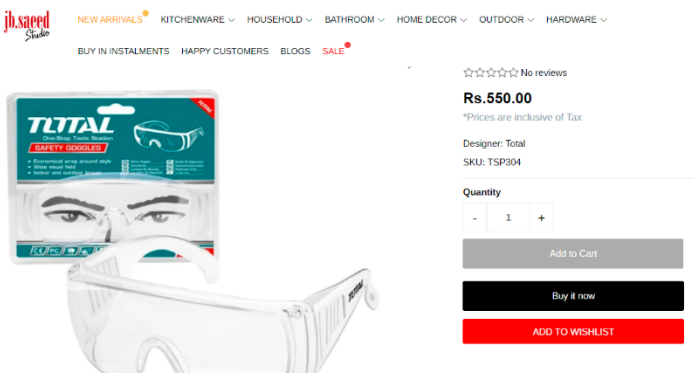
3. Hand Gloves



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

PRESCOTT PSBV101 LARGE REFLECTION VEST

PRODUCT VIEWS: 658
- STOCK AVAILABILITY: In Stock
- MODEL: BEHR-2587

PRESCOTT

Rs540/-

1 ADD TO CART INQUIRY

ADD TO WISH LIST COMPARE THIS PRODUCT

Based on 1 reviews. Write a review

7. Infrared Thermometer

BENETECH GM-2200 INFRARED THERMOMETER

PRODUCT VIEWS: 904
- STOCK AVAILABILITY: In Stock
- MODEL: CPCB-10216

BENETECH

Rs40,000/-

1 ADD TO CART INQUIRY

ADD TO WISH LIST COMPARE THIS PRODUCT

Based on 1 reviews. Write a review

8. Fire Extinguishers

DCP FIRE EXTINGUISHERS, FIRE EXTINGUISHERS, FIRE FIG...
DCP Fire Extinguisher 12 Kg China
Rs4,200.00

DCP FIRE EXTINGUISHERS, FIRE EXTINGUISHERS, FIRE FIG...
DCP Fire Extinguisher 6 kg NAFFCO
Rs6,500.00

DCP FIRE EXTINGUISHERS, FIRE EXTINGUISHERS, FIRE FIG
6 KG DCP Fire Extinguisher Bavaria ...
Rs6,800.00

9. PVC Cones and Delineators

ROAD SAFETY PVC TRAFFIC CONES

PKR 950.00

10.Delineators with Chain

ROAD GUIDING PORTABLE DELINEATORS

PKR 1200.00

SAFETY TRAFFIC CHAIN

PKR 3700.00

Annexure-C

Project Economic Analysis

FINANCIAL ANALYSIS ROAD NETWORK

TABLE - 9.1

AVERAGE OPERATING SPEEDS

Km/Hr

WITHOUT PROJECT CONDITION

Years	Cars/Jeeps	Hiace Wagon/ Pickup	Coaster/ Mini Buses	Buses	Trucks 2-AXLE	Trucks 3-AXLE & 4-AXLE	Trucks 5-AXLE & 6-AXLE
Base Year(2022)	25	20	20	15	15	15	15
2029	20	15	15	10	10	10	10
2037	15	10	10	10	10	10	10

WITH PROJECT CONDITION

Years	Cars/Jeeps	Hiace Wagon/ Pickup	Coaster/ Mini Buses	Buses	Trucks 2-AXLE	Trucks 3-AXLE & 4-AXLE	Trucks 5-AXLE & 6-AXLE
Base Year(2022)	25	20	20	15	15	15	15
2029	20	15	15	10	10	10	10
2037	15	10	10	10	10	10	10

TABLE - 9.3
VEHICLE OPERATING COSTS
FOR POOR ROAD CONDITIONS
WITHOUT PROJECT

Rs/Km

SPEEDS	MOTOR CYCLE	RICKSHAW	CAR	WAGON	MINI-BUS	BUS	TRUCK 2-AXLE	TRUCK 3-AXLE & 4-AXLE	TRUCK 5-AXLE & 6-AXLE
10	4.94	6.86	56.39	57.04	68.24	97.79	103.44	109.08	114.72
15	4.21	5.89	47.21	47.89	57.70	82.34	86.88	92.52	98.16
20	3.80	5.35	42.43	43.08	52.15	74.07	75.86	81.50	87.14
25	3.53	5.00	39.47	40.32	48.67	68.87	67.55	73.19	78.83
30	3.35	4.76	37.48	38.27	46.28	65.37	61.01	66.65	72.29
35	3.23	4.60	36.09	36.79	44.55	63.00	55.82	61.46	67.10
40	3.16	4.51	35.10	35.70	43.28	61.46	51.79	57.43	63.07
45	3.12	4.47	34.42	34.89	42.35	60.58	48.80	54.44	60.08
50	3.12	4.47	33.99	34.31	41.69	60.28	46.78	52.42	58.07
55	3.16	4.53	33.76	33.91	41.26	60.48	45.70	51.34	56.98
60	3.22	4.64	33.71	33.68	41.03	61.14	45.52	51.16	56.80
65	3.30	4.77	33.82	33.58	40.98	62.24	46.22	51.86	57.50
70	3.42	4.95	34.09	33.62	41.09	63.76	47.80	53.44	59.08
75	3.56	5.18	34.49	33.77	41.36	65.68	50.23	55.87	61.51
80	3.73	5.42	35.02	34.04	41.76	67.99	53.51	59.15	64.79
85	3.93	5.73	35.68	34.41	42.31	70.68	57.63	63.28	68.92

TABLE- 9.4
FOR GOOD ROAD CONDITIONS
WITH PROJECT

Rs/Km

SPEEDS	MOTOR CYCLE	RICKSHAW	CAR	WAGON	MINI-BUS	BUS	TRUCK 2-AXLE	TRUCK 3-AXLE & 4-AXLE	TRUCK 5-AXLE & 6-AXLE
10	3.71	5.12	35.59	34.99	41.42	61.63	65.14	69.34	73.54
15	3.08	4.29	28.49	28.17	33.56	50.94	54.02	58.23	62.43
20	2.73	3.83	24.80	24.60	29.44	45.22	46.71	50.92	55.12
25	2.50	3.53	22.53	22.35	26.84	41.60	41.22	45.42	49.62
30	2.35	3.33	21.00	20.80	25.05	39.13	36.87	41.08	45.28
35	2.25	3.19	19.92	19.67	23.75	37.40	33.40	37.60	41.80
40	2.19	3.11	19.16	18.83	22.77	36.21	30.65	34.85	39.06
45	2.15	3.07	18.62	18.20	22.05	35.43	28.55	32.76	36.96
50	2.15	3.08	18.26	17.73	21.51	35.01	27.06	31.26	35.46
55	2.17	3.12	18.06	17.39	21.13	34.89	26.13	30.33	34.54
60	2.21	3.19	17.99	17.17	20.88	35.05	25.76	29.96	34.16
65	2.28	3.30	18.04	17.06	20.76	35.48	25.92	30.12	34.32
70	2.37	3.44	18.19	17.03	20.74	36.14	26.61	30.81	35.01
75	2.49	3.61	18.45	17.09	20.83	37.04	27.82	32.02	36.22
80	2.62	3.81	18.80	17.23	21.01	38.17	29.54	33.74	37.94
85	2.77	4.04	19.24	17.44	21.29	39.52	31.77	35.98	40.18
90	2.95	4.31	19.77	17.73	21.65	41.08	31.77	35.98	40.18

TABLE - 9.5
VALUE OF TRAVEL TIME

DESCRIPTION	MOTORCYCLE	CAR	WAGON	COASTER/ FLYING COACH	TRUCK	BUS
TRAVEL TIME VALUE OF PASSENGERS/OCCUPANTS						
Average Income of Passenger (Rs./Month)	40,000	60,000	30,000	22,000	35,000	30,000
Average Income of Passenger (Rs./Annum)	480,000	720,000	360,000	264,000	420,000	360,000
Working Hours /Annum	2424	2424	2424	2424	2424	2424
Rate of passenger Rs./Hour	198	297	149	109	173	149
No. of Occupants	2.00	5.00	16.00	29.00	2.00	45.00
Travel Time Value of occupants---in financial terms (Rs./Hour)	396.04	1485.15	2376.24	3158.42	346.53	6683.17
Travel Time Value of occupants---in economic terms (Rs./Hour) 25%	**99.01**	**371.29**	**594.06**	**789.60**	**86.63**	**1670.79**

NOTE:- 'The value of travel time in a number of studies have been estimated at 25% to 33% of the wage rate due to lack of information on the split of work and non-work travel among passengers and the 'proportion of non-wage earners among passengers.

TABLE - 9.6

Gojra (2.29 km)

ANNUAL VEHICLE OPERATING COST

WITHOUT PROJECT

(Million Rs.)

Years	Voc/Km (Rs.)	Traffic Volume ADT	Distance Annual Km	Total Cost Million Rs.
Motor Cycles\Rickshaw				
Base Year(2022)	4.26	2135	836	7.61
2029	4.57	3630	836	13.88
2037	5.05	6533	836	27.58
Cars				
Base Year(2022)	39.47	987	836	32.57
2029	42.43	1678	836	59.50
2037	47.21	3020	836	119.17
Wagons				
Base Year(2022)	43.08	5	836	0.18
2029	47.89	9	836	0.34
2037	57.04	15	836	0.73
Bus				
Base Year(2022)	82.34	3	836	0.21
2029	97.79	5	836	0.42
2037	97.79	9	836	0.75
T.Trolly + Trucks 2-AXLE				
Base Year(2022)	86.88	14	836	1.02
2029	103.44	24	836	2.06
2037	103.44	43	836	3.70
Trucks 3-AXLE & 4-AXLE				
Base Year(2022)	92.52	3	836	0.23
2029	109.08	5	836	0.46
2037	109.08	9	836	0.84
Trucks 5-AXLE & 6-AXLE				
Base Year(2022)	98.16	0	836	-
2029	114.72	0	836	-
2037	114.72	0	836	-
TOTAL				
Base Year(2022)				**41.81**
2029				**76.66**
2037				**152.77**

Note :"VOC" means Vehicle Operating Cost

TABLE - 9.7

Gojra (2.29 km)

ANNUAL VEHICLE OPERATING COST

WITH PROJECT

(Million Rs.)

Years	Voc/Km (Rs.)	Traffic Volume ADT	Distance Annual Km	Total Cost Million Rs.
Motor Cycles\Rickshaw				
Base Year(2022)	2.65	2135	836	4.73
2029	2.72	3630	836	8.25
2037	2.84	6533	836	15.52
Cars				
Base Year(2022)	19.16	987	836	15.80
2029	19.92	1678	836	27.94
2037	21.00	3020	836	53.02
Wagons				
Base Year(2022)	18.83	5	836	0.08
2029	19.67	9	836	0.14
2037	20.80	15	836	0.27
Bus				
Base Year(2022)	36.21	3	836	0.09
2029	37.40	5	836	0.16
2037	39.13	9	836	0.30
T.Trolly + Trucks 2-Axle				
Base Year(2022)	22.77	14	836	0.27
2029	23.75	24	836	0.47
2037	25.05	43	836	0.90
Trucks 3-AXLE & 4-AXLE				
Base Year(2022)	34.85	3	836	0.09
2029	37.60	5	836	0.16
2037	41.08	9	836	0.32
Trucks 5-AXLE & 6-AXLE				
Base Year(2022)	39.06	3	836	0.10
2029	41.80	5	836	0.18
2037	45.28	9	836	0.35
TOTAL				
Base Year(2022)				**21.15**
2029				**37.30**
2037				**70.66**

Note :"VOC" means Vehicle Operating Cost

TABLE - 9.8
Gojra (2.29 km)

(Million Rs.)

YEARS	VEHICLE OPERATING COSTS		SAVINGS
	WITHOUT PROJECT	WITH PROJECT	
Base Year(2022)	41.81	21.15	20.66
2029	76.66	37.30	39.36
2037	152.77	70.66	82.11
		TOTAL	**142.13**

TABLE - 9.9

Gojra (2.29 km)

ANNUAL VALUE OF TRAVEL TIME COST

WITHOUT PROJECT

(Million Rs.)

Years	VOT Rs/km	Traffic Volume ADT	Distance Annual (Km)	Total Cost Million Rs.
Motor Cycles\Rickshaw				
Base Year(2022)	3.96	2135	836	7.07
2029	4.95	3630	836	15.02
2037	6.60	6533	836	36.04
Cars				
Base Year(2022)	14.85	987	836	12.25
2029	18.56	1678	836	26.04
2037	24.75	3020	836	62.49
Wagons				
Base Year(2022)	29.70	5	836	0.12
2029	39.60	9	836	0.28
2037	59.41	15	836	0.76
Bus				
Base Year(2022)	39.48	3	836	0.10
2029	52.64	5	836	0.22
2037	78.96	9	836	0.61
T.Trolly + Trucks 2-Axle				
Base Year(2022)	5.78	14	836	0.07
2029	8.66	24	836	0.17
2037	8.66	43	836	0.31
Trucks 3-AXLE & 4-AXLE				
Base Year(2022)	5.78	3	836	0.01
2029	8.66	5	836	0.04
2037	8.66	9	836	0.07
Trucks 5-AXLE & 6-AXLE				
Base Year(2022)	5.78	3	836	0.01
2029	8.66	5	836	0.04
2037	8.66	9	836	0.07
TOTAL				
Base Year(2022)				**20**
2029				**42**
2037				**100**

Note :"VOT" means value of Travel Cost

TABLE - 9.10
Gojra (2.29 km)
ANNUAL VALUE OF TRAVEL TIME COST
WITH PROJECT

(Million Rs.)

Years	VOT Rs/km	Traffic Volume ADT	Distance Annual (Km)	Total Cost Million Rs.
Motor Cycles\Rickshaw				
Base Year(2022)	2.65	2135	836	4.73
2029	2.72	3630	836	8.25
2037	2.84	6533	836	15.52
Cars				
Base Year(2022)	19.16	987	836	15.80
2029	19.92	1678	836	27.94
2037	21.00	3020	836	53.02
Wagons				
Base Year(2022)	18.83	5	836	0.08
2029	19.67	9	836	0.14
2037	20.80	15	836	0.27
Bus				
Base Year(2022)	36.21	3	836	0.09
2029	37.40	5	836	0.16
2037	39.13	9	836	0.30
T.Trolly + Trucks 2-Axle				
Base Year(2022)	22.77	14	836	0.27
2029	23.75	24	836	0.47
2037	25.05	43	836	0.90
Trucks 3-AXLE & 4-AXLE				
Base Year(2022)	34.85	3	836	0.09
2029	37.60	5	836	0.16
2037	41.08	9	836	0.32
Trucks 5-AXLE & 6-AXLE				
Base Year(2022)	39.06	3	836	0.10
2029	41.80	5	836	0.18
2037	45.28	9	836	0.35
TOTAL				
Base Year(2022)				**21.15**
2029				**37.30**
2037				**70.66**

TABLE - 9.11
Gojra (2.29 km)

(Million Rs.)

YEARS	ANNUAL VALUE OF TRAVEL TIME COST (VOTT)		SAVINGS
	WITHOUT PROJECT	WITH PROJECT	
Base Year(2022)	19.64	21.15	(1.51)
2029	41.81	37.30	4.50
2037	100.34	70.66	29.68
		TOTAL	**32.67**

TABLE - 9.12

Gojra (2.29 km)

TOTAL PROJECT BENEFITS

(Million Rs.)

YEARS	SAVINGS		TOTAL SAVINGS
	VOC	VOTT	
Base Year(2022)	20.66	(1.51)	19.15
2029	39.36	4.50	43.86
2037	82.11	29.68	111.79
		TOTAL	**175**

TABLE - 9.13
Gojra (2.29 km)
Calculation of Economic Internal Rate of Return

Million Rs.

Years	PROJECT ECONOMIC COSTS			Project Economic Benefits	**Net Benefits Pattern at Economic Prices**			
	Investment	O & M	Total Costs		**(a)**	**(b)**	**(c)**	**(d)**
1	132.03	0.00	132.03	0.00	-132.03	-132.03	-145.23	-145.23
2		0.66	0.66	19.15	18.49	16.57	18.42	16.51
3		0.66	0.66	22.02	21.36	19.16	21.29	19.09
4		0.66	0.66	25.32	24.66	22.13	24.60	22.06
5		0.66	0.66	29.12	28.46	25.55	28.39	25.48
6		0.66	0.66	33.49	32.83	29.48	32.76	29.41
7		0.66	0.66	38.51	37.85	34.00	37.79	33.94
8		0.66	0.66	44.29	43.63	39.20	43.56	39.13
9		0.66	0.66	50.93	50.27	45.18	50.21	45.11
10		0.66	0.66	58.57	57.91	52.06	57.85	51.99
Total :	132.03	5.94	137.97	321.41	183.44	151.30	169.64	137.50

DISCOUNT RATES	**PRESENT WORTH OF COST**		**Present Worth of Benfefit**	**NET PRESENT WORTH**			
10 %	120.03	123.48	137.01	47.77	30.65	35.43	18.30
12 %	117.88	121.02	122.45	32.03	16.73	19.93	4.62
18 %	111.89	114.30	89.52	-2.40	-13.59	-13.83	-25.02
20 %	110.03	112.24	81.24	-10.69	-20.85	-21.92	-32.07
ECONOMIC INTERNAL RATE OF RETURN 12% DR				17.47	14.95	15.18	12.76
BENEFIT COST / RATIO AT 12 % D.R			1.01				

* A factor of 0.9 has been used for Capital Cost and O&M Cost in the Economics Terms.
(a) Base Case assuming 10 Years period of analysis.
(b) Benefits decreased by 10 %
(c) Cost over-run by 10 %
(d) Benefit reduction and cost over-run both occuring simultaneously.

Annexure-D

Gant Chart

TENTATIVE PROJECT IMPLEMENTATION SCHEDULE FOR IMPROVEMENT & REHABILITATION OF ROADS IN GOJRA CITY

YEAR (2022-2023)

Road	JANUARY-23				FEBRUARY-23				MARCH-23				APRIL-23			
P3-Samundri Road, Hussain & Ansar Colony Road																
P4-Cheemni Peer Road																

Annexure-E

EIA Report

Environmental & Social Screening Checklist

Instructions:

Environmental and Social Focal Persons (ESFPs)[1] 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[2] 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: MSI - MOP

Name of MC: MC Gojra

Sub-Project Sector: Roads

Sub-Project Title: Rehabilitation of road from Takia Phamin Sian Chowk to Filtration plant Ansar colony

Sub- Project Categorization:

E-1	S-1
E-2	S-2
E-3	S-3

(Ansar colony road)

Date of Screening: 07/08/2021

Anticipated Project Activities

- Scarification of road
- Asphalt laying

Estimated Cost of Subprojects

Completion Time/Duration 06 months

Estimated Labor for Subproject 25-30

[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.

[2] It is meant as PC-I and/or engineering estimates of sub-project

Screening Questions	Yes	No	Remarks
A. Project Siting Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?			
Legally protected Area		✓	No environmentally sensitive receptors observed within ROW and construction limits.
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project[3]		✓	
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[4]		✓	No PCRs or archeological site is observed within scope of sub-project.
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project[5]		✓	
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[6] of the society and women or children)?		✓	
Already existing infrastructure [7](including public amenities) which may be required to dismantle or may be affected temporarily by any means?		✓	No damage to any public infrastructure envisaged.
B. Potential Environmental Impacts Will the Sub-Project cause…			
1. Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?		✓	
2. Cutting of trees?		✓	No trees cutting involved.
3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?		✓	
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?		✓	

[3] Ibid.

[4] According to Environmental Assessment Guidelines adopted by Punjab EPA

[5] Ibid.

[6] due to caste, creed, religion or gender e.g. transgender

[7] 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?		✓	
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?		✓	
9. Serious contamination of soil due to construction works?		✓	
10. Aggravation of solid waste problems in the area?		✓	All construction waste generated shall be disposed off.
11. Generation of hazardous waste?		✓	
12. Increased air pollution due to sub-project construction and operation?		✓	Negligible impact
13. Noise and vibration due to sub-project construction or operation?		✓	Negligible impact
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?		✓	
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)?		✓	No disfiguration of landscape involved.
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)		✓	No displacement involving Resettlement involved for execution of sub-project
3. Disproportionate impacts on the poor, women and children and or other vulnerable groups [8](mentioned above)?		✓	
4. Temporary impediments in movements of people/transport and animals?	✓		Temporary hindrance in mobility of peoples
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)?		✓	
6. Social conflicts if workers from other areas are hired?		✓	
7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?		✓	OHS required to be ensured by Contractor

[8] 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?		✓	No hazardous material utilization envisaged.
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?		✓	Site Safety Shall be ensured by the Contractor.
10. Any impact on sensitive receptors (mentioned above)		✓	
11. Any impact of negative nature on already existing infrastructure including public amenities		✓	

Prepared By:

Name: Nabeel Ahmad.

Signature: Nabeel

Date:

Endorsed By:

Name: Asif Sr/Con

Signature:

Date:

Environmental & Social Screening Checklist

Instructions:

Environmental and Social Focal Persons (ESFPs)[1] 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[2] 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: MOI. MoP

Name of MC: MC Gojra

Sub-Project Sector: Roads

Sub-Project Title: Rehabilitation of road from Samundri road to Dijkot road (Chemni peer road)

Sub- Project Categorization:

E-1	S-1
E-2	S-2
E-3	S-3

Date of Screening: 07/09/2021

Anticipated Project Activities

- laying of Sub-base
- laying of base
- Asphalt
- lane marking

Estimated Cost of Subprojects

Completion Time/Duration 06 months

Estimated Labor for Subproject 25-30

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[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.

[2] It is meant as PC-I and/or engineering estimates of sub-project

Screening Questions	Yes	No	Remarks
A. Project Siting Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?			
Legally protected Area		✓	No environmentally sensitive receptors observed within sub-project construction limits
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project[3]		✓	
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[4]		✓	No PCRs or socially sensitive receptors observed.
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project[5]	✓		Darul-Islam Boys & Girls Campus, Allied school Skin-Care Clinic outside Construction limits
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[6] of the society and women or children)?		✓	
Already existing infrastructure [7](including public amenities) which may be required to dismantle or may be affected temporarily by any means?		✓	No damage to any public infrastructure envisaged
B. Potential Environmental Impacts Will the Sub-Project cause…			
1. Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?		✓	
2. Cutting of trees?		✓	No tree cutting involved.
3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?		✓	
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?		✓	

[3] Ibid.

[4] According to Environmental Assessment Guidelines adopted by Punjab EPA

[5] Ibid.

[6] due to caste, creed, religion or gender e.g. transgender

[7] 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?		✓	
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?		✓	
9. Serious contamination of soil due to construction works?		✓	
10. Aggravation of solid waste problems in the area?		✓	Construction waste might be generated and disposed off
11. Generation of hazardous waste?		✓	
12. Increased air pollution due to sub-project construction and operation?		✓	Negligible impact.
13. Noise and vibration due to sub-project construction or operation?		✓	Machinery needs to be well tuned
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?		✓	
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)?		✓	No PCR/landscape/historical area exists within scope of sub-project
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)		✓	No involuntary Resettlement/ displacement involved.
3. Disproportionate impacts on the poor, women and children and or other vulnerable groups [8](mentioned above)?		✓	
4. Temporary impediments in movements of people/transport and animals?		✓	Alternative routs available
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)?		✓	
6. Social conflicts if workers from other areas are hired?		✓	
7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?		✓	OHS risks should be mitigated.

[8] 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?		✓	
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?		✓	Site safety should be ensured by contractors
10. Any impact on sensitive receptors (mentioned above)		✓	
11. Any impact of negative nature on already existing infrastructure including public amenities		✓	

Prepared By:

Name: Nabeal Ahmad.

Signature:

Date:

Endorsed By:

Name: Asif Gillani

Signature:

Date:

ENVIRONMENTAL AND 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 to support the 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) Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures

Name of Enumerator/ESFP: MOI/MOP

Name of City/MC/LG: MC Gojra

Sub-Project Sector: Roads

Sub-Project Title: Rehabilitation of Hussnia Colony road

Sub- Project Categorization:

E-1	☐	S-1	☐
E-2	☐	S-2	☐
E-3	☑	S-3	☑

Date of Screening: 07/09/2021

Anticipated Project Activities:

- Cold milling of road surface
- Water Bound Macadam
- Asphalt laying
- Tuff pavement.

Estimated Cost of Sub-Project:

Approx. Completion Time: 06 months

Estimated Labor for Sub-Project: 25-30

Screening Questions	Yes	No	Remarks
A. Project Siting			
Is the Sub-Project area adjacent to or within any of the following?			
Environmentally sensitive areas?			
Cultural heritage site		✓	No environmentally sensitive receptor observed within scope of sub-project
Legally protected Area (core zone or buffer zone)		✓	
Any surface water body (river, canal, stream, lake, wetland) within 250 meters of proposed project?		✓	
Mangrove Forest		✓	
Estuarine		✓	
Special area for protecting biodiversity		✓	
Buffer zone of protected area		✓	
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	✓		At Jamia Masjid Qadria observed outside construction limits.
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project	✓		Elite school observed outside construction limits.
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 of the society and women or children)?		✓	
Already existing infrastructure (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		✓	No damage to any public infrastructure anticipated.
B. Potential Environmental Impacts			
Will the Sub-Project cause…			
1. Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?		✓	
2. Cutting of trees?		✓	No tree cutting involved

3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?		✓	
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?		✓	
8. Over pumping of ground water, leading to salinization and ground subsidence?		✓	
9. Serious contamination of soil due to construction works?		✓	
10. Aggravation of solid waste problems in the area?	✓		Construction waste might be generated and disposal required
11. Generation of solid waste/hazardous waste?		✓	
12. Increased air pollution due to sub-project construction and operation?	✓		Negligible impact
13. Noise and vibration due to sub-project construction or operation?	✓		Negligible impact
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?		✓	
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)?		✓	No PCRs/ disfiguration of any historic or cultured area envisaged.
2. Displacement or involuntary resettlement of people? (Physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)		✓	No involuntary Resettlement/ displacement of people/structure required for execution of sub-project

3. Disproportionate impacts on the poor, women and children and or other vulnerable groups [1](mentioned above)?		✓	
4. Temporary impediments in movements of people/transport and animals?	✓		Temporary hindrance in movement of pedestrian/traffic.
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)?		✓	
6. Social conflicts if workers from other areas are hired?		✓	
7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	✓		OHS risks should be mitigated properly.
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?		✓	
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?	✓		Site safety should be ensured by Contractor
10. Any impact on sensitive receptors (mentioned above)		✓	
11. Any impact of negative nature on already existing infrastructure including public amenities		✓	

Prepared By: Nabeel Ahmad.

Name:

Signature:

Endorsed By: Asif Gillani

Name:

Signature:

[1] Women, Children, Women headed households, People in old age, people having disabilities, socially isolated community groups and or people living below the poverty line

Environmental & Social Screening Checklist

Instructions:

Environmental and Social Focal Persons (ESFPs)[1] 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[2] 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: MOI - MoF

Name of MC: MC Gojra

Sub-Project Sector: Roads

Sub-Project Title: Rehabilitation of road from Railway Crossing Chenk via Sungum Marriage Hall to Chenni Peer road (Sumundri road)

Sub- Project Categorization:

E-1	S-1
E-2	S-2
E-3	S-3

Date of Screening: 07/09/2021

Anticipated Project Activities

- Scarification of road
- Asphalt laying

Estimated Cost of Subprojects

Completion Time/Duration 06 months

Estimated Labor for Subproject 25-30

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[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.

[2] It is meant as PC-I and/or engineering estimates of sub-project

Screening Questions	Yes	No	Remarks
A. Project Siting Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?			
Legally protected Area		✓	No environmentally
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project[3]		✓	Sensitive receptors
Estuarine		✓	lies within Rohtas and
Special area for protecting biodiversity		✓	construction limits
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[4]		✓	01 mosque observed outside construction limits
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project[5]	✓	✓	Sangam Marriy Hall outside ROW.
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[6] of the society and women or children)?		✓	
Already existing infrastructure [7](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…			
1. Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?		✓	No ecologically important site lies within sub. project
2. Cutting of trees?		✓	jurisdiction.
3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?		✓	
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?		✓	

[3] Ibid.

[4] According to Environmental Assessment Guidelines adopted by Punjab EPA

[5] Ibid.

[6] due to caste, creed, religion or gender e.g. transgender

[7] 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?		✓	
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?		✓	
9. Serious contamination of soil due to construction works?		✓	
10. Aggravation of solid waste problems in the area?		✓	Road scarified material shalld be disposed off
11. Generation of hazardous waste?		✓	
12. Increased air pollution due to sub-project construction and operation?	✓		Fugitive dust shalld be mitigated
13. Noise and vibration due to sub-project construction or operation?	✓		Machinery should be well-tuned.
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?		✓	
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)?		✓	No PCRs exist within sub-Project jurisdiction
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)		✓	No involuntary Resettlement involved in purposed sub-project.
3. Disproportionate impacts on the poor, women and children and or other vulnerable groups [8](mentioned above)?		✓	
4. Temporary impediments in movements of people/transport and animals?	✓		Temporary hindrance but negligible
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)?		✓	
6. Social conflicts if workers from other areas are hired?		✓	
7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?		✓	OHS should be ensured by contractor.

[8] 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?		✓	
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?	✓		Site Safety ensured by displaying road safety signage
10. Any impact on sensitive receptors (mentioned above)		✓	
11. Any impact of negative nature on already existing infrastructure including public amenities		✓	

Prepared By:

Name: Nabeel Ahmad

Signature:

Date:

Endorsed By:

Name: Asif Gillani

Signature:

Date:

PUNJAB CITIES PROGRAM

ENVIRONMENT, HEALTH AND SAFETY SOPs FOR LABOR/WORKERS

Labor /workers play key role in the infrastructure development and construction activities. The objective of preparation of the EHS SOPs for Labor/Workers is to address environment, health and safety issues related to the proposed sub-project implementation. These SOPs will provide guidelines to be followed by the contractors for effective management of EHS issues related to labor/workers/daily wagers (including women). These SOPs will be annexed in the general conditions of all the contracts carried out under the PCP. These SOPs are designed for Punjab Cities Program and will be applicable to all types of labor/workers/daily wagers (including women), hired for the construction activities under PCP. Following are the anticipated Environment, Health and Safety issues and their recommended mitigation measures.

Table 1: Construction Camp Management

Activity/ Impact Source	EHS Concerns/issues	Mitigation Measures/ Management Guidelines
Siting and Location of construction camps	Camp sites for construction workers are the important locations that have significant impacts such as health and safety hazards on labor/workers Lack of proper infrastructure facilities, such as housing, water supply and sanitation facilities will increase pressure on the local services and generate substandard living standards and health hazards.	The Contractor shall: Locate the construction camps at areas which are acceptable from environmental, cultural or social point of view. Consider the location of construction camps away from communities in order to avoid social conflict with the surrounding communities. Submit to the relevant MC for approval of a detailed layout plan for the development of the construction camp showing the relative locations of all temporary buildings and facilities that are to be constructed together with the location of site roads, fuel storage areas (for use in power supply generators), solid waste management and dumping locations, and drainage facilities, prior to the development of the construction camps. Local authorities responsible for health, religious and security shall be duly informed on the set up of camp facilities so as to maintain effective surveillance over public health, social and security matters
Construction Camp Facilities	Lack of proper infrastructure facilities, such as housing, water supply and sanitation facilities will generate social issues and impacts on health and environment.	Contractor shall provide the following facilities in the campsites: Adequate ventilation facilities Safe and reliable drinking water supply for personal hygiene (washing or bathing) Adequate housing for all workers Safe and reliable drinking water supply. Water supply from tube wells that meets the Punjab Environment Quality Standards Hygienic sanitary facilities, hand washing facilities and sewerage system. The toilets and domestic waste water will be collected

Activity/ Impact Source	EHS Concerns/issues	Mitigation Measures/ Management Guidelines
		through a common sewerage. Provide separate latrines and bathing places for males and females with total isolation by wall or by location. Female toilets should be clearly marked in language or signage clearly understood by the persons using them to avoid miscommunication. The minimum number of toilet facilities required is one toilet for every ten persons. Storm water drainage facilities. Both sides of roads are to be provided with shallow v drains to drain off storm water to a silt retention pond which shall be sized to provide a minimum of 20 minutes retention of storm water flow from the whole site. Channel all discharge from the silt retention pond to natural drainage via a grassed swale at least 20 meters in length with suitable longitudinal gradient. Paved internal roads. Ensure with grass/vegetation coverage to be made of the use of top soil that there is no dust generation from the loose/exposed sandy surface. Pave the internal roads of at least haring-bond bricks to suppress dusts and to work against possible muddy surface during monsoon. Provide child crèches for women working on the construction site. The crèche should have facilities for dormitory, kitchen, indoor/outdoor play area. Schools should be attached to these crèches so that children are not deprived of education whose mothers are construction workers Provide in-house community/common entertainment facilities. Dependence of local entertainment outlets by construction camps to be discouraged/prohibited to the extent possible.
Disposal of Labor Camp waste	Management of wastes is crucial to minimize impacts on the environment as well as on the health of the workers/labor	The Contractor shall: Ensure proper collection and disposal of solid wastes within the construction camps Insist waste separation by source; organic wastes in one pot and inorganic wastes in another pot at household level. Store inorganic wastes in a safe place within the household and clear organic wastes on daily basis to waste collector. Establish waste collection, transportation and disposal systems at their own. Dispose organic wastes in a designated safe place on daily basis. At the end of the day cover the organic wastes with a thin layer of sand so that flies, mosquitoes, dogs, cats, rats, are not attracted. One may dig a large hole to put organic wastes in it; take care to protect groundwater from contamination by leachate formed due to decomposition. Cover the bed of the pit with impervious layer of materials (clayey, thin concrete) to protect groundwater from

Activity/ Impact Source	EHS Concerns/issues	Mitigation Measures/ Management Guidelines
		contamination. Locate the garbage pit/waste disposal site min 500 m away from the residence so that peoples are not disturbed with the odor likely to be produced from anaerobic decomposition of wastes at the waste dumping places. Encompass the waste dumping place by fencing and tree plantation to prevent children to enter and play with. All solid waste will be collected and removed from the work camps and disposed in approval waste disposal sites.
Fuel supplies for cooking purposes	Illegal sourcing of fuel wood by construction workers will impact the natural flora and fauna	The Contractor shall: Provide fuel to the construction camps for their domestic purpose, in order to discourage them to use fuel wood or other biomass. Make available alternative fuels like natural gas or kerosene on ration to the workforce to prevent them using biomass for cooking. Conduct awareness campaigns to educate workers on preserving the protecting of biodiversity in the project area, and relevant government regulations and punishments on wildlife protection.
Health and Hygiene	There will be a potential for diseases to be transmitted including COVID-19, malaria, exacerbated by inadequate health and safety practices. There will be an increased risk of work crews spreading sexually transmitted infections and HIV/AIDS.	The Contractor shall: Provide adequate health care facilities within construction sites. Provide first aid box facility at the construction site round the clock. Maintain stock of medicines in the first aid facility in camp sites facility and appoint fulltime designated first aider or nurse. Provide ambulance facility for the laborers during emergency to be transported to nearest hospitals and telephone/mobile facility to call for Emergency Services 1122. Initial health screening of the laborers coming from outside areas Train all construction workers in basic sanitation and health care issues and safety matters, and on the specific hazards of their work Provide HIV awareness programming, including STI (sexually transmitted infections) and HIV information, education and communication for all workers on regular basis Provide adequate drainage facilities throughout camps to ensure that disease vectors habitats (stagnant water bodies, puddles) do not form. Regular mosquito repellant sprays in monsoon. Carryout short training sessions on best hygiene practices to

Activity/ Impact Source	EHS Concerns/issues	Mitigation Measures/ Management Guidelines
		be mandatorily participated by all workers. Place display boards at strategic locations within the camps containing messages on best hygienic practices Place display boards of contact information of nearest dispensary/health clinic/hospital
Safety	In adequate safety facilities to the construction camps may create security problems and fire hazards	The Contractor shall: Provide appropriate security personnel (police / home guard or private security guards) and enclosures to prevent unauthorized entry in to the camp area. Maintain register to keep track on a head count of persons present in the camp at any given time. Encourage use of flame proof material for the construction of labor housing/site office. Ensure that these houses/rooms are of sound construction and capable of withstanding storms/cyclones. Provide appropriate type of firefighting equipment suitable for the construction camps Display emergency contact numbers clearly and prominently at strategic places in camps. Communicate the roles and responsibilities of laborers in case of emergency in the monthly meetings with contractor.
Food Safety	There is potential for exposure to poisonous substances by ingestion	Suitable arrangements are to be made for provision of clean eating areas where workers are not exposed to the hazardous or noxious substances
Site Restoration	Restoration of the construction camps to original condition requires demolition of construction camps.	The Contractor shall: Dismantle and remove from the site all facilities established within the construction camp including the perimeter fence and lockable gates at the completion of the construction work. Dismantle camps in phases as the work decreases (do not wait for completion of the entire work. Give prior notice to the laborers before demolishing their camps/units Maintain the noise levels within the national standards during demolition activities Different contractors should be hired to demolish different structures to promote recycling or reuse of demolished material. Reuse the demolition debris to a maximum extent. Dispose remaining debris at the designated waste disposal site by MCs/ESFPs. Handover the construction camps with all built facilities as it is if agreement between both parties (contactor and land-owner) has been made so.

Activity/ Impact Source	EHS Concerns/issues	Mitigation Measures/ Management Guidelines
		Restore the site to its original condition or to an agreed condition with the landowner defined prior to the commencement of the works (in writing). Not make false promises to the laborers for future employment in O&M of the project.

Table 2: Cultural and Religious Issues

Activity/ Impact Source	Environmental Impacts	Mitigation Measures/ Management Guidelines
Construction activities	Disturbance in performance of religious activities	The Contractor shall: Provide separate prayer facilities (men and women) to the construction workers. Show appropriate and non-biased behavior with all construction workers irrespective of their religious or cultural affinities Allow the workers to participate in praying during construction time Inform the local authorities responsible for health, religious and security duly informed before commencement of civil works so as to maintain effective surveillance over public health, social and security matters In case of working during COVID-19 pandemic, SOPs for prayers in Mosque issued by the Government of Punjab, will be applicable and it will be responsibility of contractor to sensitize the labor/workers about it

Table 3: Workers/Labor Health and Safety at Construction Site

Activity/ Impact Source	Impacts	Mitigation Measures/ Management Guidelines
Construction Activities	Construction works may pose health and safety risks to the construction workers and site visitors leading to severe injuries and deaths. The population in the proximity of the construction site and the construction workers will be exposed to a number of (i) biophysical health risk factors, (e.g. noise,	The Contractor shall: Implement suitable safety standards for all workers and site visitors which should not be less than those laid down on the international standards (e.g. International Labor Office guideline on 'Safety and Health in Construction; World Bank Group's 'Environmental Health and Safety Guidelines') and contractor's own national standards or statutory regulations, in addition to complying with the national acts and rules of the Government of Pakistan Provide the workers with a safe and healthy work environment, taking into account inherent risks in its particular construction activity and specific classes of

Activity/ Impact Source	Impacts	Mitigation Measures/ Management Guidelines
	dust, chemicals, construction material, solid waste, waste water, vector transmitted diseases etc), (ii) risk factors resulting from human behavior (e.g. STD, HIV etc) and (iii) road accidents from construction traffic.	hazards in the work areas, Provide Personal Protection Equipment (PPEs)1 for workers, such as safety boots, helmets, masks, gloves, protective clothing, goggles, full-face eye shields, and ear protection. Maintain the PPE properly by cleaning dirty ones and replacing them with the damaged ones. Safety procedures include provision of information, training and protective clothing to workers involved in hazardous operations and proper performance of their job Appoint an environment, health and safety manager to look after the health and safety of the workers Inform the local authorities responsible for health, religious and security before commencement of civil works and establishment of construction camps so as to maintain effective surveillance over public health, social and security matters
	Child and pregnant labor	The Contractor shall: not hire children of less than 14 years of age and pregnant women or women who delivered a child within 8 preceding weeks, in accordance with the Employment of Children Act (2015)2 and Pakistani Labor Laws and policies respectively .

1 Table 4 presents general examples of occupational hazards and types of PPE available for different purposes.

2 The ECA 2015 defines a child as a person who has not completed his/her 14th year of age. The ECA states that no child shall be employed or permitted to work in any of the occupations set forth in the ECA (such as transport sector, railways, construction, and ports) or in any workshop wherein any of the processes defined in the Act is carried out

Activity/ Impact Source	Impacts	Mitigation Measures/ Management Guidelines
Accidents	Lack of first aid facilities and health care facilities in the immediate vicinity will aggravate the health conditions of the victims	Provide health care facilities and first aid facilities are readily available. Appropriately equipped first-aid stations should be easily accessible throughout the place of work Document and report occupational accidents, diseases, and incidents. Prevent accidents, injury, and disease arising from, associated with, or occurring in the course of work by minimizing, so far as reasonably practicable, the causes of hazards. In a manner consistent with good international industry practice. Identify potential hazards to workers, particularly those that may be life-threatening and provide necessary preventive and protective measures. Provide awareness to the construction drivers to strictly follow the driving rules Provide adequate lighting in the construction area and along the roads
Water and sanitation facilities at the construction sites	Lack of Water sanitation facilities at construction sites cause inconvenience to the construction workers and affect their personal hygiene.	The contractor shall provide separate portable toilets and hand washing facilities at the construction sites, if about 25 people are working the whole day for a month. Location of portable facilities should be at least six m away from storm drain system and surface waters. These portable toilets should be cleaned once a day and all the sewerage should be pumped from the collection tank once a day and should be brought to the common septic tank for further treatment. Contractor should provide bottled drinking water facilities to the construction workers at all the construction sites.
Other issues	Potential risks on health and hygiene of construction workers and general public	The Contractor shall follow the following management measures to reduce health risks to the construction workers and nearby community: Drainage Management Air Quality Management Noise and Vibration Management Road Transport and Road Traffic Management
Trainings	Lack of awareness and basic knowledge in health care among the construction workforce, make them susceptible to potential diseases.	The Contractor shall: Train all construction workers in basic sanitation and health care issues (e.g., how to avoid COVID-193, malaria and transmission of sexually transmitted infections (STI) HIV/AIDS. Train all construction workers in general health and safety matters, and on the specific hazards of their work Training should consist of basic hazard awareness, site specific

3 .SOPs issued by the GoPunjab during COVID-19 Pandemic will be implemented

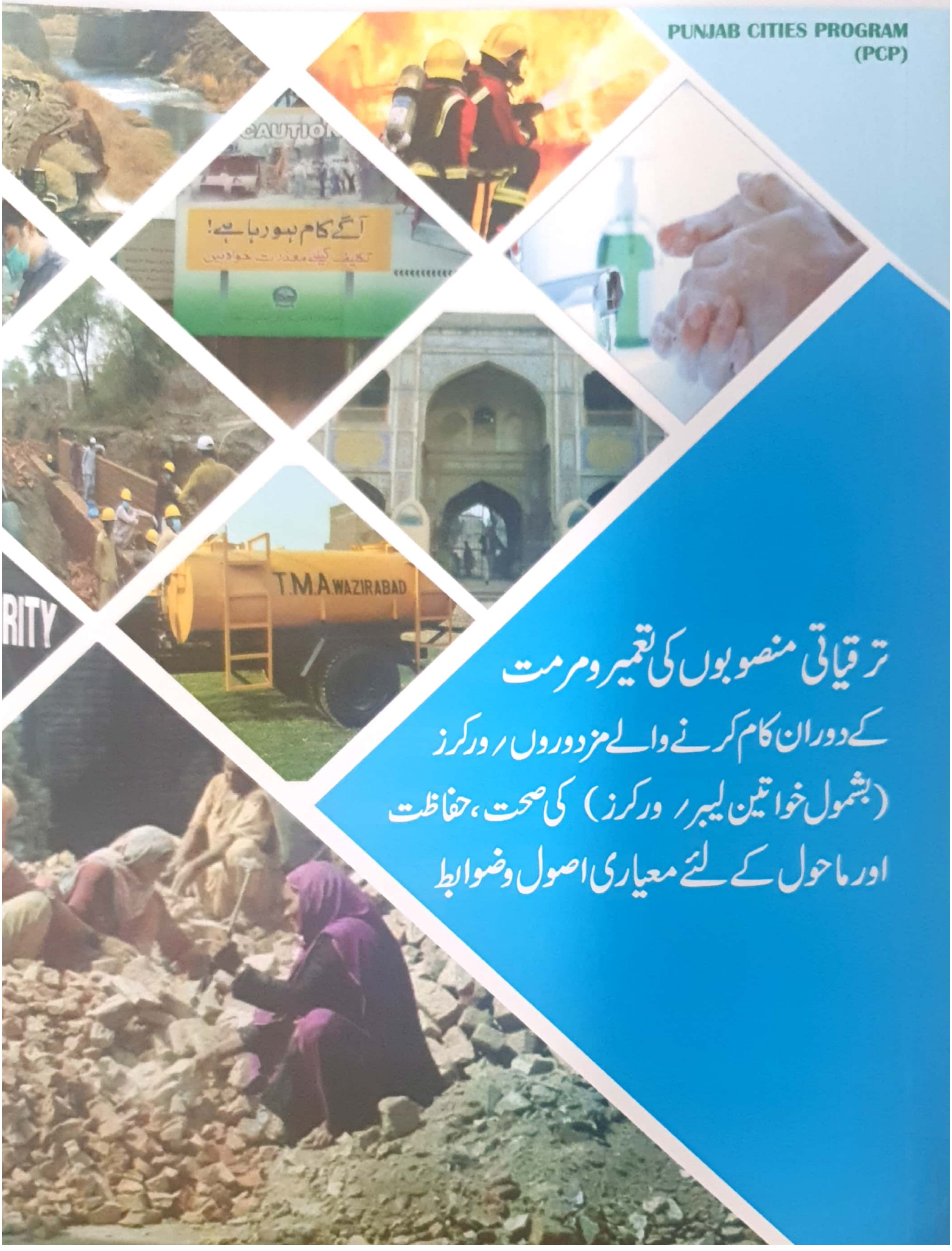
Activity/ Impact Source	Impacts	Mitigation Measures/ Management Guidelines
		hazards, safe work practices, and emergency procedures for fire, evacuation, and natural disaster, as appropriate. Commence the COVID-19, malaria, HIV/AIDS and STI education campaign before the start of the construction phase and complement it with by a strong condom marketing, increased access to condoms in the area as well as to voluntary counseling and testing. Implement COVID-19, malaria, HIV/AIDS and STI education campaign targeting all workers hired, international and national, female and male, skilled, semi- and unskilled occupations, at the time of recruitment and thereafter pursued throughout the construction phase on ongoing and regular basis. This should be complemented by easy access to condoms at the workplace as well as to voluntary counseling and testing.

Table 4: Summary of Recommended Personal Protective Equipment According to Hazard[4]

Objective	Workplace Hazards	Suggested PPE
Eye and face protection	Flying particles, molten metal, liquid chemicals, gases or vapors, light radiation.	Safety Glasses with side-shields, protective shades, etc.
Head protection	Falling objects, inadequate height clearance, and overhead power cords.	Plastic Helmets with top and side impact protection.
Hearing protection	Noise, ultra-sound.	Hearing protectors (ear plugs or ear muffs).
Foot protection	Falling or rolling objects, pointed objects. Corrosive or hot liquids.	Safety shoes and boots for protection against moving & falling objects, liquids and chemicals.
Hand protection	Hazardous materials, cuts or lacerations, vibrations, extreme temperatures.	Gloves made of rubber or synthetic materials (Neoprene), leather, steel, insulating materials, etc.
Respiratory protection	Dust, fogs, fumes, mists, gases, smokes, vapors.	Facemasks with appropriate filters for dust removal and air purification (chemicals, mists, vapors and gases). Single or multi-gas personal monitors, if available.
	Oxygen deficiency	Portable or supplied air (fixed lines). On-site rescue equipment.
Body/leg protection	Extreme temperatures, hazardous materials, biological agents, cutting and laceration.	Insulating clothing, body suits, aprons etc. of appropriate materials.

4 Source: IFC Environmental, Health, and Safety (EHS) Guidelines

PUNJAB CITIES PROGRAM
(PCP)



ترقیاتی منصوبوں کی تعمیر و مرمت کے دوران کام کرنے والے مزدوروں / ورکرز (بشمول خواتین لیبر / ورکرز) کی صحت، حفاظت اور ماحول کے لئے معیاری اصول وضوابط

حق اشاعت

پیش لفظ

لوکل گورنمنٹ اینڈ کمیونٹی ڈویلپمنٹ ڈیپارٹمنٹ اور پنجاب میونسپل ڈویلپمنٹ فنڈ کمپنی (PMDFC) نے ورلڈ بینک کے اشتراک سے پنجاب سیٹیز پروگرام (PCP) کا کامیابی سے اجرا کر دیا ہے. اس منصوبے کے تحت صوبہ پنجاب کے 16 چھوٹے شہروں (MCs) بشمول بہاولنگر، بوریوالا، خانیوال، کوٹ ادو، وہاڑی، گوجرہ، جھنگ، کمالیہ، اوکاڑا، ڈسکہ، حافظ آباد، جہلم، کاموکی، مریدکے [illegible] ترقیاتی کاموں پر کامیابی سے کام جاری ہے۔ ان ترقیاتی منصوبوں میں ویسٹ مینجمنٹ، پانی کی فراہمی، نکاسی آب [illegible] مرمت، کمیونٹی پارکس کی بحالی اور قدرتی آفات کی روک تھام کے منصوبہ جات شامل ہیں۔

پنجاب سیٹیز پروگرام (PCP) کے منصوبہ جات کی تکمیل کے دوران سماجی اور ماحولیاتی مسائل کی جانچ پڑتال اور اس کے حل کے لئے انوائرنمنٹل اینڈ سوشل سیف گارڈز (ESSs) ٹیم نے انوائرنمنٹل اینڈ سوشل مینجمنٹ فریم ورک (ESMF) بنایا ہے. مختلف منصوبہ جات اسی فریم ورک کی رو سے پایہ تکمیل تک پہنچ رہے ہیں۔

تعمیراتی اور ترقیاتی کاموں کی تکمیل میں تعمیراتی جگہوں پر کام کرنے والے مزدوروں/لیبر (بشمول خواتین) کی صحت اور کام کرنے کے دوران حفاظت بہت اہمیت رکھتی ہے۔ اس اہم مسئلہ کو ملحوظِ خاطر رکھتے ہوئے، پی ایم ڈی ایف سی کے زیرِ اہتمام پنجاب سٹیز پروگرام کی انوائرنمنٹ اینڈ سوشل مینجمنٹ ٹیم نے **" ترقیاتی منصوبوں کی تعمیر و مرمت کے دوران کام کرنے والے مزدوروں، ورکرز (بشمول خواتین لیبر/ورکرز) کی صحت، حفاظت اور ماحول کیلئے بنیادی اصول وضوابط"** مرتب کے ہیں تاکہ متعلقہ میونسپل کمیٹیز/کارپوریشنز (MCs) کے عہدیداران اور ٹھیکیداران کو آگاہی فراہم کی جائے۔

اغراض و مقاصد

۱۔ مجوزہ معیاری اصول وضوابط پنجاب سیٹیز پروگرام (PCP) کے تحت پنجاب میونسپل ڈویلپمنٹ فنڈ کمپنی (PMDFC) کے ماہرین ماحولیات نے پروگرام ڈائریکٹر (PCP) اور ڈپٹی پروگرام ڈائریکٹر (PCP) کی زیرنگرانی تشکیل دیئے ہیں۔

۲۔ شہری ترقی کے ترقیاتی منصوبہ جات کی تعمیر ومرمت میں مزدور/ورکرز بنیادی کردار ادا کرتے ہیں۔ ان (SOPs) کا بنیادی مقصد مزدور/ورکرز (بشمول خواتین لیبر / ورکرز) کو تعمیراتی جگہوں (Constrcution sites) اور لیبر کیمپس میں ماحولیاتی اور سماجی تحفظ فراہم کرنا اور صحت، ماحولیات اور کسی خطرناک صورتحال سے بچنے کے لئے حفاظت فراہم کرنا ہے۔

۳۔ یہ SOPs (PCP) پنجاب سیٹیز پروگرام کے تحت 16 شہروں کی میونسپل کمیٹیز/کارپوریشنز میں تعمیر ومرمت کے تمام پراجیکٹس پر لاگو ہوں گے۔

۴۔ یہ SOPs مزدوروں/کام کرنے والوں/دیہاڑی دار (بشمول خواتین) پر بلاتخصیص لاگو ہوں گے۔

۵۔ ان SOPs کو موثر اور یقینی بنانے کے لئے انھیں ٹھیکیداروں کے کنٹریکٹ کا حصہ بنانا اور ان پر عمل درآمد کرانا میونسپل کمیٹیز/کارپوریشنز کی ذمہ داری ہے۔ جسے پی ایم ڈی ایف سی کی متعلقہ پروگرام ٹیم یقینی بنائے گی۔

پیغام

پاکستان کی ترقی میں تعمیراتی کاموں کے دوران کام کرنے والا مزدور طبقہ نہایت اہمیت کا حامل ہے اور انکے صحت وتندرستی سے متعلق مسائل کا مؤثر حل انتہائی ضروری ہے۔ " ترقیاتی منصوبوں کی تعمیر و مرمت کے دوران کام کرنے والے مزدوروں / ورکرز (بشمول خواتین لیبر/ورکرز) کی صحت، حفاظت اور ماحول کیلئے بنیادی اصول وضوابط " کی اشاعت و ترویج اوران پر بروقت عمل درآمد بے حد ضروری ہے جس سے اس طبقے کے بنیادی حقوق کا تحفظ یقینی بنایا جا سکے گا اور اس طرح اس طبقے کی کارکردگی میں بھی بہتری نظر آئے گی۔ ان اصولوں کے تحت ہر ٹھیکیدار کو ورکرز کی صحت اور حفاظت کی ذمہ داری دی گئی ہے۔ مزدور تعمیراتی کاموں کے دوران خطرات کے مطابق ذاتی حفاظتی سامان بھی استعمال کریں گے جس سے دوران کام حادثات میں بھی نمایاں کمی نظر آئے گی۔ ماحولیات اور صحت کے اصولوں کو مدنظر رکھتے ہوئے ہر سطح پر ہم اس بات کو یقینی بنانے کی کوشش کریں گے کہ ہماری پالیسیاں اور طرز عمل فعال ہوں۔ ماحولیات، صحت اور حفاظت (EHS) کے اصولوں کو اپنانے میں کسی بھی قسم کا سمجھوتہ نہیں کیا جائے گا۔ میں امید کرتا ہوں کہ ان اصول وضوابط کی روشنی میں مزدور/ورکرز (بشمول خواتین لیبر) کے حقوق کی پاسداری کو ایک نیا رخ ملے گا اور حکومتی عہدیداران اور ٹھیکیداران بھی اپنی ذمّہ داریوں کا احساس کریں گے۔ اور اس سلسلے میں پی ایم ڈی ایف سی اور پنجاب سیٹیز پروگرام کی انوائرنمنٹ اینڈ سوشل سیف گارڈز (ESSs) ٹیم بلاشبہ مبارکباد کی مستحق ہے اور یہ توقع کی جا سکتی ہے کہ وہ مستقبل میں ان قواعد وضوابط کی نگرانی کے لئے بھرپور اقدامات کریں گے۔

محمد عامر نذیر
پروگرام ڈائریکٹر
پنجاب سیٹیز پروگرام (PCP)

زیر نگرانی

افتخار رسول
ڈپٹی پروگرام ڈائریکٹر
پنجاب سیٹیز پروگرام (PCP)

عاشق چوھدری
سینئر پروگرام آفیسر (انفراسٹرکچر)
پنجاب سیٹیز پروگرام (PCP)

تکنیکی ٹیم

رضوانہ انجم
پروگرام آفیسر (انوائرنمنٹ اینڈ سوشل سیف گارڈز)
پنجاب سیٹیز پروگرام (PCP)

تہمینہ کرن
ڈپٹی پروگرام آفیسر (ESSs)
پنجاب سیٹیز پروگرام (PCP)

کنزیٰ ندیم
ریسرچ اینالسٹ
پنجاب سیٹیز پروگرام (PCP)

(۱) لیبر کیمپس کے لئے معیاری اصول و ضوابط

سرگرمیاں

۱. مزدور / لیبر کیلئے عارضی کیمپ / رہائش گاہ کے انتظام و قیام کے لئے جگہ کا انتخاب

مسائل

- مقامی آبادی کے وسائل پر اضافی بوجھ
- مقامی آبادی سے تنازعات کا خدشہ
- سماجی، مذہبی، اور سکیورٹی کے مسائل۔

حفاظتی اقدامات

ٹھیکیدار لیبر کیمپس کے قیام کے وقت مندرجہ ذیل باتوں کا خیال رکھے گا:

- کیمپس ایسی جگہوں پر لگائے جائیں جو ماحولیاتی، مذہبی، سماجی اور ثقافتی نقطہ نظر سے قابل قبول ہوں۔
- مقامی آبادی کے ساتھ کسی تنازعہ سے بچنے کے لیئے آبادی سے دور جگہ کا انتخاب کیا جائے
- لیبر کیمپ کی جگہ اور سہولیات سے متعلق ایک تفصیلی نقشہ تیار کر کے متعلقہ میونسپل کمیٹی/کارپوریشن میں جمع کرایا جائے۔
- دیگر مقامی ادارے جیسے صحت، سکیورٹی وغیرہ کو لیبر کیمپ کے مقام اور مدت کے بارے مطلع کیا جائے تا کہ کسی ناگہانی صورتحال سے بچا جا سکے۔
- لیبر کیمپس کے قیام کیلیئے عارضی جگہ/زمین کا حصول زمین کے مالک کی مرضی، طے کردہ کرایہ اور باقاعدہ تحریری معاہدے کی صورت میں کیا جائے۔
- لیبر کیمپس سے ملحقہ بنیادی سہولتوں جیسے پینے کا پانی اور نکاسی آب کے انتظامات سے ماحولیاتی آلودگی میں اضافہ نہ ہو

سرگرمیاں

۲۔لیبر کیمپ میں مہیا کی جانے والی سہولیات

مسائل

- مناسب انفراسٹرکچر کی کمی
- بنیادی ضروریات اور سہولیات جیسے پانی اور بجلی کی فراہمی ،صفائی ستھرائی کی سہولیات اور نکاسی آب کی فراہمی

حفاظتی اقدامات

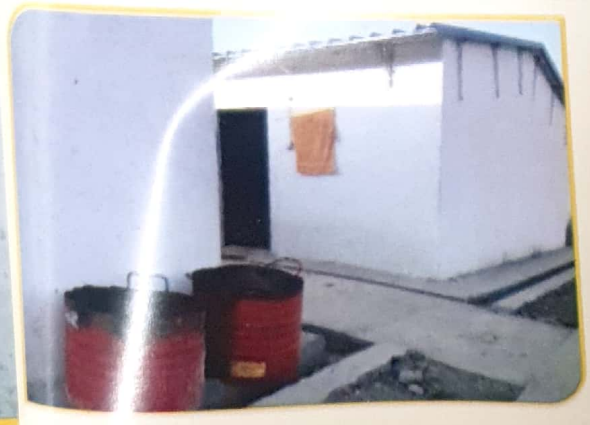
ٹھیکیدار کیمپ سائٹس پر درج ذیل باتوں کا خیال رکھے گا:

- ہوادار اور صاف ستھری رہائش گاہ
- عارضی کمروں کیلئے ایسے میٹریل کا استعمال جو جلد آگ نہ پکڑیں۔
- نہانے ،دھونے اور پانی پینے کیلیے صاف اور مناسب پانی کی فراہمی۔
- تمام مزدوروں کیلیئے مناسب جگہ کی موجودگی اور محفوظ ماحولیاتی معیار۔
- صاف ستھرے واش رومز اور نکاسی آب کا مناسب انتظام۔
- خواتین لیبر کیلیئے پردے اور پرائیویسی کا انتظام اور الگ کمروں کا قیام مزید براں خواتین لیبر کی موجودگی کی صورت میں اُنکے لیے علیحدہ ٹوائلٹس رواش رومز کا انتظام۔
- بین الاقوامی معیار کے مطابق ہر دس افراد کیلیئے مطلوبہ ٹوائلٹ کی سہولت کی تعداد ایک ہے۔
- اگر لیبر کیمپ طویل مدت کیلیئے لگایا جانا ہو تو بارشوں رسیلاب کے پانی سے بچنے کیلیئے مناسب انتظامات کا ہونا اور نکاسی آب کی فراہمی بے حد ضروری ہے۔
- ٹوائلٹس اور عارضی رہائش گاہوں میں بجلی کی فراہمی کو یقینی بنایا جائے۔ ۔

سرگرمیاں

۳۔ لیبر کیمپ سے پیدا ہونے والا سالڈ اور لیکوئڈ ویسٹ

مسائل



- تعفن اور بدبو
- صحت کے لیئے نقصان
- ماحولیات کے لیئے نقصان
- مقامی آبادی کے لیئے نقصان
- بیماریاں پیدا کرنے والے بیکٹیریا اور مچھروں کا ذریعہ

حفاظتی اقدامات

- روزمرہ پیدا ہونے والے کوڑا کرکٹ اور کچن کے کوڑا کرکٹ کے لیئے الگ الگ کوڑا دانوں کا انتظام
- میونسپل کمیٹی رکارپوریشن کی جانب سے منتخب کردہ جگہ پر روزانہ کی بنیاد پر کوڑے کو اٹھانے اور تلف کرنے کا مناسب انتظام۔
- عارضی ٹوائلٹس سے پیدا شدہ فضلے اور لیکوئیڈ ویسٹ کو حفظان صحت کے اصولوں کے مطابق ٹھکانے لگانے کا انتظام۔
- فضلے کو ٹھکانے لگانے کے لیئے رہائش گاہ سے کم از کم 500 میٹر دور جگہ کا انتخاب کیا جائے جس کے اردگرد لوگوں کی رہائش نہ ہو۔
- عارضی ٹوائلٹس سے پیدا شدہ فضلے کو ٹھکانے لگانے کے لیئے منتخب کردہ جگہ کے اردگرد باڑ لگائی جائے یا درخت لگا دیے جائیں تا کہ بچے اور دیگر رہائشی داخل نہ ہوں اور مچھر اور بدبو بھی پیدا نہ ہو۔

سرگرمیاں

٤۔ کھانا پکانے کے لئیے ایندھن کی فراہمی

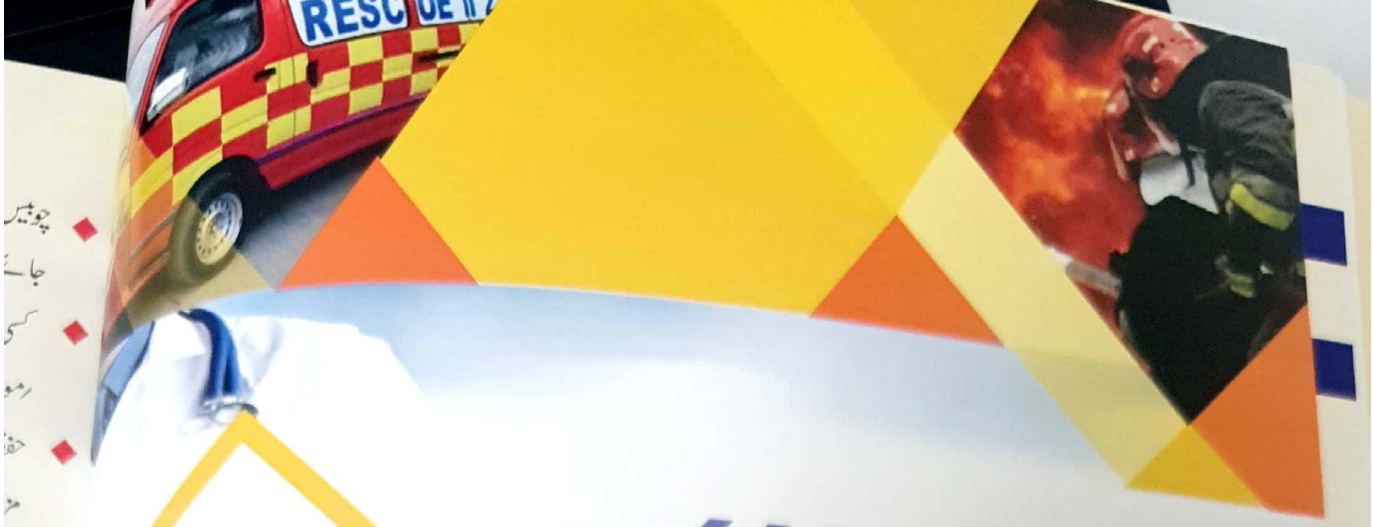
مسائل

- گیس اور دیگر ایندھن سے چلنے والے چولہوں کے پھٹنے کا اندیشہ
- ایندھن کے لیئے لکڑی کے حصول کے لیے درختوں کی کٹائی

حفاظتی اقدامات

ٹھیکیدار کیمپ سائٹس پر درج ذیل سہولیات مہیا کرے گا۔

- لیبر کیمپس میں کھانا پکانے، کمروں کو گرم رکھنے نیز سردیوں میں نہانے اور دھونے کے لیے گرم پانی کے لیے ایندھن کی لکڑی یا دیگر بائیو گیس استعمال کرنے کی حوصلہ شکنی کریں اور ایندھن کیلیے درختوں کی کٹائی نہ کریں۔
- درختوں اور اردگرد جنگلات کی حفاظت کیلیے مزدوروں/لیبر کو آگاہی دی جائے۔
- کھانا پکانے کے لیئے قدرتی گیس یا مٹی کے تیل کے محفوظ چولہے استعمال کیے جائیں۔



سرگرمیاں

۵۔جانوروں /پرندوں کا شکار خرید و فروخت

مسائل

- جنگلی حیات کو خطرات
- ماحولیاتی وسائل کو خطرات

حفاظتی اقدامات

- لیبر/مزدوروں کو گاہی فراہم کی جائے کیونکہ اردگرد موجود کسی بھی قسم کی جنگلی حیات کو نقصان پہنچانا ،ان کے گھونسلوں/ پناہ گاہوں میں کوئی مداخلت کرنا، شکار کرنا یا جانوروں/ پرندوں کو قید کرنا اور خرید و فروخت کرنا، پنجاب وائلڈ لائف (پروٹیکشن ، پریزرویشن، کنزرویشن اینڈ مینجمنٹ ایکٹ 1974) کے مطابق ممنوع اور سزا قابل تعزیر جرم ہے۔

سرگرمیاں

۶۔حفظان صحت کے اصول

مسائل

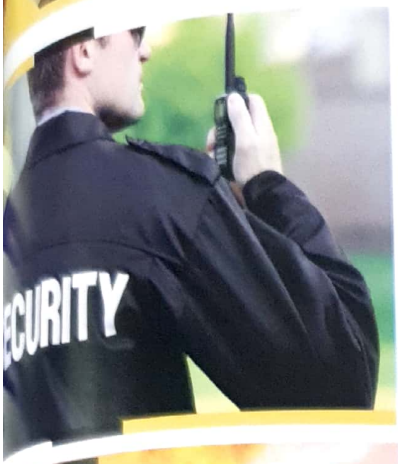
- حفظان صحت کے رہنما اصولوں پر عملدرآمد کرنے کی صورت میں مختلف بیماریاں مثلاً کرونا وائرس ، ملیریا ، ایچ آئی وی ایڈز اور دیگر انفیکشنز کے پھیلنے کا خطرہ

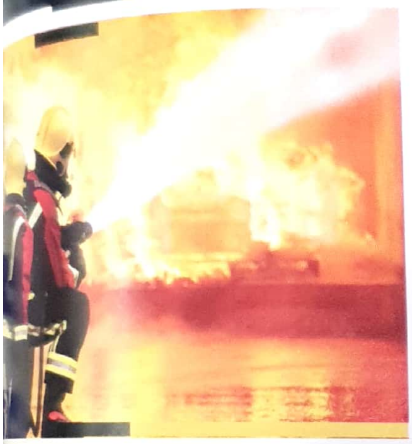
حفاظتی اقدامات

ٹھیکیدار لیبر کیمپس میں درج ذیل انتظامات مہیا کرے گا:

- لیبر کیمپس میں صحت و صفائی کی مناسب سہولیات کی فراہمی
- بیرونی علاقوں سے آنے والے مزدوروں کی صحت کی ابتدائی سکریننگ

- چوبیس گھنٹے لیبر کیمپس میں پر فرسٹ ایڈ بکس کی سہولت موجود ہو۔ کیمپ سائٹس میں ابتدائی طبی امداد سے متعلقہ دواؤں کا موجود ہونا یقینی بنایا جائے۔ اور طویل المدتی کیمپ کی صورت میں کسی ڈسپنسر/ڈاکٹر کا کیمپ میں موجود ہونا چاہیئے۔
- کسی ایمرجنسی کے دوران مزدوروں کے لیے ایمبولینس کی سہولت فراہم کی جائے اور ایمرجنسی سروسز 1122 یا 15 پر کال کرنے کے لیے ٹیلیفون /موبائل کی سہولت مہیا کی جائے ۔
- حفظان صحت کے بہترین اصولوں ، صفائی ستھرائی اور صحت کی دیکھ بھال کے امور کیلیے مزدوروں/لیبر کو تربیت فراہم کی جائے جس میں تمام مزدوروں کی شرکت کو یقینی بنایا جائے۔
- جنسی طور پر منتقل ہونے والی بیماریوں اور ایڈز وغیرہ کے بارے میں مزدوروں کو مکمل معلومات فراہم کی جائیں اور ان بیماریوں سے بچنے کے لیے حفاظتی اصول اپنانے پر زور دیا جائے۔
- مچھروں اور دیگر بیکٹیریا کو پیدا ہونے سے روکنے کیلیئے حفاظتی سپرے لازمی کرائے جائیں۔
- کرونا سے بچنے کے لیئے ابتدائی سکریننگ یقینی بنائیں اور بار بار ہاتھ دھونے پر زور دیں اور علامات ظاہر ہونے پر فوری طور پر دیگر مزدوروں سے آئسولیشن کے مکمل اصولوں پر سختی سے عمل کیا جائے۔
- لیبر کیمپس کے اندر مناسب مقامات پر حفظان صحت کے اصولوں سے متعلقہ پیغامات اور طریقے ڈسپلے کیے جائیں اور تربیتی پروگرام کا اہتمام کیا جائے۔
- قریبی ڈسپنسری/ہیلتھ کلینک/ہسپتال کے رابطہ نمبر وغیرہ واضح مقامات پر آویزاں کئے جائیں۔





سرگرمیاں

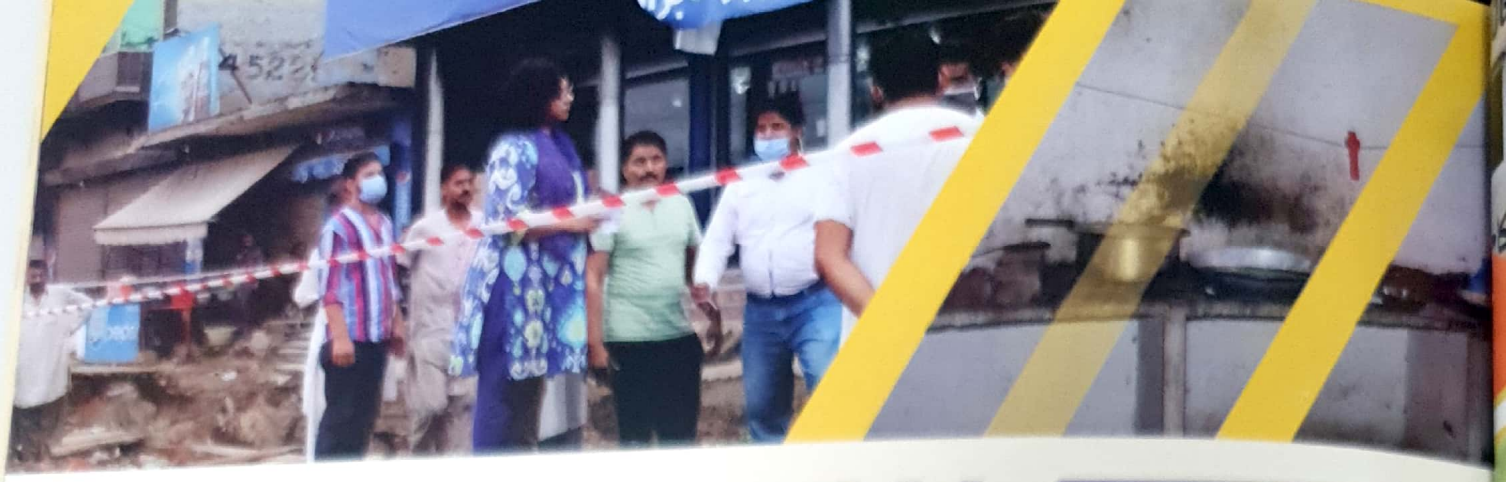
۷۔ سکیورٹی اور حفاظت کی سہولیات

مسائل

- سکیورٹی کے مسائل
- چوری کا خطرہ
- دہشت گردی کا خطرہ
- آگ لگنے کے خطرات

حفاظتی اقدامات

- کیمپ کے گرد حفاظتی باڑ کی فراہمی
- حفاظتی اہلکار (پولیس یا نجی سکیورٹی گارڈ/ہوم گارڈ وغیرہ) کی تعیناتی
- کیمپ میں موجود افراد کی صحیح تعداد اور آمد و رفت کا حساب کتاب رکھنے کے لیے رجسٹر میں اندراج۔
- آگ سے بچاؤ کے لیئے لیبر کیمپ بنانے میں ایسا کوئی میٹیریل استعمال نہ کیا جائے جس سے آگ لگنے کا اندیشہ ہو۔
- بارش، طوفان، سیلاب وغیرہ سے بچنے کیلئے اس بات کو یقینی بنایا جائے کہ کیمپ سائٹ اور عارضی کمرے/رہائش گاہیں محفوظ رہیں۔
- لیبر کیمپس میں آگ بجھانے والا آلات موجود ہوں جن پر انکی آخری معیاد کی تاریخ درج ہو۔ اور سکیورٹی گارڈ یا لیبر وغیرہ میں سے نمائندہ افراد کو آگ بجھانے والے آلہ استعمال کرنے کی تربیت دی جائے۔
- لیبر کیمپ میں واضح مقامات پر ہنگامی/ایمرجنسی رابطہ نمبر نمایاں درج ہوں۔
- ٹھیکیدار، لیبر کے ساتھ ماہانہ میٹنگز میں ایمرجنسی کی صورت میں ہر ایک مزدور کو اسکی ذمہ داریوں اور تربیت سے آگاہ کرے اور اسکی تفصیل متعلقہ کنسلٹنٹ اور میونسپل کمیٹی/کارپوریشن کو فراہم کرے۔ اور کسی بھی قسم کی شکایات ایک رجسٹر میں درج کرے۔



سرگرمیاں

۸۔ حفظان صحت کے اصولوں پر مبنی خوراک (Food Safety)

مسائل

- فوڈ پوائزننگ کا خدشہ
- بیماری کا ڈر

حفاظتی اقدامات

- مزدوروں کو صاف ستھرے اور تازہ کھانے کی فراہمی کو یقینی بنایا جائے۔

سرگرمیاں

۹۔ مذہبی و سماجی میل جول

مسائل

- مذہبی عبادات میں رکاوٹ
- سماجی تعلقات میں دشواری
- سماجی، ثقافتی اور مذہبی خیالات میں شدت پسندی یا لڑائی جھگڑا وغیرہ

حفاظتی اقدامات

- مزدوروں/لیبر کو ان کے مذہب اور فرقے کے مطابق مذہبی عبادات کی سہولیات فراہم کرنا۔
- خواتین لیبر کی موجودگی کی صورت میں ان کے لیے علیحدہ وضو، نماز اور پردے کا اہتمام کیا جائے۔
- تمام مزدوروں کی مذہبی، ثقافتی یا فرقے کی وابستگی سے قطع نظر غیر متعصّبانہ اور برابری کا سلوک کیا جائے۔
- مزدوروں کو تعمیراتی کام کے دوران نماز میں شرکت کرنے یا دیگر عبادات کی اجازت دی جائے اور اس سلسلے میں مذہبی اور سکیورٹی امور کے ذمہ دار مقامی حکام کو تعمیراتی کاموں کے آغاز سے پہلے باضابطہ طور پر آگاہ کیا جائے تاکہ صحت عامہ، معاشرتی اور حفاظتی امور پر موثر نگرانی برقرار رہ سکے۔

سرگرمیاں

10. تعمیراتی کام ختم ہونے کے بعد کی زمہ داریاں

مسائل

- فالتو سامان اور کوڑا کرکٹ کی گندگی

حفاظتی اقدامات

- کیمپ سائٹ کو اصل حالت میں بحال کیا جائے۔
- تعمیراتی کام کے مکمل ہونے پر فریم اور باڑ لگنے والے دروازوں سمیت لیبر کیمپ میں قائم تمام سہولیات کو ایسے ختم کیا جائے کہ وہاں کا کوئی
  رہے۔
- کام کم ہونے کے ساتھ لیبر کیمپ کو مرحلہ وار ختم کیا جائے (پورے کام کی تکمیل کا انتظار نہ کریں)
- لیبر کیمپ کو مسمار کرنے کے دوران شور اور کسی بھی قسم کی آلودگی مثلاً گرد و غبار، آبی آلودگی وغیرہ پھیلانے سے گریز کریں۔
- لیبر کیمپ کو مسمار شدہ ملبہ کو دوبارہ استعمال کرنے اور دوبارہ قابل استعمال کرنے کیلیے کسی لوکل ڈیلر/ٹھیکیدار کی خدمات حاصل کریں۔
- مسمار شدہ ملبہ کو دوبارہ استعمال کرنے اور دوبارہ قابل استعمال کرنے کیلیے کسی لوکل ڈیلر/ٹھیکیدار کی خدمات حاصل کریں۔
- کوڑا کرکٹ اور دوبارہ ناقابل استعمال سامان کو متعلقہ میونسپل کمیٹی/کارپوریشن کی جانب سے مقرر کردہ مقام پر مناسب طریقے سے تلف کیا جائے۔
- لیبر کیمپ کی زمین/جگہ کے مالک کے ساتھ طے شدہ معاہدے کے مطابق کام کریں اور کسی بھی قسم کے اختلاف یا جھگڑے سے گریز کریں۔ اور
  جگہ کو متفقہ منصوبہ کے مطابق اسکے حوالے کیا جائے۔
- لیبر/مزدوروں سے آئندہ کام یا مراعات کے جھوٹے وعدے ہرگز نہ کیے جائیں۔

سرگرمیاں

۱۔تمام قسم کے تعمیراتی سرگرمیاں اور کام

مسائل

- انجریز اور چوٹیں وغیرہ
- نامناسب دیکھ بھال اور بروقت امداد نہ ملنے کے باعث ہلاکت
- دہشت گردی اور سکیورٹی سے متعلق خطرات

حفاظتی اقدامات

- تمام مزدوروں/لیبر سے مقامی/بین الاقوامی معیار کے مطابق مناسب حفاظتی اور قانونی ضوابط کی پیروی کروائی جائے۔
- کام کی جگہ پر اردگرد کے علاقوں میں موجود دہشت گردی اور سکیورٹی کے خطرات کے مطابق حکمت عملی کی بروقت تیاری اور ایک محفوظ وصحت مند ماحول مہیا کیا جائے۔
- مزدوروں/لیبر کیلیے ذاتی حفاظت کے سامان (PPEs) کی فراہمی مثلاً حفاظتی جوتے، ہیلمٹ، ماسک، دستانے، حفاظتی لباس، چشمے، چہرے اور کان کی حفاظت کے سامان وغیرہ کی فراہمی
- تمام مزدوروں/لیبر کو ذاتی حفاظت کے ساز وسامان کے بارے میں مکمل آگاہی اور استعمال کے طریقے کار کے بارے تربیت کا انتظام۔
- اگر تعمیراتی کام ایک ماہ سے زائد عرصہ کیلئے جاری رہنا ہو تو تمام مدت کے لیئے صحت، صفائی اور تربیت یافتہ ماحولیات کی تعیناتی کی جائے جو مزدوروں کی صحت، صفائی اور ماحولیات کے امور کی نگرانی کرے اور انھیں تربیت وآگاہی فراہم کرے۔
- تعمیراتی کاموں کے دوران کسی چوٹ لگنے/انجریز کی صورت میں مزدور/لیبر کے علاج معالجے کی سہولت مہیا کرنا اور بروقت ہسپتال/ڈسپنسری وغیرہ پہچانا ٹھیکیدار کی ذمہ داری ہے۔
- مزید برآں دوران تعمیر تعمیراتی کام کی وجہ سے لگنے والی چوٹ/انجریز کے نتیجے میں ہلاکت ہو جانے کی وجہ سے مزدور/لیبر کی انشورنس اور اس کی بروقت ادائیگی کو یقینی بنایا جائے۔
- ایمرجنسی رابطہ نمبر مثلاً ریسکیو 1122 یا 15 اور دیگر قریبی ہسپتالوں/ڈسپنسری وغیرہ کے نمبر تعمیراتی جگہوں پر واضح درج ہونے چاہیں اور کال کی سہولت فراہم کی جائے۔
- شہری ترقی کے تعمیراتی منصوبہ جات کے اغاز سے قبل صحت، مذہبی امور اور شہری تحفظ/سکیورٹی فراہم کرنے والے مقامی اداروں کو آگاہ رکھا جائے اور اس سلسلے میں متعلقہ میونسپل کمیٹی/کارپوریشن کے تعاون سے موثر حکمت عملی تشکیل دی جائے۔

سرگرمیاں

۲۔تمام قسم کی تعمیراتی سرگرمیاں اور کنسٹرکشن کے کام

مسائل

- 15 سال سے کم عمر بچوں کی صحت اور تعلیم کا نقصان
- 18 سال اور اس سے کم عمر بچوں کی صحت کا نقصان
- حاملہ مزدور عورتوں کی صحت سے متعلقہ خطرات

حفاظتی اقدامات

- دی پنجاب رسٹرکشن آن ایمپلائمنٹ آف چلڈرن ایکٹ 2016 کے مطابق 15 سال سے کم عمر بچوں کو مزدوری یا کسی سرگرمی کے لیئے کام پر نہیں رکھا جا سکتا۔
- ویسٹ پاکستان میٹرنٹی بینیفٹ آرڈیننس 1958 کے مطابق حاملہ خواتین یا ایسی خواتین جنہوں نے چھ ہفتے قبل بچے کو جنم دیا ہو، کو مزدوری یا کسی سرگرمی کے لیئے کام پر نہیں رکھا جا سکتا۔
- دی پنجاب رسٹرکشن آن ایمپلائمنٹ آف چلڈرن ایکٹ 2016 کے مطابق 18 سال اور اس سے کم عمر کے بچوں کہ محنت مزدوری کے ایسے کام کے لیے نھیں رکھا جا سکتا جن میں صحت کو نقصان پہنچنے یا چوٹ لگنے یا کسی کیمیائی زہریلے مادے سے نقصان پہنچنے یا جہاں ہڈی ٹوٹنے کا اندیشہ ہو۔

سرگرمیاں

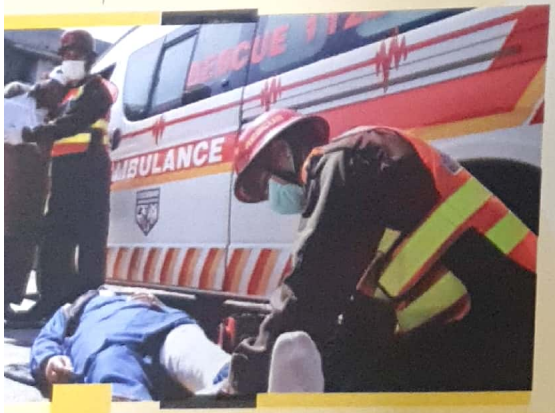
۳۔دوران تعمیر حادثات کا پیش آنا

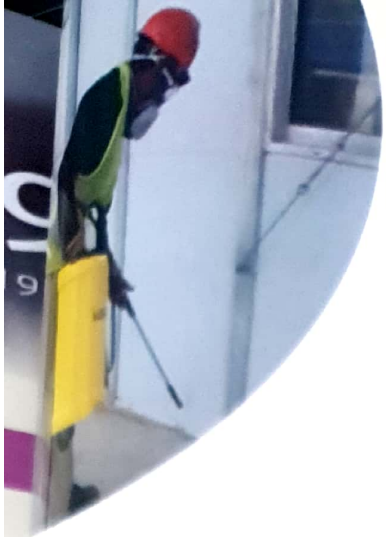
مسائل

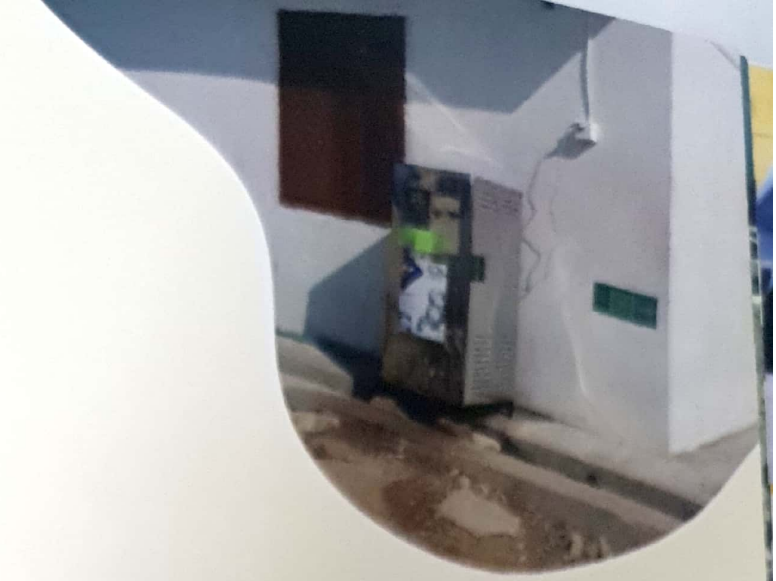
- فوری طبی امداد کی کمی
- اردگرد کے علاقوں میں ابتدائی طبی سہولیات اور صحت عامہ کا فقدان

حفاظتی اقدامات

- تعمیراتی جگہ پر فرسٹ ایڈ باکس کی موجودگی کہ یقینی بنایا جائے اور فرسٹ ایڈ باکس میں تمام ضروری ادویات اور طبی امداد کا ضروری سامان موجود ہو۔
- تعمیراتی کاموں کے دوران پیش آنے والے حادثات بیماریوں اور واقعات کا مکمل ریکارڈ رکھا جائے۔اسی طرح حادثات کی نوعیت و وجوہات کا مکمل ریکارڈ موجود ہو۔
- مزدوروں کی صحت و سکیورٹی سے متعلق ممکنہ خطرات کی بروقت نشاندہی کی جائے خاص کر وہ خطرات جو جان لیوا ثابت ہو سکتے ہیں۔اور ضروری حفاظتی اقدامات بروقت کئے جائیں۔
- تعمیراتی کاموں سے متعلق مشینری چلانے والے ڈرائیوروں کو دوران ڈرائیونگ قواعد وضوابط پر سختی سے عملدرآمد کرانے کے لئے آگاہی فراہم کی جائے۔
- تعمیراتی علاقوں اور سڑکوں کے ساتھ ساتھ روشنی کا معقول انتظام ہو۔







سرگرمیاں

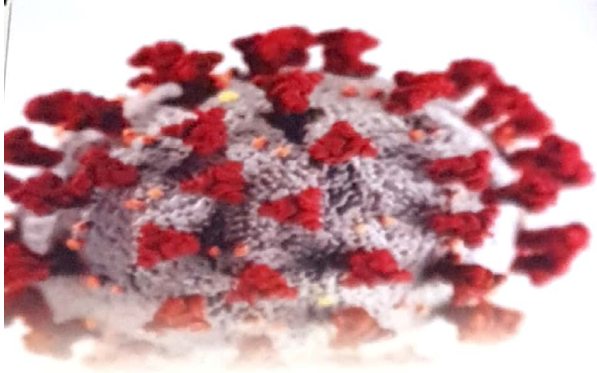
٤.تعمیراتی مقامات پر پانی اور صفائی ستھرائی کی سہولیات اور سالڈ ویسٹ مینجمنٹ

مسائل

- صحت کو خطرہ
- اردگرد علاقے کے لوگوں کے لئے ناگواری کا باعث
- مچھروں اور دیگر بیکٹیریا کی افزائش نسل کا ذریعہ

حفاظتی اقدامات

- تعمیراتی جگہوں پر تمام مزدوروں کے لئے پینے کے لئے صاف ستھرا پانی مہیا کیا جائے۔
- اگر تقریباً 25 مزدور ایک مہینہ کے لئے سارا دن کام کر رہے ہوں تو ان کے لیے تعمیراتی جگہوں پر پورٹ ایبل ٹوائلٹ کا انتظام کیا جائے جو مقامی ڈرینج سسٹم سے ملحق ہوں اور مقامی ڈرینج سسٹم کی غیر موجودگی میں مقامی ندی نالوں وغیرہ سے کم از کم 6 میٹر کے فاصلے پر ہوں۔ مزید برآں پورٹ ایبل ٹوائلٹس کی صفائی ستھرائی کو روزانہ کی بنیاد پر یقینی بنایا جائے۔
- تعمیراتی کاموں کے دوران کھدائی سے حاصل شدہ گارا، مٹی، ریت، کنکریٹ وغیرہ کو تعمیراتی جگہ پر [illegible] دن سے زائد مدت کے لئے کھلا نہ رکھا دیا جائے۔ اور روزانہ کی بنیاد پر متعلقہ میونسپل کمیٹی/کارپوریشن کی جانب سے مقرر کردہ جگہ پر مناسب [illegible] ذریعے سے ٹھکانے لگایا جائے۔



COVID-19
CORONAVIRUS DISEASE 2019

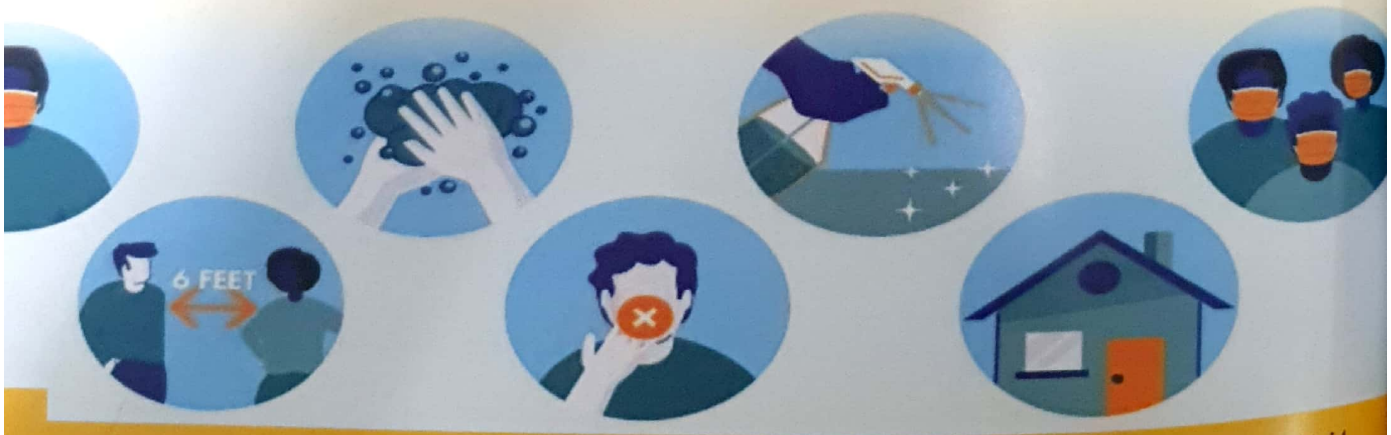
سرگرمیاں

کرونا وائرس کی وبا کے دوران حفاظتی تدابیر

حفاظتی اقدامات

گورنمنٹ آف پنجاب اور ورلڈ بنک کی ھدایات کے مطابق کرونا کی وبا کے دوران درج ذیل حفاظتی اقدامات کی پابندی کروانا کنٹریکٹر کی ذمہ داری ھے :

- کرونا وائرس کی وبا کے دنوں میں کنسٹرکشن سائٹ پر ہاتھ دھونے کیلئے پانی (پورٹ ایبل ہینڈ واشنگ کی سہولت) اور صابن مہیا کیا جائے اور لیبر کو بار بار صابن سے ہاتھ دھونے کی تلقین کی جائے۔
- لیبر کیمپس میں اور کنسٹرکشن سائٹ پر سوشل ڈیسٹینسنگ (6m کا فاصلہ) کے اصولوں کو مدنظر رکھا جائے۔
- کرونا وائرس کی وبا کے دوران اس بات کا خاص خیال رکھا جائے کہ اگر کنسٹرکشن سائٹ پر آبادی میں وبا پھیلی ہوئی ہے تو آبادی اور مقامی لوگوں سے دور رہیں اور کسی قسم کا میل جول نہ رکھیں۔ اسی طرح اگر کوئی مزدور وبا کے علاقے سے روزانہ کی بنیاد پر آ رہا ہے تو اسے باقی لوگوں/مزدوروں سے میل جول سے دور رکھا جائے۔
- اگر کسی مریض میں وائرس کی علامات (خشک کھانسی، نزلہ، زکام، بخار وغیرہ) پائی جائیں تو اسے فوراً دوسرے مزدوروں سے آئسولیٹ کر دیا جائے اور ٹیسٹ کروانے کیلئے کہا جائے۔
- وبا کے دوران کنسٹرکشن سائٹ پر دیگر PPEs کے ساتھ ساتھ مزدوروں کو ماسک لازمی استعمال کرایا جائے۔



تعمیراتی کاموں کے دوران خطرات/حادثات سے بچنے کیلئے سامان برائے ذاتی حفاظت کا خلاصہ

مقصد	تعمیراتی کام	تجویز کردہ سامان برائے ذاتی حفاظت	تصویریں
آنکھوں اور چہرے کی حفاظت/ تحفظ	اڑنے والے ذرات کا استعمال جیسے پگھلی ہوئی دھات مائع کیمیکل، گیسیں، اور بخارات، روشنی کی شعاعیں۔	حفاظتی عینکیں	
سر کی حفاظت/ تحفظ	ایسے تمام کام جن میں گرنے کا خطرہ ہو، بلندی پر کام کرنا، تعمیراتی کام کو سنبھالنے اور دوسری جگہ پر منتقل کرنے والے کام۔	اوپر اور اطراف سے نقصان سے بچاؤ کیلئے پلاسٹک کے ہیلمٹ	
سماعت کی حفاظت/ تحفظ	کھدائی/شور پیدا کرنے والے کام یا بھاری مشینری استعمال کرنے کی وجہ سے شور۔	سماعت کی حفاظت کے آلہ جات جیسے کن پوش یا ایئر پلگ	
پاؤں کی حفاظت/ تحفظ	تمام تعمیراتی کام جن میں چیزوں کا گرنا یا گھمانا، نوکیلی اشیا شامل ہوں۔ گلانے والا یا گرم مائع، کچرے کے ڈھیر سے کچرا اٹھانا۔	ملنے اور گرنے والی اشیاء، مائعات اور کیمیائی مواد سے بچاؤ کیلئے حفاظتی جوتے یا بوٹ	
ہاتھوں کی حفاظت/ تحفظ	جسمانی صحت کیلئے نقصان دہ سامان جیسے کچرے کو سنبھالنا، ایسے کام جس میں کاٹ یا گہرے زخم لگنے کا اندیشہ ہو، ارتعاش، بہت زیادہ درجہ حرارت۔	ربڑ یا مصنوعی مواد (نیوروپین)، چمڑا، سٹیل، غیر موصل مواد سے بنے گلوز	
تحفظ تنفس	دھول، دھند، شعلے، گیسیں، دھواں، بخارات	ایک جگہ سے دوسری جگہ لے جانے والے یا ایک ہی جگہ پڑے مواد کی فراہمی تعمیراتی جگہ پر بچاؤ کا سامان	
	آکسیجن کی کمی	چہرے کے ماسک جن میں دھول ہٹانے اور ہوا کو صاف رکھنے کیلئے (کیمیائی مواد، دھند، بخارات اور گیسوں سے) مناسب فلٹر لگے ہوں	 
جسم / ٹانگوں کی حفاظت/ تحفظ	تمام کام جن میں شدید درجہ حرارت، نقصان دہ مواد، حیاتیاتی ایجنٹ، چھوٹے یا گہرے زخم لگنے کا اندیشہ ہو	مناسب میٹریل سے بنے غیر موصل کپڑے، ایپرن وغیرہ	
اونچائی پر کام کرتے ہوئے حفاظت	تمام تعمیراتی کام جو 4 فٹ یا اس سے زیادہ کی اونچائی پر کیے جانے ہوں بشمول سٹریٹ لائٹس وغیرہ	ہیلمٹ، حفاظتی عینکیں، [illegible] کے گلوز اور ربڑ کے بوٹ	
اونچائی پر کام کرتے ہوئے حفاظت	تمام تعمیراتی کام جو 4 فٹ یا اس سے زائد اونچائی پر مسلسل ایک دن کیلئے کیے جانے ہوں	اینکر، بیلٹ، رسی، کنیکٹر، [illegible] جگہ اور ایک ساتھی فرد	

Summary of Recommended Personal Protective Equipment According to Hazard

Objective	Workplace Hazards	Suggested PPE	Pictures
Eye and face protection	Flying particles, molten metal, liquid chemicals, gases or vapors, light radiation.	Safety Glasses with side-shields, protective shades, etc.	
Head protection	Falling objects, inadequate height clearance, and overhead power cords.	Plastic Helmets with top and side impact protection.	
Hearing protection	Noise, ultra-sound.	Hearing protectors (ear plugs or ear muffs).	
Foot protection	Falling or rolling objects, pointed objects. Corrosive or hot liquids.	Safety shoes and boots for protection against moving & falling objects, liquids and chemicals.	
Hand protection	Hazardous materials, cuts or lacerations, vibrations, extreme temperatures.	Gloves made of rubber or synthetic materials (Neoprene), leather, steel, insulating materials, etc.	
Respiratory protection	Dust, fogs, fumes, mists, gases, smokes, vapors.	Facemasks with appropriate filters for dust removal and air purification (chemicals, mists, vapors and gases). Single or multi-gas personal monitors, if available.	
	Oxygen deficiency	Portable or supplied air (fixed	
Body/leg protection	Extreme temperatures, hazardous materials, biological agents, cutting and	Insulating clothing, body suits, aprons etc.	
Working at *height	Rehabilitation Projects	Helmet, Safety glasses,	
	New Construction Projects	Anchor, belt, lanyard,	

*In general, use of PPEs is required for any height of 4 ft or more. *Ref: OSHA standards*

(3) مقامی آبادی/دکانداروں اور رہائشیوں کی صحت، ماحولیات اور سماجیات سے متعلق رہنما اصول وحفاظتی تدابیر

سرگرمیاں

۱. تعمیراتی کاموں کے لئے منتخب کردہ مقام/ جگہ پر کام کا آغاز

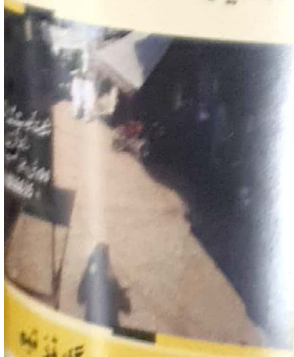
مسائل

- مقامی آبادی/رہائشیوں کیلئے تعمیراتی کام کی عدم آگاہی
- لیبر/مزدوروں کے داخلے سے رہائشی عورتوں کے پردے اور پرائیویسی کے مسائل
- مقامی آبادی کے ثقافتی، سماجی، مذہبی ورثہ، اور تاریخی مقامات/عمارتوں کو نقصان

حفاظتی اقدامات

ٹھیکیدار کو چاہئے کہ:

- متعلقہ میونسپل کمیٹی کے انوائرنمنٹ اینڈ سوشل فوکل پرسن (ز) منتخب کردہ اور متعلقہ ریجنل آفس میں موجود ڈپٹی پروگرام آفیسر (انوائرنمنٹ اینڈ سوشل سیف گارڈز) کی موجودگی میں مقامی آبادی/رہائشیوں اور دکانداروں کو تعمیراتی کام کے آغاز سے قبل تعمیراتی کام کی نوعیت، اغراض ومقاصد اور تکمیل کی معینہ مدت کے بارے میں مکمل آگاہی فراہم کرے۔
- تعمیراتی کام کے دوران پیش آنے والے ممکنہ سماجی اور ماحولیاتی مسائل اور ان کے مطابق حفاظتی اقدامات کے بارے میں مقامی رہائشیوں/دکانداروں کو کام کے آغاز سے قبل مکمل آگاہی دی جائے۔
- تعمیراتی کام کے آغاز سے پہلے مقامی رہائشیوں اور دکانداروں کو تعمیراتی کاموں کی وجہ سے سماجی/ماحولیاتی مسائل کی نشاندہی/شکایات/تجاویز کیلئے مندرجہ ذیل رابطہ نمبرز کے بارے میں مکمل آگاہی فراہم کی جائے۔
  - (a) ٹھیکیدار کا موبائل/ٹیلیفون نمبر
  - (b) متعلقہ میونسپل کمیٹی/کارپوریشن کے فوکل پرسن (ز) کے رابطہ نمبرز
  - (c) متعلقہ (PCP) ریجنل آفس میں تعینات ڈپٹی پروگرام آفیسر (ESSs) کے رابطہ نمبرز
- تعمیراتی کام کے آغاز سے پہلے تعمیراتی مقام/جگہ کو فیتہ کی مدد سے باقی علاقہ سے الگ کر دیا جائے۔



تعمیراتی جگہ/مقام پر واضح بورڈ نصب کر دیئے جائیں، جن پر درج ذیل پیغامات/احکامات لکھے ہوں:

(a) تعمیراتی کام کی نوعیت

(b) ٹریفک میں رکاوٹ کی صورت میں متبادل راستے کا نشان اور عارضی رکاوٹ کا پیغام

(c) ایمرجنسی اور شکایت کیلئے رابطہ نمبرز

(d) (PMDFC) کی جانب سے جاری کردہ سماجی و ماحولیاتی پیغامات پر مبنی پوسٹرز۔

تعمیراتی کام کی جگہ کے ارد گرد 100 میٹر تک کی حدود میں موجود ثقافتی، سماجی، مذہبی ورثہ، تاریخی عمارتوں اور مذہبی مقامات جیسے قبرستان، مساجد، مندر، گرجا گھروں وغیرہ کو کسی قسم کا نقصان نہ پہنچایا جائے اور ان کی حدود میں کوڑا کرکٹ ڈالنے یا فالتو پانی چھوڑنے سے گریز کیا جائے۔ مزید برآں کھدائی کے دوران کسی نئے آثارِ قدیمہ ملنے کی صورت میں متعلقہ مقامی محکمے سے رجوع کیا جائے اور کھدائی کا کام بند کر کے تعمیراتی کام روک دیا جائے۔

سرگرمیاں

2- کھدائی کی جگہ اور اس سے متعلقہ کام اور نالوں کی صفائی اور اس سے حاصل شدہ بھل وغیرہ

مسائل

- کھدائی سے حاصل شدہ مٹی/کنکر کے ڈھیر (Debris) سے رہائشیوں کی آمدورفت اور ٹریفک میں رکاوٹ
- مقامی رہائشیوں کیلئے ناگواری کا باعث
- مچھروں اور دیگر بیماری پھیلانے والے جراثیم کی افزائش کا ذریعہ
- کھدائی کی جگہ پر گرنے اور حادثات کے خطرات

حفاظتی اقدامات

- تعمیر کے دوران کھدائی کے تمام مقامات کے اردگرد حفاظتی ٹیپ / پٹی لگائی جائے اور کھدائی کی جگہ کو عارضی طور پر بند کر دیا جائے جس کے باہر اس جگہ سے دور رہنے کیلئے واضح پیغامات لکھے ہوں۔
- کھدائی سے حاصل شدہ مٹی / کنکر / پتھر وغیرہ کو ایک دن سے زیادہ اس جگہ پر موجود نہ رہنے دیا جائے بلکہ روزانہ کی بنیاد پر متعلقہ میونسپل کمیٹی / کارپوریشن کی منتخب کردہ جگہ پر محفوظ طریقے سے ٹھکانے لگایا جائے۔
- نالوں کی صفائی سے حاصل شدہ بھل / ریت وغیرہ کو ایک دن سے زیادہ اس جگہ پر موجود نہ رہنے دیا جائے بلکہ روزانہ کی بنیاد پر اٹھوایا جائے اور بھل کو ایک جگہ سے دوسری جگہ منتقلی کے دوران ٹریکٹر / ٹرالی کو ترپال کی مدد سے ڈھانپ کر لے جایا جائے۔

سرگرمیاں

3-تعمیراتی مشینری / تعمیراتی مٹیریل اور تعمیراتی کاموں کی وجہ سے عارضی بندش

مسائل

- ٹریفک میں رکاوٹ۔

حفاظتی اقدامات

- ٹریفک میں ممکنہ رکاوٹ کے پیش نظر متبادل راستے کا انتخاب اور اس کی نشاندہی کیلئے پیغامات واضح درج کیے جائیں۔
- ٹریفک کونز (cones) کی مدد سے رکاوٹ والی جگہ کو الگ کر دیا جائے تاکہ حادثات سے بچا جا سکے۔
- ٹریفک میں زیادہ دنوں تک مسلسل رکاوٹ کی صورت میں مقامی ٹریفک پولیس کو آگاہ کیا جائے اور ان کے ساتھ مل کر ٹریفک مینجمنٹ پلان کو تشکیل دیا جائے جس کو واضح مقام پر نصب کیا جائے اور مقامی آبادی / رہائشیوں کو اس کے بارے میں مکمل آگاہی دی جائے۔

سرگرمیاں

4-تعمیراتی کاموں کی وجہ سے راستوں میں عارضی رکاوٹ اور زمین کا عارضی حصول

مسائل

- روزمرہ معمولات اور کاموں میں رکاوٹ
- رہائشی خواتین کیلئے آنے جانے میں رکاوٹ
- دکانداروں کے دکانوں کے آگے رکاوٹیں اور گاہکوں کیلئے مشکلات
- مستقل وعارضی سٹالز لگا کر بیچنے والے چھوٹے بڑے مستقل دکانداروں کا گاہک کم ہو جانے کی وجہ سے مالی نقصان

حفاظتی اقدامات

- تعمیراتی علاقے میں اردگرد موجود تمام چھوٹی بڑی دکانوں، ٹھیلوں، عارضی خوانچہ فروشوں اور گھروں کا مکمل سروے (تعداد اور مالی حیثیت وغیرہ) او
ان پر ممکنہ سماجی اور ماحولیاتی اثرات کا جائزہ لے کر ایک تفصیلی رپورٹ اور متعلقہ پلان میونسپل کمیٹی/کارپوریشن کے دفتر میں موجود ہونی چاہئے
جو کہ فوکل پرسنز، متعلقہ علاقائی آفس میں موجود ڈپٹی پروگرام آفیسر (ESSs) کے ساتھ تعمیراتی کاموں کی مالیت کا اندازہ لگائے وقت تیار ک
جائیگی۔ اس رپورٹ اور پلان میں موجود سماجی اور ماحولیاتی مسائل کے حل کیلئے مختص رقم اور ان کا صحیح طریقے سے استعمال ٹھیکیدار کے کنٹریکٹ
حصہ ہوگا۔
- رہائشیوں کیلئے آنے جانے اور دکانوں/گھروں تک رسائی کے لیے متبادل راستے مہیا کرنا ٹھیکیدار کی ذمہ داری ہے۔
- دکانوں/تھڑوں/ٹھیلوں وغیرہ کے باہر کسی بھی قسم کے نقصان یا توڑ پھوڑ کی صورت میں ٹھیکیدار طے شدہ ضوابط کے مطابق اس کی قیمت متاثرہ لوگوں
ادا کرے گا۔
- لیبر/مزدور کو تربیت دی جائے کہ وہ اردگرد رہائشی عورتوں اور بچوں کے آنے جانے میں کوئی رکاوٹ نہ بنیں اور رہائشیوں کے ساتھ بلاضرورت کو
میل جول نہ رکھیں۔
- تعمیراتی کیمپ لگانے، تعمیراتی کام کرنے یا مشینری اور تعمیراتی سامان رکھنے کے لیئے عارضی طور پر حاصل کی گئی زمین کا کرایہ مالک مکان کو وقت
پر ادا کی جائے گا۔ اور تحریری معاہدے کی صورت میں ٹھیکیدار تمام قواعد وضوابط کا پابند ہوگا۔
- تعمیراتی کاموں/کیمپ وغیرہ لگانے کے لیئے عارضی زمین حاصل کرنے کے لئے مقامی رہائشیوں سے مشاورت اور دنوں کے حساب سے کرایہ اور
اس کا مکمل طریقہ کار وضع کر کے باقاعدہ لکھا جائے گا۔ اور خلاف ورزی کی صورت میں ٹھیکیدار ذمہ دار ہوگا۔

سرگرمیاں

۵۔تعمیراتی کام اور ہیوی مشیری کا استعمال

مسائل

- شور غل
- پانی کی آلودگی
- ہوائی آلودگی
- دیگر ماحولیاتی مسائل

حفاظتی اقدامات

- تعمیراتی علاقے میں موجود ہسپتالوں، سکولوں/کالجوں وغیرہ اور رہائشی گھروں/دکانوں کی تمام تفصیلات کی رپورٹ متعلقہ میونسپل کمیٹی کے دفتر میں موجود ہونی چاہیئے جو کہ ٹھیکیدار کے کنٹریکٹ کا حصہ ہوگی۔ اور ٹھیکیدار ان تفصیلات کے مطابق ایسا پلان ترتیب دے گا جس سے اردگرد عمارتوں/رہائشیوں اور دکانداروں کو کم سے کم پریشانی کا سامنا کرنا پڑے مثلاً زیادہ شور پیدا کرنے والے کام دن کے اس حصے میں کئے جائیں جب ہسپتالوں، اور سکولوں/کالجوں وغیرہ کے مصروف اوقات کار نہ ہوں اور ایسے کام جن کی وجہ سے راستوں کی عارضی بندش ضروری ہوں وہ رات کو کیئے جائیں جب رہائشیوں کی آمدورفت نہ ہو۔
- تعمیراتی کاموں کے دوران پیدا شدہ فاضل پانی یا پورٹیبل ٹوائلٹس کا پانی/فضلہ وغیرہ کا محفوظ اور مناسب طریقے سے ٹھکانے لگانے کا بندوبست کیا جائے اور فاضل پانی کو پینے کے صاف پانی کے ساتھ شامل ہونے سے بچانے کا ہر ممکن قدم اٹھایا جائے۔
- واٹر سپلائی کی سکیموں یا ایسی تمام کام جن کی وجہ سے رہائشیوں کو پانی یا سیوریج وغیرہ میں عارضی بندش کا سامنا کرنا پڑ سکتا ہو۔ ایسے تمام کاموں کے آغاز سے پہلے رہائشیوں کو پیشگی اطلاع دی جائے اور متبادل انتظامات کا خاطر خواہ انتظام کیا جائے۔
- تعمیراتی کاموں کی وجہ سے درختوں کی کٹائی سے ہر حال میں گریز کیا جائے اور ناگزیر صورت حال میں ایک درخت کی کٹائی کے متبادل کے طور پر چار درخت لگانا ضروری ہیں۔
- تعمیراتی جگہ پر پیدا ہونے والے کوڑا کرکٹ کو ٹھکانے لگانے کیلئے ڈسٹ بن لگائے جائیں اور ان کو روزانہ کی بنیاد پر متعلقہ میونسپل کمیٹی کی طرف سے مقرر کردہ مقام پر ٹھکانے لگایا جائے۔
- کوڑا کرکٹ اور فاضل پانی اردگرد موجود فصلوں اور ندی نالوں میں پھینکنے سے گریز کریں۔
- گرد و غبار اور ہوائی آلودگی کی صورت میں پانی کا باقاعدہ چھڑکاؤ کریں۔
- تعمیراتی کام کی مدت اور نوعیت کے مطابق کام کے آغاز سے پہلے، کام کے دوران اور کام کے بعد شور کی آلودگی، ہوائی آلودگی اور آبی آلودگی کے نمونہ جات حاصل کر کے ان کی جانچ پڑتال کرانا ٹھیکیدار کی ذمہ داری ہے۔ اس سلسلے میں ریجنل آفس میں موجود ڈپٹی پروگرام آفیسر (ESSs) سے مزید رہنمائی حاصل کریں۔
- تعمیراتی کام مکمل ہو جانے کے بعد علاقے کی صفائی ستھرائی اور ماحولیاتی خوبصورتی کا خاص خیال رکھیں اور پہلے سے بہتر حالت میں چھوڑیں۔

* سپریم کورٹ آف پاکستان کے سوموٹو کیس نمبر 25 بمطابق 2009 حوالہ نمبر "کٹنگ آف ٹریز فار کینال وائیڈننگ پراجیکٹ لاہور" تعمیراتی کاموں کے دوران ہر ایک درخت کی کٹائی کے متبادل چار درخت لگائے جائیں گے۔

ترقیاتی منصوبوں کی تعمیرو مرمت کے دوران کام کرنے والے
مزدوروں ،ورکرز، (بشمول خواتین لیبر/ ورکرز) کی صحت، حفا
ظت ،اور ماحول کے لئے معیاری اصول وضوابط درج ذیل پالیسیز،
قوانین اور نوٹیفیکیشنز کا تجزیہ کر کے تجویز کئے گئے ہیں۔

- The Punjab Occupational Health & Safety Act, 2019
- General Environment, Health & Safety (EHS) Guidelines by International Finance Corporation (IFC), World Bank
- International Labour Standards of International Labour Organization (ILO)
- Punjab Tehsil/Town Municipal Administration (Works) Rules 2003 (Amendments 2016)
- The Punjab Restriction on Employment of Children Act , 2016
- The West Pakistan Maternity Benefit Ordinance , 1958
- ESF/Safeguards Interim Note: COVID-19 Considerations in Construction / Civil Works Projects - World Bank Guidelines
- Health & safety SOPs for Construction Workers/Sector for COVID 19
- Punjab Wildlife (Protection, Preservation, Conservation and Management) Act, 1974