



Local Government & Community Development Department

Punjab Cities Program Construction of Parking Shed in Muridke City

PC-I

Estimated Cost Million PKR 53.639

July 2022

Municipal Committee Muridke



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Punjab Cities Program

PC-I Form for Construction of Parking Shed in Muridke City

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PC-I FORM
for
Construction of Parking Area in Muridke City

Project Serial Number

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

Sub Sector: **Social**

1. Name of the project	Punjab Cities Program Construction of Parking Area in Muridke city	
2.Location	The city of Muridke is located at 74°-15' East and 31°-48' North at Main GT Road (N-5) at a distance of 33 km from Sheikhpura at its north east, 28 km from Lahore at its north and 40 Km from Gujranwala at its south. It is a railway station on Lahore Rawalpindi section and is connected with entire province through rail and road links. Location map of the city is attached in Annexure-A	
3. Authorities responsible for		
i- Sponsoring	Government of the Punjab (through World Bank funding)	
ii- Execution	Municipal Corporation Muridke	
iii- Operation and Maintenance	Municipal Corporation Muridke	
iv-Concerned Provincial Department	Local Government and Community Development Department Punjab	
4a.Plan Provision		
i. If the project is included in medium term/five year plan, specify actual allocation	Punjab Cities Program (PCP) is a World Bank funded Program with a total cost of USD 236.00 million and comprises of below mentioned components.	
	Total loan from World Bank	USD 200.00 million
	Component-1 Infrastructure development (PforR)	USD 180.00 million
	Component-2 Technical Assistance	USD 20.00 million
	MCs share (20% of PforR component) equivalent to:	USD 36.00 million
	Total Program cost	USD 236.00 million
	Component-2 i-e Technical Assistance component of Program costing USD 20.00 million is meant for management cost of the Program and	

	capacity building of MCs & Government Departments and is included in the medium term/ five-year plan and has been funded now in ADP 2022-23 - under General Serial No-1769 with allocation of PKR 1329.90 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. 1329.90.00 million under ADP 2022-23 General Serial No 1769 as described above.
5. Project objectives and its relationship with sector objectives	<p><u>Sector Objectives</u></p> <p>The sector objectives include:</p> <ol style="list-style-type: none"> 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 <p><u>Objectives of the Project</u></p> <p>The Punjab Cities Program aims at improvement of infrastructure of municipal services such as roads, cross roads, street lights, parks and parking shed for SWM machinery for improved communication and recreational facilities.</p> <p>Scope of the work for this particular project includes the construction of Parking shed for SWM Machinery.</p> <p>The Project has the following objectives;</p>

	<ol style="list-style-type: none"> 1. Provision of suitable parking area for the MC Vehicles. 2. Making MC self-sufficient in small repairs to the machinery & Equipment possessed by MC 3. Provision of a washing facilities for the vehicles 4. Effective protection to the vehicles against the solar radiation and Ultraviolet rays, rain, hail, wind, and dust. 5. Slowing down the deterioration of vehicles, therefore reducing the cost of maintenance. 6. Enhancement of the security of vehicles during non-working hours. 7. Better watch and ward of MC machinery and equipment and reduction of losses due to theft of equipment and spares. 8. Provision of better solid waste management service by protection of the machinery and equipment. <p>Hence, the objectives of the project are in line with the sector objectives at serial No-1, 2, 3 & 7 and the project forms integral part of the concerned sector.</p>
<p>6. Description, justification, technical parameters and technology transfer aspects</p>	
<p>i. Present Condition</p>	<p>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.</p> <p>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.</p> <p>MC Muridke has some machinery and equipment which is already being used for collection and disposal of the solid waste. Under Punjab Cities Program modern, efficient and cost-effective machinery and equipment has been provided to MC Muridke for provision of better solid waste management facilities to the people of Muridke.</p> <p>At present, there is no appropriate parking space available with MC for the existing and newly procured machinery and equipment and dire need for parking area facility is being felt. Currently the solid waste machinery is being parked under open sky in various spaces available with MC. Absence of permanent parking space can cause machinery</p>

	deterioration and compromise its safety that will lead to non-sustainability of solid waste management.																								
ii. Description of the subproject-	The project comprises of construction of Parking Area for solid waste management and other machinery and equipment possessed by MC over an area of 4.0 Kanals in the city. Detail of the components of Parking Area have been given in the table below.																								
iii Detail of civil works, equipment & machinery and other physical facilities	<p>The detail of Parking Shed for SWM Machinery to be constructed in the city, is given below: Location: Garden City near Canal Road</p> <table border="1"> <thead> <tr> <th>S. N.</th> <th>Detail of works</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Boundary wall and gate</td> </tr> <tr> <td>2</td> <td>Sheds for vehicles with trusses and Aluzinc sheeting at the top</td> </tr> <tr> <td>3</td> <td>Office room with toilet</td> </tr> <tr> <td>4</td> <td>Workshop</td> </tr> <tr> <td>5</td> <td>Washing ramp</td> </tr> <tr> <td>6</td> <td>Sitting room for staff with toilets</td> </tr> <tr> <td>7</td> <td>Parking aprons</td> </tr> <tr> <td>8</td> <td>Guard room</td> </tr> <tr> <td>9</td> <td>Generator pad</td> </tr> <tr> <td>10</td> <td>Water supply and drainage system</td> </tr> <tr> <td>11</td> <td>Approach road</td> </tr> </tbody> </table>	S. N.	Detail of works	1	Boundary wall and gate	2	Sheds for vehicles with trusses and Aluzinc sheeting at the top	3	Office room with toilet	4	Workshop	5	Washing ramp	6	Sitting room for staff with toilets	7	Parking aprons	8	Guard room	9	Generator pad	10	Water supply and drainage system	11	Approach road
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iv Indicate governess issues of the sector relevant to the project and strategy to resolve them	<ul style="list-style-type: none"> • MC Muridke 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 in 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 MCs are lacking at present. Hence inculcating the mind set for good repair and maintenance is the major requirement for improving the service delivery level. 																								

7- Capital Cost of Project	The summary of the works included in the project is given below;		
	S. No	Item of works	Cost (PKR million)
	1	Office Building	1.368
	2	Guard Room	0.571
	3	Work Shop	2.967
	4	Parking Sheds (Civil + Electrical)	28.190
	5	Washing Pit	0.525
	6	Generator pad	0.155
	7	Pump Pad	0.014
	8	Septic Tank	0.302
	9	Tube well 0.25 cusec	3.638
	10	External Work (Boundary wall + Tuff Paver + Lawn)	4.773
	11	External Plumbing work	0.463
	12	External Electrical work	5.177
	13	Environmental Mitigation Cost	1.697
	14	Dismantling Work	0.285
		Total cost	50.130
		Contingencies @2%	1.002
		Punjab Sales Tax @5%	2.506
		Grand Total	53.639
	See Annexure-B for details		
i- Indicate date of estimation of the project cost	The project estimates have been framed during the month of July, 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 Sheikhpura 2 nd 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	Physical phasing of the project is included in the following table:			
	S. #	Item of works	Year 2022-2023	
	1	Boundary wall and gate	100%	
	2	Sheds for vehicles with trusses and Aluzinc sheeting at the top	100%	
	3	Office room with toilet	100%	
	4	Workshop	100%	
	5	Washing ramp	100%	
	6	Sitting room for staff with toilets	100%	
	7	Parking aprons	100%	
	8	Guard room	100%	
	9	Generator pad	100%	
	10	Water supply and drainage system	100%	
	11	Approach road	100%	
12	Contingencies & PRS Taxes	100%		
iv- Phasing of capital cost on the basis of each item of work.	Phasing of capital cost of the project is included in the following table: (All figures are in million rupees)			
	S. #	Items of Shed	Total cost (Million Rs)	Year 2022-2023 (Million Rs)
	1	Office Building	1.368	1.368
	2	Guard Room	0.571	0.571
	3	Work Shop	2.967	2.967
	4	Parking Sheds (Civil + Electrical)	28.190	28.190
	5	Washing Pit	0.525	0.525
	6	Generator pad	0.155	0.155
	7	Pump Pad	0.014	0.014
	8	Septic Tank	0.302	0.302
	9	Tube well 0.25 cusec	3.638	3.638
	10	External Work (Boundary wall + Tuff Paver + Lawn)	4.773	4.773
	11	External Plumbing work	0.463	0.463
	12	External Electrical work	5.177	5.177
	13	Environmental Mitigation Cost	1.697	1.697
	14	Dismantling Work	0.285	0.285
		Total cost	50.130	50.130
	Contingencies @2%	1.002	1.002	
	Punjab Sales Tax @5%	2.506	2.506	
	Grand Total	53.639	53.639	

<p>8-Annual recurrent cost after completion of the project and source of financing</p>	<p>PKR 0.801 million (Details are attached as Annexure-1)</p>
<p>9- Demand & Supply Analysis</p> <p>i- Existing Capacity of services</p>	<p>Existing supply level</p> <ul style="list-style-type: none"> • There is no existing parking facility for the SWM machinery. Resultantly the vehicles are parked at open spaces with no protection. • MC Muridke is unable to protect the solid waste transportation and other MC vehicles because of non-availability of appropriate parking area.
<p>ii- Projected Demand for 10 years</p>	<p>The Parking area is required to park and protect the solid waste transportation and other MC vehicles.</p> <ul style="list-style-type: none"> •The influence and value of parking spaces in planning for livable communities is very essential. Parking space is more than a necessary element of larger residential or commercial uses; it merits consideration as a distinct land use that affects travel behavior and the environment. The provision of parking lots reduces the congestion on streets and roads and improves traffic flow. District Muridke lacks parking space for the SWM Machinery which are therefore parked in open or rental spaces. The proposal is to construct a parking shed for SWM machinery to accommodate a total of 19 vehicles. •The municipal services require radical improvement to enhance the efficiency of the service to increase service delivery to a satisfactory level. •Many shortcomings, problems and bottlenecks have been observed in the present situation which could not be addressed by MC due to funding constraints and now have been proposed to be addressed by the construction of the municipal services infrastructure.
<p>iii- Capacity of other similar projects being implemented in public/private sector</p>	<p>No other project of this nature is being implemented in public as well as private sector because of funding constrains in the Unit.</p>
<p>iv- Supply and Demand gaps</p>	<p>As explained above there is no parking area in Muridke City for solid waste transportation and other MC vehicles. So there is a large gap between the supply and demand.</p>
<p>v-Designed capacity and output of the project</p>	<p>1)-Table showing details of the parking area is given below:</p>

	Location	Components	No. of Sheds	Area											
				Total area	Shed area & Nos.										
	Garden City near Canal Road	As listed in section-7	4	4 Kanals	1 No=72'x32' 1 No=30'x32' 1 No =25'x32' 1 No =120'x32'										
	<p>2)-Parking shed is designed for 10-year life.</p> <p>3)-This Parking shed is designed for 19 vehicles of SWM Machinery.</p>														
10. Financial Plan Sources of financing <u>Debt</u> a) Indicate the local and foreign debt Loan	<p>Below given loan for the Punjab Cities Program has been funded by World Bank for 16 PCP cities in Punjab.</p> <table border="1"> <tr> <td>Total loan to Government of Pakistan/Punjab</td> <td>USD 200 million</td> </tr> <tr> <td>Component-1 for Infrastructure Development</td> <td>USD 180 million</td> </tr> <tr> <td>Component-2 for Investment Project Financing For capacity building of MCs & three Govt. organization and program management.</td> <td>USD 20 million</td> </tr> <tr> <td>20% share of Municipalities is equivalent to</td> <td>USD 36 million</td> </tr> <tr> <td>Total funds available for Infrastructure Development</td> <td>USD 216 million</td> </tr> </table> <p>This project will be funded under this financing.</p>					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
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20% share of Municipalities is equivalent to	USD 36 million														
Total funds available for Infrastructure Development	USD 216 million														
b) Equity	<p>A. Loan/grant to MC</p> <p>The amount of loan converted to grant to MC Muridke will be Rs 42.911 million. The financing of the project will be as give n below:</p> <table border="1"> <tr> <td>Grant to MC Muridke from World Bank (80% of cost of PC-I)</td> <td>PKR 42.911 million</td> </tr> <tr> <td>20% Co-finance by MC</td> <td>PKR 10.727 million</td> </tr> <tr> <td>Total cost of project</td> <td>PKR 53.639 million</td> </tr> </table> <p>B. Project Cost =Rs. 53.639 million</p> <p>*The loan is from World Bank to Government of Pakistan/Punjab which will trickle down to MC Muridke as grant.</p>					Grant to MC Muridke from World Bank (80% of cost of PC-I)	PKR 42.911 million	20% Co-finance by MC	PKR 10.727 million	Total cost of project	PKR 53.639 million				
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c) Grants	<p>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.</p>														
d) Weighted cost of capital	<p>Nil</p>														
11-Project benefits and analysis															
i.Financial: Income to the project with assumption	<ul style="list-style-type: none"> No income will be generated from the project and hence the Financial Analysis is not required. 														

	<ul style="list-style-type: none"> • It is a social sector project and the capital cost of the project is not intended to be recovered. MC 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	<p>The completion of the project will result in:</p> <ul style="list-style-type: none"> • Provision of suitable parking area for the MC Vehicles. • Making MC self-sufficient in small repairs to the machinery & Equipment possessed by MC • Provision of a washing facilities for the vehicles • Effective protection to the vehicles against the solar radiation and Ultraviolet rays, rain, hail, wind, and dust. • Slowing down the deterioration of vehicles, therefore reducing the cost of maintenance. • Enhancement of the security of vehicles during non-working hours. • Better watch and ward of MC machinery and equipment and reduction of losses due to theft of equipment and spares. • Provision of better solid waste management service by protection of the machinery and equipment.
iii.Environmental Impact negative/positive	<p>Primary and secondary data has been collected and used to assess the environmental impacts of the proposed Parking Area in Muridke. Site visit was conducted to the project area for the proposed works and to assess the baseline in order to evaluate whether there are any key receptors that will need to be considered during the project works to prevent any long term and irreversible impacts. The activities to be conducted under the project were screened for potential impacts at the design/pre-construction, construction and operation phases of the Parking Sheds. This ‘activity wise’ screening enabled to obtain a clear picture of the expected level of impacts resulting from the different activities and helped identify required mitigation measures to mitigate them to within acceptable limits as per the guidelines provided by the World Bank in the form of Environment and Social Management Framework. However, the impacts will be temporary and there will be no negative impacts after completion of the project, rather, during the operation phase of the Parking Sheds, mostly positive impacts are expected. To facilitate the selection of an optimal solution and for the inclusion of Standard Operating Procedures for Construction workers/labors; assessment indicators or an Environmental Screening Checklist has 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 Plan (ESMP) needs</p>

	<p>to be prepared since the sub-project is of category E-2. Moreover, the necessary cost for Environment Health and Safety of Workers has also been incorporated in the PC-1. The Environment, Health and Safety SOPs for labor/workers are provided as Annexure E (B). The ESMP shall be prepared and made part of the bidding documents.</p>												
iv. Quantifiable project outputs	<p>The quantifiable project outputs have been given above in Sr. No-9 (V). The social benefits to the citizen have been described at Sr. No-11(ii).</p>												
v. Unit cost analysis	<p>A) Capital Unit Cost The unit cost analysis is produced below;</p> <table border="1" data-bbox="571 577 1461 707"> <tr> <td>Project capital cost</td> <td>PKR 53.639 million</td> </tr> <tr> <td>Population of the city in year 2023</td> <td>425,593 persons</td> </tr> <tr> <td>Unit capital cost per capita</td> <td>PKR 126.03</td> </tr> </table> <p>B)-Unit R&M cost:</p> <table border="1" data-bbox="571 792 1461 922"> <tr> <td>Annual R&M cost</td> <td>PKR 0.801 million</td> </tr> <tr> <td>Population of the city in year 2023</td> <td>425,593 persons</td> </tr> <tr> <td>Unit R&M cost per capita</td> <td>PKR 1.88</td> </tr> </table>	Project capital cost	PKR 53.639 million	Population of the city in year 2023	425,593 persons	Unit capital cost per capita	PKR 126.03	Annual R&M cost	PKR 0.801 million	Population of the city in year 2023	425,593 persons	Unit R&M cost per capita	PKR 1.88
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vi. Employment generation (direct and indirect)	<p><u>Employment Analysis</u> Direct Employment</p> <p>a) Planning and Design of projects The planning and design of the project has been entrusted to local consultants (JERS Consultancy) who have appointed staff and experts in Structural designing 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.</p> <p>b) Execution of the Project</p> <p>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:</p> <ul style="list-style-type: none"> • Civil Engineers • Accounts, administration and audit personnel • Urban planners • GIS experts • Support staff like computer operators, vehicle drivers, office boys and guards. • Procurement experts • Communication experts • Environmental and social experts • Contract management experts 												

	<p>b) Consultants PMDFC has employed consultants for detailed design and resident supervision of the projects who have deployed their staff for detailed design and resident supervision of the project.</p> <p>c) Municipality MC Muridke 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</p> <p>d) Contractor The contractor responsible for execution of the sub project will employ skilled and un-skilled labor on this work.</p> <p>Indirect Employment Indirect employment for production of material such as cement, steel, stone metal, bitumen, bricks etc. will be generated.</p>
vii. Impacts of delays on project cost and viability	<p>The impact of delay in project implementation will result in;</p> <ul style="list-style-type: none"> • Increased project cost due to escalation in cost of material and labor. • Deterioration of vehicles due to weathering effects • Recurrent watch and ward problems for the delayed period
12-Implementation Schedule	
a) Indicate starting and completion date of the project	The project is anticipated to commence by August, 2022 and to be completed by January 2023 with project implementation period of 06 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	<p>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.</p> <p>iii. Preparation of cost estimation The cost estimates have been prepared by the design consultants by actual measurements and requirements at site. The execution of the items of works included in these estimates /PC-I will be certified by these consultants.</p> <p>iv. Execution of the project</p>

	<ul style="list-style-type: none"> • The project will be executed by MC Muridke and supervised by the Consultants appointed by PMDFC in resident supervision mode. The technical staff & experts in PMDFC will oversee, coordinate 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 MC 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 Muridke Unit as per PPRA Rules. <p>v. Verification of quantities included in PC-Is and Resident Supervision of the works by consultants</p> <p>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 MC 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.</p>
<p>ii)The manpower requirements by skills during execution and operation of the project and;</p> <p>The job description, qualification, experience, age and salary of each post</p>	<p>a) PMDFC experts and staff</p> <p>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.</p> <p>b) Resident Supervision Consultants</p> <p>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:</p>

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
<p>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.</p> <p>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;</p> <ul style="list-style-type: none"> • 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	<p>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.</p> <p>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</p>		

	<p>allowed to recruit the persons to fill these slots due to ban on recruitments.</p> <p>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.</p> <p>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.</p>
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	Stamp & Signatures	
Checked by	Municipal officer (Infrastructure) MC Muridke	Stamp & Signatures	
	Chief Officer MC Muridke	Stamp & Signatures	
Forwarded by	Administrator MC Muridke	Stamp & Signatures	

Annexure-1

Annual Recurrent Cost

Annual Recurrent Cost after Completion of the Project

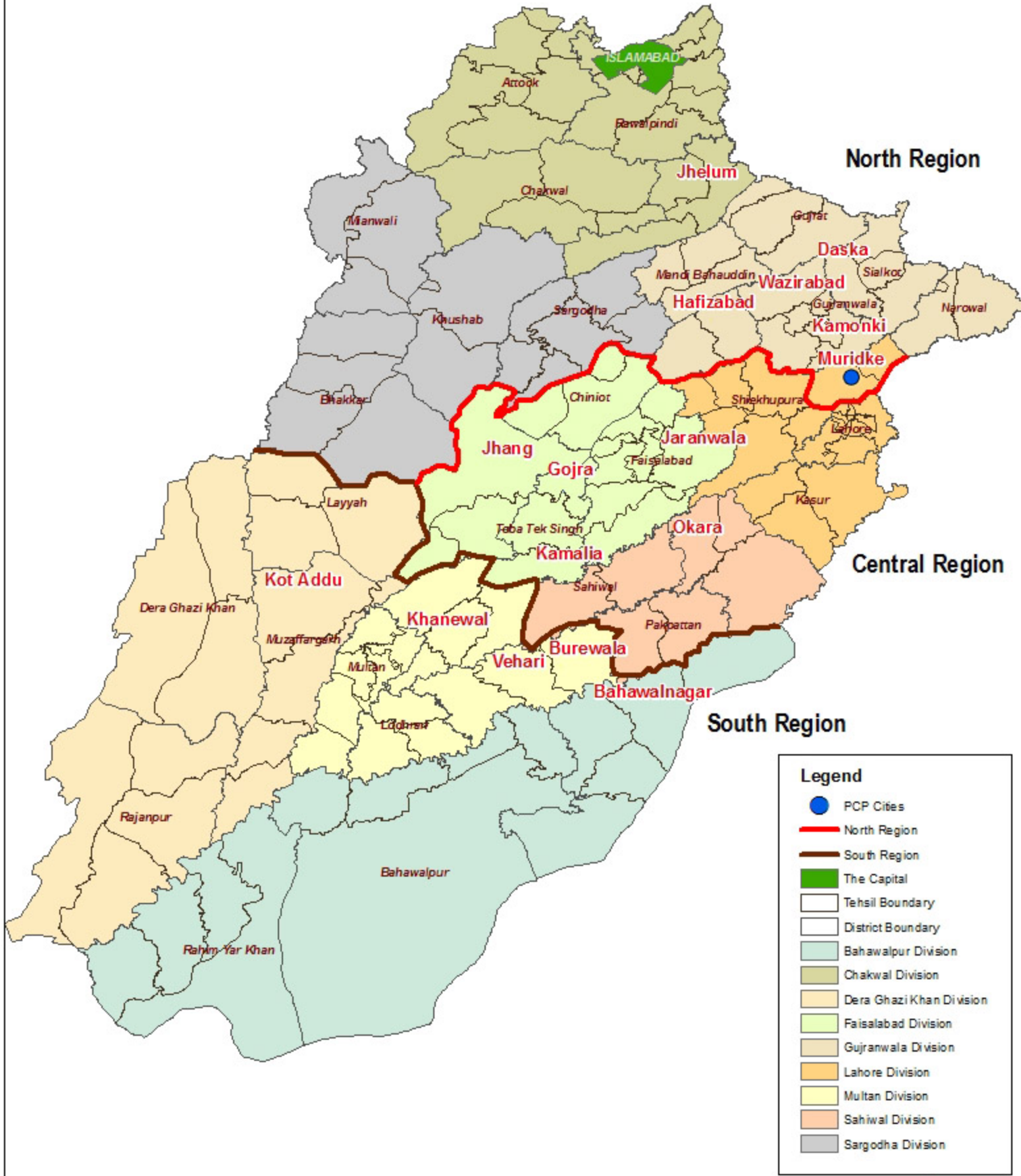
Cost Category	Cost Breakup	Cost per Annum (Rs.)
Annual Maintenance Cost of The Civil Works	1% of Project Cost = 0.01*(50,130,209)	501,302
Annual Man Power Cost of One Guard	Rs.25,000/month	300,000
Total cost per Annum (Million Rs.)		0.801 million

Annexure-A

Location Map

Location Map (Punjab Cities Program)

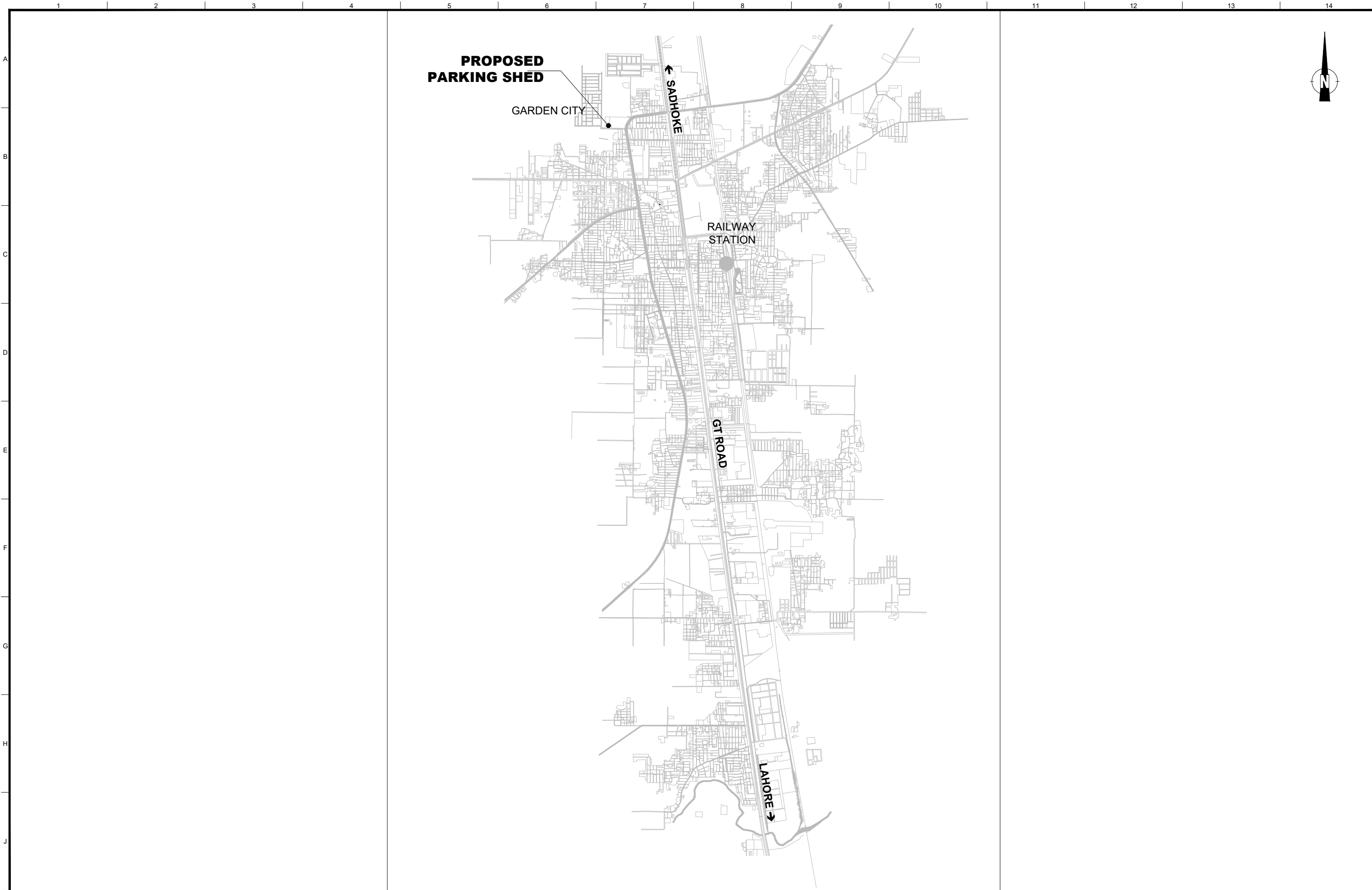
ANNEXURE - A




Legend

- PCP Cities
- North Region
- South Region
- The Capital
- Tehsil Boundary
- District Boundary
- Bahawalpur Division
- Chakwal Division
- Dera Ghazi Khan Division
- Faisalabad Division
- Gujranwala Division
- Lahore Division
- Multan Division
- Sahiwal Division
- Sargodha Division





CLIENT:
 **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. 19

DRAWING TITLE:
PROJECT KEY PLAN
(MURIDKE CITY)

REV.	DATE	DESCRIPTION
-	-	-

DRAWN BY:
Munir
 CHECKED BY:
Sadat Waleed
 DATE:
July, 2022

DRAWING NO:
PS-01
 SCALE:
UNIT=FEET
NTS
 SHEET:
-
 JOB NO:
488-01

Annexure-B

Rough Cost Estimate



Punjab Municipal Development Fund Company

**Consultancy Services for Detailed Design of Infrastructure
sub-projects (Parking Sheds, Parks, Roads, Chowks, etc.)
and Resident Supervision in 16 Cities of Punjab**

Construction of SWM Parking Shed MC Muridke

Detailed Cost Estimate

June, 2022



JERS CONSULTANCY (PVT) LTD
(Formerly Jers Engineering Consultants)

24-Civic Center, Quaid-e-Azam Town, Township, Lahore (Pakistan)

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

DETAILED COST ESTIMATE

PARKING SHED (MURIDKE)

SUMMARY

Sr. No.	Description	Amount (Rs)
1	OFFICE BUILDING	
i	Civil Work	1,035,935
ii	Plumbing Work	230,937
iii	Electrical Work	101,291
3	GUARD ROOM	
i	Civil Work	504,556
ii	Plumbing Work	6,518
iii	Electrical Work	60,251
4	WORK SHOP	
i	Civil Work	2,542,999
ii	Plumbing Work	83,244
iii	Electrical Work	341,286
5	PARKING SHED (SIZE 120' x 32')	
i	Civil Work	10,395,103
iii	Electrical Work	264,751
6	PARKING SHED (SIZE 72' x 32')	
i	Civil Work	6,236,961
iii	Electrical Work	190,950
7	PARKING SHED (SIZE 30' x 32')	
i	Civil Work	5,828,985
iii	Electrical Work	69,589
8	PARKING SHED (SIZE 25' x 32')	
i	Civil Work	5,137,893
iii	Electrical Work	66,670
9	WASHING PIT	525,539
7	GENERATOR PAD	155,163
8	PUMP PAD	14,169
9	SEPTIC TANK	302,831
10	TUBE WELL 0.25CUSEC	3,638,600

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

DETAILED COST ESTIMATE

PARKING SHED (MURIDKE)

SUMMARY

Sr. No.	Description	Amount (Rs)
11	EXTERNAL WORK (BOUNDARY WALL + TUFF PVER + LAWN)	4,773,249
12	EXTERNAL PLUMBING WORK	463,266
13	EXTERNAL ELECTRICAL WORK	5,177,365
14	ENVIRONMENTAL MITIGATION COST	1,697,000
15	DISMANTLING WORK	285,108
	Total Rs.	50,130,209
	Contingencies @ 2%	1,002,604
	PRA Charges @ 5%	2,506,510
	Total Amount. Rs.	53,639,323

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

DETAILED COST ESTIMATE

OFFICE BUILDING

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Schedule Item				
		Excavation				
1	3/21/a/ii	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.	1000Cft	0.48	10,677.75	5,125
		Anti-Termite				
2	26/43	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concentrate (SC), Mixing Ability-HEXTAR with Ratio (1:250) = 540 Sft or equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10-years complete in all respect as approved by the Engineer Incharge.	Sft	783.75	9.25	7,250
		Plain Cement Concrete				
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(i) Ratio 1: 4: 8	100 Cft	0.63	28,986.90	18,262
		Brick work in Foundation				
4	7/4/i	Pacca brick work in foundation and plinth in:-				
		Cement, sand mortar:- Ratio 1:5	100 Cft	3.68	31,756.30	116,863
		Horizontal D.P.C				
5	6/36	Providing and laying damp proof course of cement concrete 1 : 2 : 4 (using cement, sand and shingle), including bitumen coating :-				
		(a) with one coat bitumen and one coat polythene sheet 500gauge				
		i) 1½" thick (40 mm)	100 Sft	0.57	8,661.35	4,937
		Vertical D.P.C				
6	6/37	Providing and laying vertical damp proof course with cement sand plaster and bitumen coating:-				
		(a) with one coat of bitumen and one coat of polythene sheet 500 gauge:				
		ii) Ratio 1:3 ¾ " thick (20 mm)	100 Sft	0.77	6,481.60	4,991

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

DETAILED COST ESTIMATE

OFFICE BUILDING

CIVIL WORK

Sr. No.	2nd Bi-Annual- 2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Brick work in Super Structure				
7	7/5	Pacca brick work in ground floor:-				
		i) Cement, sand mortar:- Ratio 1:5	100 Cft	6.00	33,940.10	203,641
		Concrete Work				
8	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.):-				
		Above foundation				
		(a) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-				
		Type C (nominal mix 1: 2: 4)	P.Cft	163.97	556.50	91,249
		Steel Work.				
9	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):-				
		Deformed bars (Grade-60)	100kg	5.27	31,769.80	167,427
		Sand Filling				
10	7/30	Supplying and filling sand under floor; or plugging in wells.	100 Cft	4.20	2,943.30	12,362
		Brick ballast				
11	6/2	Dry rammed brick or stone ballast, 1½" to 2"(40 mm to 50 mm) gauge.	100 Cft	0.69	9,353.50	6,454
		Plain Cement Concrete				
12	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		Ratio 1: 2: 4	100 Cft	0.35	38,178.90	13,363

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

DETAILED COST ESTIMATE

OFFICE BUILDING

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Porcelain Tile				
13	10/42/d	Providing and laying superb quality Porcelain glazed tiles flooring of MASTER brand of specified size in approved design, Color and Shade with adhesive / bond over 3/4" thick (1:3)cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respect as approved and directed by the Engineer Incharge.				
		d) (Non-Skid Chequered Tiles) 300mmx300mm	Per Sft	160.00	211.60	33,856
14	10/43/a	Providing and laying superb quality Porcelain glazed tiles of Master brand, skirting/ dado of specified size, Color and Shade with adhesive/ bond over 1/2" thick (1:2)cement plaster i/c the cost of and sealer for finishing the joints, cutting grinding complete in all respect as approved and directed by the Engineer Incharge.				
		a) Full body Glazed Tile				
		(i) 400 mm x 400 mm	Per Sft	17.16	292.75	5,024
		Ceramic Tile				
15	10/24	Providing and laying superb quality Ceramic tile floors of Master brand of specified size, Glossy/Matt/Texture of approved Color and Shade as per approved design with adhesive bond, over 3/4" thick (1;2) cement sand plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects and as approved and directed by the Engineer Incharge.				
		i) 12"x18"/12"x24"/10"x24" /8"x24"/12"x36"	Per Sft	50.00	240.00	12,000
16	10/25	Providing and laying superb quality Ceramic tiles dado of Master brand of specified size, Glossy/Matt/Texture skirting / dado of approved Color and Shade with adhesive bond over1/2" thick (1:2)cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects as approved and directed by the Engineer Incharge.				
		i) 12"x18"/12"x24"/10"x24" /8"x24"/12"x36"	Per Sft	210.00	292.75	61,478

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

DETAILED COST ESTIMATE

OFFICE BUILDING

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Slab Plaster				
17	11/10/b	Cement plaster 3/8" (10 mm) thick under soffit of R.C.C. roof slabs only, upto 20' height. (Ratio:-1:3)	100 Sft	2.10	3,708.60	7,788
		Cement Plaster				
18	11/9	Cement plaster 1:4 upto 20' (6.00 m) height:- 3/4" (20 mm) thick	100 Sft	7.67	4,220.85	32,374
		Pointing				
19	11/18/a	Cement pointing struck joints, on walls, upto 20' (6.00 m) height:- a) ratio 1:2	100 Sft	9.04	3,518.35	31,806
20	11/31	Extra cost of labour and material for red oxide pigment in cement pointing to match with the colour of bricks.	100 Sft	9.04	652.50	5,899
		Distempering				
21	11/23	Distempering:- iii) three coats	100 Sft	10.09	1,295.00	13,067
		Wooden Door				
22	12/49-i	Providing and fixing 1½" (40 mm) thick hollow flush doors and windows with commercial ply (3 ply) on both faces of deodar wood shutter frame 1¼" (30 mm) thick and partial wood braces at about 3" (75 mm) apart and deodar wood lipping 1½"x3/8" (40 mmx10 mm) fixed with M.S. chowkat (frame) including chromium plated fittings, etc. complete in all respects (without sliding bolt or lock):- M.S. angle iron 1½"x1½"x¼", welded (40 mmx40 mmx 6mm) with M.S. flat 2"x¼" (50 mm x 6 mm)	Per Sft	42.00	2,024.90	85,046
		Lock				
23	12/22	Providing and fixing, approved quality mortice lock.	Each	2.00	771.50	1,543
		Paint				
24	13/5/c	Painting new surface:- Preparing surface and painting of doors and windows any type (including edges):- i) priming coat.	100 Sft	0.84	1,292.00	1,085
		ii)Two coat	100 Sft	0.84	711.40	598

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

DETAILED COST ESTIMATE

OFFICE BUILDING

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Steel Window				
25	25/41/b	Providing and fixing steel windows with openable glazed panels, using beam section for frame 1½"x1"x5/8"x1/8" (40x25x16x3 mm), Z-section for leaves ¾"x1"x¾"x1/8" (20x25x20x3 mm), T-section sashes 1"x1"x1/8" (25x25x3 mm), glass panes, wooden screed for glazing embedded over a thin layer of putty duly screwed with leaves, brass fittings, holdfast, duly painted, complete in all respects, including all cost of material and labour, etc. as per approved design and as directed by the Engineer-in-charge:-				
		b) fixed with wire gauze, 22 SWG				
		v) glass pane 5 mm thick	Per Sft	52.00	1,081.65	56,246
		Roof Insulation				
26	9/5	Single layer of tiles 9"x4½"x1½" (225x113x40 mm) laid over 4"(100 mm) earth and 1" (25 mm) mud plaster without Bhoosa, grouted with cement sand 1:3 on top of RCC roof slab, provided with 34 lbs. per %Sft. or 1.72 Kg/Sq.m bitumen coating sand blinded.	100 Sft	2.76	11,389.85	31,436
27	26/37/ii	Supplying and laying polythene sheet over D.P.C. under floors and on roofs, etc.				
		ii) 500 gauge (.005" thick)	Per Sft	276.00	7.85	2,167
		Khurras				
28	9/15	Khuras on roof 2'x2'x6" (600 x 600 x 150 mm)	Each	1.00	855.00	855
		Bottom Khuras				
29	9/16	Bottom Khuras of brick masonry in cement mortar 1:6, 4'x2'x4½" (1200x600x113 mm) over 3" (75 mm) cement concrete 1:4:8.	Each	1.00	1,747.40	1,747
		Total Rs.				1,035,935

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

OFFICE BUILDING

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	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)						
	ii) in ordinary soil.						
	Office wall	1	55.00	2.50	2.50	343.75	Cft
	Toilet wall	1	21.50	2.50	2.50	134.38	Cft
						Total	478.13 Cft
						Total	0.48 %oCft
	Anti-Termite						
2	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concentrate (SC), Mixing Ability-HEXTAR with Ratio (1:250) = 540 Sft or equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10-years complete in all respect as approved by the Engineer Incharge.						
	Office wall	1	55.00	7.50		412.50	Sft
	Toilet wall	1	21.50	7.50		161.25	Sft
	Floor	1	16.00	10.00		160.00	Sft
		1	10.00	5.00		50.00	Sft
						Total	783.75 Sft
	Plain Cement Concrete						
3	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(i) Ratio 1: 4: 8						
	Office wall	1	55.00	2.50	0.33	45.38	Cft
	Toilet wall	1	21.50	2.50	0.33	17.74	Cft
						Total	63.11 Cft
						Total	0.63 %Cft

**PUNJAB CITIES PROGRAM (PCP)
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OFFICE BUILDING

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Brick work in Foundation						
4	Pacca brick work in foundation and plinth in:- Cement, sand mortar:- Ratio 1:5						
	Office wall						
	Step - 1	1	55.00	1.875	0.25	25.78	Cft
	Step - 2	1	55.00	1.500	0.25	20.63	Cft
	Step - 3	1	55.00	1.125	0.25	15.47	Cft
	Step - 4	1	55.00	0.750	4.92	202.95	Cft
	Toilet wall						
	Step - 1	1	21.50	1.875	0.25	10.08	Cft
	Step - 2	1	21.50	1.500	0.25	8.06	Cft
	Step - 3	1	21.50	1.125	0.25	6.05	Cft
	Step - 4	1	21.50	0.750	4.92	79.34	Cft
					Total	368.35	Cft
					Total	3.68	%Cft
	Horizontal D.P.C						
5	Providing and laying damp proof course of cement concrete 1 : 2 : 4 (using cement, sand and shingle), including bitumen coating :-						
	(a) with one coat bitumen and one coat polythene sheet 500gauge						
	i) 1½" thick (40 mm)						
	Office wall	1	55.00	0.75		41.25	Sft
	Toilet wall	1	21.50	0.75		16.13	Sft
					Total	57.38	Sft
					Total	0.57	%Sft
	Vertical D.P.C						
6	Providing and laying vertical damp proof course with cement sand plaster and bitumen coating:-						
	(a) with one coat of bitumen and one coat of polythene sheet 500 gauge:						
	ii) Ratio 1:3 ¾ " thick (20 mm)						
	Office wall	1	55.00		1.00	55.00	Sft
	Toilet wall	1	21.50		1.00	21.50	Sft
					Total	76.50	Sft
					Total	0.77	%Sft

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

OFFICE BUILDING

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Brick work in Super Structure						
7	Pacca brick work in ground floor:-						
	i) Cement, sand mortar:- Ratio 1:5						
	Office wall	1	55.00	0.75	10.50	433.13	Cft
	Toilet wall	1	21.50	0.75	10.50	169.31	Cft
	Parapet Wall	1	66.50	0.38	2.50	62.34	Cft
	Entrance step	2	4.00	1.00	0.75	6.00	Cft
	D/d Doors and Window						
	D-1	-1	3.50	0.75	7.00	(18.38)	Cft
	D-2	-1	2.50	0.75	7.00	(13.13)	Cft
	W-1	-2	6.00	0.75	4.00	(36.00)	Cft
	V-1	-1	2.00	0.70	2.00	(2.80)	Cft
						Total	600.48 Cft
						Total	6.00 %Cft
	Concrete Work						
8	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.):-						
	Above foundation						
	(a) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-						
	Type C (nominal mix 1: 2: 4)						
	Top Slab	1	17.50	11.50	0.50	100.63	Cft
	Toilet Slab	1	6.50	11.50	0.50	37.38	Cft
	Sun shade	1	15.25	1.50	0.25	5.72	Cft
	Sun shade	1	16.50	1.50	0.25	6.19	Cft
	Doors and window Lintels						
	D-1	1	4.50	0.75	0.75	2.53	Cft
	D-2	1	3.50	0.75	0.75	1.97	Cft
	W-1	2	7.00	0.75	0.75	7.88	Cft
	V-1	1	3.00	0.75	0.75	1.69	Cft
						Total	163.97 Cft

PUNJAB CITIES PROGRAM (PCP)
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SUPERVISION IN 16 CITIES OF PUNJAB

OFFICE BUILDING

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Steel Work.						
9	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):-						
	Deformed bars (Grade-60)					163.97	Cft
	Top Slab & lintel @ 6.75 lbs / Cft		6.75		=	1,106.79	lbs/cft
				Total	=	1,106.79	lbs/cft
				Total	=	502.17	Kg.
				Add 5% Wastage.	=	25.11	Kg.
				Total	=	527	Kg
						Total	5.27 %kg
	Sand Filling						
10	Supplying and filling sand under floor; or plugging in wells.						
	Floor	1	16.00	10.00	2.00	320.00	Cft
	toilet	1	10.00	5.00	2.00	100.00	Cft
					Total	420.00	Cft
						Total	4.20 %Cft
	Brick ballast						
11	Dry rammed brick or stone ballast, 1½" to 2"(40 mm to 50 mm) gauge.						
	Floor	1	16.00	10.00	0.33	52.80	Cft
	toilet	1	10.00	5.00	0.33	16.50	Cft
					Total	69.30	Cft
						Total	0.69 %Cft
	P.C.C						
12	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	Ratio 1: 2: 4						
	Floor	1	16.00	10.00	0.17	26.67	Cft
	toilet	1	10.00	5.00	0.17	8.33	Cft
						Total	0.35 %Cft

**PUNJAB CITIES PROGRAM (PCP)
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OFFICE BUILDING

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Porcelain Tile						
13	Providing and laying superb quality Porcelain glazed tiles flooring of MASTER brand of specified size in approved design, Color and Shade with adhesive / bond over 3/4" thick (1:3)cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respect as approved and directed by the Engineer Incharge.						
	d) (Non-Skid Chequered Tiles) 300mmx300mm	1	16.00	10.00		160.00	Sft
					Total	160.00	Sft
14	Providing and laying superb quality Porcelain glazed tiles of Master brand, skirting/ dado of specified size, Color and Shade with adhesive/ bond over 1/2" thick (1:2)cement plaster i/c the cost of and sealer for finishing the joints, cutting grinding complete in all respect as approved and directed by the Engineer Incharge.						
	a) Full body Glazed Tile						
	(i) 400 mm x 400 mm	1	52.00		0.33	17.16	Sft
					Total	17.16	Sft
	Ceramic Tile						
15	Providing and laying superb quality Ceramic tile floors of Master brand of specified size, Glossy/Matt/Texture of approved Color and Shade as per approved design with adhesive bond, over 3/4" thick (1;2) cement sand plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects and as approved and directed by the Engineer Incharge.						
	i) 12"x18"/12"x24"/10"x24" /8"x24"/12"x36"	1	10.00	5.00		50.00	Sft
					Total	50.00	Sft

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OFFICE BUILDING

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
16	Providing and laying superb quality Ceramic tiles dado of Master brand of specified size, Glossy/Matt/Texture skirting / dado of approved Color and Shade with adhesive bond over 1/2" thick (1:2) cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects as approved and directed by the Engineer Incharge.						
	i) 12"x18"/12"x24"/10"x24" /8"x24"/12"x36"	2	10.00		7.00	140.00	Sft
		2	5.00		7.00	70.00	Sft
					Total	210.00	Sft
	Slab Plaster						
17	Cement plaster 3/8" (10 mm) thick under soffit of R.C.C. roof slabs only, upto 20' height. (Ratio:- 1:3)						
		1	16.00	10.00		160.00	Sft
		1	10.00	5.00		50.00	Sft
					Total	2.10	%Sft
	Cement Plaster						
18	Cement plaster 1:4 upto 20' (6.00 m) height:- 3/4" (20 mm) thick Office Room						
		2	10.00		10.50	210.00	Sft
		2	16.00		10.50	336.00	Sft
	Toilet						
		2	10.00		10.50	210.00	Sft
		2	5.00		10.50	105.00	Sft
	D/d Doors and Window						
	D-1	-1	3.50		7.00	(24.50)	Sft
	D-2	-1	2.50		7.00	(17.50)	Sft
	W-1	-2	6.00		4.00	(48.00)	Sft
	V-1	-1	2.00		2.00	(4.00)	Sft
					Total	767.00	Sft
					Total	7.67	%Sft

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OFFICE BUILDING

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Pointing						
19	Cement pointing struck joints, on walls, upto 20' (6.00 m) hieght:-						
	a) ratio 1:2						
	Outer Walls	1	69.50		13.00	903.50	Sft
					Total	903.50	Sft
					Total	9.04	%Sft
20	Extra cost of labour and material for red oxide pigment in cement pointing to match with the colour of bricks.						
					Total	9.04	%Sft
	Distempering						
21	Distempering:-						
	iii) three coats						
	Office Room						
		2	10.00		10.50	210.00	Sft
		2	16.00		10.50	336.00	Sft
	Toilet						
		2	10.00		10.50	210.00	Sft
		2	5.00		10.50	105.00	Sft
	Slab	1	12.00	16.00		192.00	Sft
		1	10.00	5.00		50.00	Sft
	D/d Doors and Window						
	D-1	-1	3.50		7.00	(24.50)	Sft
	D-2	-1	2.50		7.00	(17.50)	Sft
	W-1	-2	6.00		4.00	(48.00)	Sft
	V-1	-1	2.00		2.00	(4.00)	Sft
					Total	1,009.00	Sft
					Total	10.09	%Sft

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CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Wooden Door						
22	Providing and fixing 1½" (40 mm) thick hollow flush doors and windows with commercial ply (3 ply) on both faces of deodar wood shutter frame 1¼" (30 mm) thick and partial wood braces at about 3" (75 mm) apart and deodar wood lipping 1½"x3/8" (40 mmx10 mm) fixed with M.S. chowkat (frame) including chromium plated fittings, etc. complete in all respects (without sliding bolt or lock):- M.S. angle iron 1½"x1½"x¼", welded (40 mmx40 mmx 6mm) with M.S. flat 2"x¼" (50 mm x 6 mm)						
	D-1	1	3.50		7.00	24.50	Sft
	D-2	1	2.50		7.00	17.50	Sft
					Total	42.00	Sft
	Lock						
23	Providing and fixing, approved quality mortice lock.	2				2.00	Each
	Paint						
24	Painting new surface:- Preparing surface and painting of doors and windows any type (including edges):-						
	i) priming coat.						
	ii) Two coat				Total	0.84	Sft
	Steel Window						
25	Providing and fixing steel windows with openable glazed panels, using beam section for frame 1½"x1"x5/8"x1/8" (40x25x16x3 mm), Z-section for leaves ¾"x1"x¾"x1/8" (20x25x20x3 mm), T-section sashes 1"x1"x1/8" (25x25x3 mm), glass panes, wooden screed for glazing embedded over a thin layer of putty duly screwed with leaves, brass fittings, holdfast, duly painted, complete in all respects, including all cost of material and labour, etc. as per approved design and as directed by the Engineer-in-charge:-						
	b) fixed with wire gauze, 22 SWG						
	v) glass pane 5 mm thick						
	W-1	2	6.00		4.00	48.00	Sft
	V-1	1	2.00		2.00	4.00	Sft
	36				Total	52.00	Sft

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CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Roof Insulation						
26	Single layer of tiles 9"x4½"x1½" (225x113x40 mm) laid over 4"(100 mm) earth and 1" (25 mm) mud plaster without Bhoosa, grouted with cement sand 1:3 on top of RCC roof slab, provided with 34 lbs. per %Sft. or 1.72 Kg/Sq.m bitumen coating sand blinded.						
	Roof area	1	17.50	11.50		201.25	Sft
		1	6.50	11.50		74.75	Sft
					Total	276.00	Sft
					Total	2.76	%Sft
27	Supplying and laying polythene sheet over D.P.C. under floors and on roofs, etc.						
	ii) 500 gauge (.005" thick)				Total	276.00	Sft
	Khurras						
28	Khuras on roof 2'x2'x6" (600 x 600 x 150 mm)	1				1.00	Each
	Bottom Khuras						
29	Bottom Khuras of brick masonry in cement mortar 1:6, 4'x2'x4½" (1200x600x113 mm) over 3" (75 mm) cement concrete 1:4:8.	1				1.00	Each

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DETAILED COST ESTIMATE

OFFICE BUILDING

PLUMBING WORKS

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Schedule Item				
		Indian W.C				
1	19-4-i	Providing and fitting glazed earthen ware water closet, squatter type (Orisa pattern), combined with foot rest.				
		i) white	Each	1.00	2,218.35	2,218
2	19-13-i	Providing and fitting plastic made low down flushing cistern 13.63 litre (3 gallons) capacity, including bracket set, copper connection, etc. complete.				
		i) white	Each	1.00	2,649.35	2,649
3	19-7-i	Providing and fitting glazed earthen ware wash hand basin 56x40 cm (22"x16") including bracket set, waste pipe and waste coupling, etc.				
		i) white, with pedestal	Each	1.00	5,169.95	5,170
4	19-30	Providing and fixing, chromium plated mixing valve, for wash hand basin, sink or shower.	Each	1.00	2,228.75	2,229
6	19-16	Providing and fixing, chromium plated soap dish.	Each	1.00	278.75	279
8	19-20	Providing and fixing looking glass 55x40 cm (22"x16") size	Each	1.00	638.15	638
9	19-27	Providing and fixing chromium plated bib cock:-				
		i) 2 cm (¾")	Each	1.00	1,015.00	1,015
10	19-28	Providing and fixing chromium plated tee stop cock 15mm (½").	Each	3.00	955.00	2,865
11	19-34-i	Providing and fixing, floor trap of cast iron, including concrete chamber all round, and C.I. grating:-				
		i) 10x5 cm (4"x2")	Each	1.00	627.95	628
12	19-36	Providing and fitting 10 cm (4") gully trap, including cement concrete, cost of PVC grating 15x15 cm (6"x6") and masonry chamber 30x30 cm (12"x12").	Each	1.00	1,132.85	1,133
13	19-35-ii	Providing and fitting "P" trap:-				
		ii) 10 cm (4") glazed.	Each	2.00	283.15	566

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PLUMBING WORKS

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		PPRC Pipe				
14	23-47	Providing, laying, testing and commissioning of POLYPROPYLENE RANDOM COPOLYMER (PPRC) water supply pipe made of (Dadex/ Popular /Beta/ BBJ)with specified pressure rating PN (PRESSURE NOMINAL) and conforming to DIN8077-8078 code i/c cost of solvent, specials, making jharries complete in all respect as approved and directedby Engineer Incharge.(Internal / External Diameters mentioned).				
		b) PN-20 pipe				
		(ii) (3/4") 25 mm	Rft	22.00	66.50	1,463
		(iii) (1") 32 mm	Rft	16.50	106.90	1,764
		Valve				
15	23/46	Providing and fixing CP heavy duty brass Ball valve with CP handle of specified dia meter made of Faisal/ Sonex/ Master best quality or equivalent complete in all respect as approved and directed by the Engineer Incharge.				
		ii) 3/4" dia	Each	1.00	1,434.00	1,434
		iii) 1" dia	Each	1.00	1,674.00	1,674
		uPVC Pipe				
16	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)				
		(iii) 2"(60 mm)	Rft	20.00	88.45	1,769
		(v) 4"(110 mm)	Rft	80.00	217.25	17,380
		(vi) 6"(160 mm)	Rft	20.00	420.65	8,413

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OFFICE BUILDING

PLUMBING WORKS

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		HDPE Tank				
17	19/51	Providing and hoisting vertical /horizontal type storage tank of required capacity made of rotationally molded from (HDPE), double ply polyethelene of approved manufacturer i/c cost of making connection for inlet/outlet pipe, float valve i/c all cost of specials & labour complete in all respect as approved and directed by the Engineer Incharge.	P.Gln	1,500	106.60	159,900
		Total Rs. (A)				213,187
		Non-Schedule Item				
18	N.S	Providing and making Manhole 2'x2' internal size including 9" thick brick masonry (1:4), 1/2" th. Plastering (1:3) i/side, benching with PCC 1:2:4 4" th. with cement finish, including manhole cover, complete in all respects.	Each	1.00	17,749.77	17,750
		Total Rs. (B)				17,750
		Total Amount Rs. (A + B)				230,937

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DETAILED COST ESTIMATE

OFFICE BUILDING

ELECTRICAL WORKS

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
		<u>Scheduled Items (A)</u>				
1	C-24/3-ii	Supply and erection of PVC pipe for wiring recessed in walls, including bends, inspection joints, boxes, pull boxes, hook, cutting and repair surface etc. completed with all specified. (20 mm i/d)	Rft.	400.00	81.70	32,680
2	C-24/3-iii	Supply and erection of PVC pipe for wiring recessed in walls, including bends, inspection joints, boxes, pull boxes, hook, cutting and repair surface etc. completed with all specified. (25 mm i/d)	Rft.	100.00	94.60	9,460
3	C-24/10a.i	Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only). (3.029)	Rft.	800.00	25.70	20,560
4	C-24/10a.iii	Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only). (7.029)	Rft.	300.00	40.75	12,225
5	C-24/14-i	Supply and erection of M.S. sheet box of 16 SWG, 10 cm (4") deep, with 4.75 mm thick (3/16") bakelite sheet top, for recessed wiring, including making holes for regulators, switches, plugs, etc. (4"x4")	Each	4.00	270.60	1,082
6	C-24/14-ii	Supply and erection of M.S. sheet box of 16 SWG, 10 cm (4") deep, with 4.75 mm thick (3/16") bakelite sheet top, for recessed wiring, including making holes for regulators, switches, plugs, etc. (7"x4")	Each	2.00	372.35	745
7	C-24/32-ii	Supply and erection of switches 10/15 Amp. (Recessed Type)	Each	6.00	87.35	524

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OFFICE BUILDING

ELECTRICAL WORKS

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
8	C-24/36-i	Supply and erection of 3 pin switch and Plug combined, recessed type. (5Amps)	Each	2.00	112.00	224
9	C-24/36-ii	Supply and erection of 3 pin switch and Plug combined recessed type (10/15Amps)	Each	4.00	149.80	599
10	C-24/43	Supply and erection of tube light, including rod, choke, starter with frame, flexible wire, including connection from ceiling rose, etc., complete				
		i) double rod (80 watts) with two chokes and 2 starters.	Each	4.00	2,164.65	8,659
11	C-24/102/a	Providing and fixing Copper winded Exhaust fan with louver and shutter made of Pak/Younas /G.F.C. i/c the cost of necessary cable and hardware for connection from ceiling rose complete as approved and directed by Engineer Incharge.				
		(a) Plastic body (ii) 12 " dia	Each	1.00	3,133.00	3,133
		Sub Total (A)				89,891
12	N.S	Supply, installation and commissioning of wall mounted mirror LED light 10 watt with tube rod and frame all necessary fixing accessories, complete in all respects	Each	1.00	2,000.00	2,000
13	N.S	Supply, installation and commissioning recessed 10W LED Down Light complete in all respects	Each	2.00	1,200.00	2,400
14	N.S	Supply, Installation, testing and commissioning of following size 56" steel body, complete with capacitor, hanging rod, canopy, blades, dimmers nuts and bolts complete in all respect.	Each	1.00	7,000.00	7,000
		Sub Total (B)				11,400
		Sub Total (A+B)				101,291

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GUARD ROOM

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Schedule Item				
		Excavation				
1	3/21/a/ii	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.	1000Cft	0.27	10,677.75	2,883
		Anti-Termite				
2	26/43	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concentrate (SC), Mixing Ability-HEXTAR with Ratio (1:250) = 540 Sft or equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10-years complete in all respect as approved by the Engineer Incharge.	Sft	422.50	9.25	3,908
		Plain Cement Concrete				
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(i) Ratio 1: 4: 8	100 Cft	0.35	28,986.90	10,145
		Brick work in Foundation				
4	7/4/i	Pacca brick work in foundation and plinth in:- Cement, sand mortar:- Ratio 1:5	100 Cft	2.07	31,756.30	65,736
		Horizontal D.P.C				
5	6/36	Providing and laying damp proof course of cement concrete 1 : 2 : 4 (using cement, sand and shingle), including bitumen coating :-				
		(a) with one coat bitumen and one coat polythene sheet 500gauge				
		i) 1½" thick (40 mm)	100 Sft	0.32	8,661.35	2,772
		Vertical D.P.C				
6	6/37	Providing and laying vertical damp proof course with cement sand plaster and bitumen coating:-				
		(a) with one coat of bitumen and one coat of polythene sheet 500 gauge:				
		ii) Ratio 1:3 ¾ " thick (20 mm)	100 Sft	0.43	6,481.60	2,787

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CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Brick work in Super Structure				
7	7/5	Pacca brick work in ground floor:-				
		i) Cement, sand mortar:- Ratio 1:5	100 Cft	3.55	33,940.10	120,487
		Concrete Work				
8	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.):-				
		Above foundation				
		(a) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-				
		Type C (nominal mix 1: 2: 4)	P.Cft	75.78	556.50	42,172
		Steel Work.				
9	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):-				
		Deformed bars (Grade-60)	100kg	2.44	31,769.80	77,518
		Sand Filling				
10	7/30	Supplying and filling sand under floor; or plugging in wells.	100 Cft	2.75	2,943.30	8,094
		Brick ballast				
11	6/2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.	100 Cft	0.33	9,353.50	3,087

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CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Plain Cement Concrete				
12	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		Ratio 1: 2: 4	100 Cft	0.17	38,178.90	6,490
		Porcelain Tile				
13	10/42/d	Providing and laying superb quality Porcelain glazed tiles flooring of MASTER brand of specified size in approved design, Color and Shade with adhesive / bond over 3/4" thick (1:3)cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respect as approved and directed by the Engineer Incharge.				
		d) (Non-Skid Chequered Tiles) 300mmx300mm	Per Sft	100.00	211.60	21,160
14	10/43/a	Providing and laying superb quality Porcelain glazed tiles of Master brand, skirting/ dado of specified size, Color and Shade with adhesive/ bond over 1/2" thick (1:2)cement plaster i/c the cost of and sealer for finishing the joints, cutting grinding complete in all respect as approved and directed by the Engineer Incharge.				
		a) Full body Glazed Tile				
		(i) 400 mm x 400 mm	Per Sft	13.20	292.75	3,864
		Slab Plaster				
15	11/10/b	Cement plaster 3/8" (10 mm) thick under soffit of R.C.C. roof slabs only, upto 20' height. (Ratio:- 1:3)	100 Sft	1.00	3,708.60	3,709
		Cement Plaster				
16	11/9	Cement plaster 1:4 upto 20' (6.00 m) height:-				
		3/4" (20 mm) thick	100 Sft	3.80	4,220.85	16,039
		Pointing				
17	11/18/a	Cement pointing struck joints, on walls, upto 20' (6.00 m) hieght:-				
		a) ratio 1:2	100 Sft	4.83	3,518.35	16,994

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CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
18	11/31	Extra cost of labour and material for red oxide pigment in cement pointing to match with the colour of bricks.	100 Sft	4.83	652.50	3,152
		Distempering				
19	11/23	Distempering:- iii) three coats	100 Sft	4.80	1,295.00	6,216
		Wooden Door				
20	12/49-i	Providing and fixing 1½" (40 mm) thick hollow flush doors and windows with commercial ply (3 ply) on both faces of deodar wood shutter frame 1¼" (30 mm) thick and partal wood braces at about 3" (75 mm) apart and deodar wood lipping 1½"x3/8" (40 mmx10 mm) fixed with M.S. chowkat (frame) including chromium plated fittings, etc. complete in all respects (without sliding bolt or lock):- M.S. angle iron 1½"x1½"x¼", welded (40 mmx40 mmx 6mm) with M.S. flat 2"x¼" (50 mm x 6 mm)	Per Sft	24.50	2,024.90	49,610
		Lock				
21	12/21	Providing and fixing, approved quality mortice lock.	Each	1.00	771.50	772
		Paint				
22	13/5/c	Painting new surface:- Preparing surface and painting of doors and windows any type (including edges):-				
		i) priming coat.	100 Sft	0.49	1,292.00	633
		ii)Two coat	100 Sft	0.49	711.40	349
		Steel Window				
23	25/41/b	Providing and fixing steel windows with openable glazed panels, using beam section for frame 1½"x1"x5/8"x1/8" (40x25x16x3 mm), Z-section for leaves ¾"x1"x¾"x1/8" (20x25x20x3 mm), T-section sashes 1"x1"x1/8" (25x25x3 mm), glass panes, wooden screed for glazing embedded over a thin layer of putty duly screwed with leaves, brass fittings, holdfast, duly painted, complete in all respects, including all cost of material and labour, etc. as per approved design and as directed by the Engineer-in-charge:-				

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GUARD ROOM

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		b) fixed with wire gauze, 22 SWG				
		v) glass pane 5 mm thick	Per Sft	16.00	1,081.65	17,306
		Roof Insulation				
24	9/5	Single layer of tiles 9"x4½"x1½" (225x113x40 mm) laid over 4"(100 mm) earth and 1" (25 mm) mud plaster without Bhoosa, grouted with cement sand 1:3 on top of RCC roof slab, provided with 34 lbs. per %Sft. or 1.72 Kg/Sq.m bitumen coating sand blinded.	100 Sft	1.32	11,389.85	15,035
25	26/37/ii	Supplying and laying polythene sheet over D.P.C. under floors and on roofs, etc.				
		ii) 500 gauge (.005" thick)	Per Sft	132.00	7.85	1,036
		Khurras				
26	9/15	Khuras on roof 2'x2'x6" (600 x 600 x 150 mm)	Each	1.00	855.00	855
		Bottom Khuras				
27	9/16	Bottom Khuras of brick masonry in cement mortar 1:6, 4'x2'x4½" (1200x600x113 mm) over 3" (75 mm) cement concrete 1:4:8.	Each	1.00	1,747.40	1,747
		Total Rs.				504,556

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GUARD ROOM

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	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)						
	ii) in ordinary soil.						
	Room wall	1	43.00	2.50	2.50	268.75	Cft
					Total	268.75	Cft
					Total	0.27	%oCft
	Anti-Termite						
2	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concentrate (SC), Mixing Ability-HEXTAR with Ratio (1:250) = 540 Sft or equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10-years complete in all respect as approved by the Engineer Incharge.						
	Room wall	1	43.00	7.50		322.50	Sft
	Floor	1	10.00	10.00		100.00	Sft
					Total	422.50	Sft
	Plain Cement Concrete						
3	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(i) Ratio 1: 4: 8						
	Room wall	1	43.00	2.50	0.33	35.48	Cft
					Total	35.48	Cft
					Total	0.35	%Cft

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CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Brick work in Foundation						
4	Pacca brick work in foundation and plinth in:- Cement, sand mortar:- Ratio 1:5						
	Room wall						
	Step - 1	1	43.00	1.875	0.25	20.16	Cft
	Step - 2	1	43.00	1.500	0.25	16.13	Cft
	Step - 3	1	43.00	1.125	0.25	12.09	Cft
	Step - 4	1	43.00	0.750	4.92	158.67	Cft
					Total	207.05	Cft
					Total	2.07	%Cft
	Horizontal D.P.C						
5	Providing and laying damp proof course of cement concrete 1 : 2 : 4 (using cement, sand and shingle), including bitumen coating :-						
	(a) with one coat bitumen and one coat polythene sheet 500gauge						
	i) 1½" thick (40 mm)						
	Room wall	1	43.00	0.75		32.25	Sft
					Total	32.25	Sft
					Total	0.32	%Sft
	Vertical D.P.C						
6	Providing and laying vertical damp proof course with cement sand plaster and bitumen coating:-						
	(a) with one coat of bitumen and one coat of polythene sheet 500 gauge:						
	ii) Ratio 1:3 ¾ " thick (20 mm)						
	Room wall	1	43.00		1.00	43.00	Sft
					Total	43.00	Sft
					Total	0.43	%Sft

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CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Brick work in Super Structure						
7	Pacca brick work in ground floor:-						
	i) Cement, sand mortar:- Ratio 1:5						
	Room wall	1	43.00	0.75	10.50	338.63	Cft
	Parapet Wall	1	43.00	0.38	2.50	40.31	Cft
	Entrance step	2	4.00	1.00	0.75	6.00	Cft
	D/d Doors and Window						
	D-1	-1	3.50	0.75	7.00	(18.38)	Cft
	W-1	-1	4.00	0.75	4.00	(12.00)	Cft
						Total	354.56 Cft
						Total	3.55 %Cft
	Concrete Work						
8	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.):-						
	Above foundation						
	(a) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-						
	Type C (nominal mix 1: 2: 4)						
	Top Slab	1	11.50	11.50	0.50	66.13	Cft
	Sun shade	1	5.50	1.50	0.25	2.06	Cft
	Sun shade	1	6.00	1.50	0.25	2.25	Cft
	Doors and window Lintels						
	D-1	1	4.50	0.75	0.75	2.53	Cft
	W-1	1	5.00	0.75	0.75	2.81	Cft
						Total	75.78 Cft

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CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Steel Work.						
9	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):-						
	Deformed bars (Grade-60)					75.78	Cft
	Top Slab & lintel @ 6.75 lbs / Cft		6.75		=	511.52	lbs/cft
				Total	=	511.52	lbs/cft
				Total	=	232.09	Kg.
				Add 5% Wastage.	=	11.60	Kg.
				Total	=	244	Kg
						Total	2.44 %kg
	Sand Filling						
10	Supplying and filling sand under floor; or plugging in wells.						
	Floor	1	10.00	10.00	2.75	275.00	Cft
					Total	275.00	Cft
					Total	2.75	%Cft
	Brick ballast						
11	Dry rammed brick or stone ballast, 1½" to 2"(40 mm to 50 mm) gauge.						
	Floor	1	10.00	10.00	0.33	33.00	Cft
					Total	33.00	Cft
					Total	0.33	%Cft
	P.C.C						
12	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	Ratio 1: 2: 4						
	Floor	1	10.00	10.00	0.17	16.67	Cft
					Total	0.17	%Cft

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CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Porcelain Tile						
13	Providing and laying superb quality Porcelain glazed tiles flooring of MASTER brand of specified size in approved design, Color and Shade with adhesive / bond over 3/4" thick (1:3)cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respect as approved and directed by the Engineer Incharge.						
	d) (Non-Skid Chequered Tiles) 300mmx300mm	1	10.00	10.00		100.00	Sft
						Total	100.00 Sft
14	Providing and laying superb quality Porcelain glazed tiles of Master brand, skirting/ dado of specified size, Color and Shade with adhesive/ bond over 1/2" thick (1:2)cement plaster i/c the cost of and sealer for finishing the joints, cutting grinding complete in all respect as approved and directed by the Engineer Incharge.						
	a) Full body Glazed Tile						
	(i) 400 mm x 400 mm	1	40.00		0.33	13.20	Sft
						Total	13.20 Sft
	Slab Plaster						
15	Cement plaster 3/8" (10 mm) thick under soffit of R.C.C. roof slabs only, upto 20' height. (Ratio:- 1:3)						
		1	10.00	10.00		100.00	Sft
						Total	1.00 %Sft
	Cement Plaster						
16	Cement plaster 1:4 upto 20' (6.00 m) height:- 3/4" (20 mm) thick						
	Guard Room						
		2	10.00		10.50	210.00	Sft
		2	10.00		10.50	210.00	Sft
	D/d Doors and Window						
	D-1	-1	3.50		7.00	(24.50)	Sft
	W-1	-1	4.00		4.00	(16.00)	Sft
						Total	379.50 Sft
						Total	3.80 %Sft
	52						

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CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Pointing						
17	Cement pointing struck joints, on walls, upto 20' (6.00 m) hieght:-						
	a) ratio 1:2						
	Outer Walls	1	46.00		10.50	483.00	Sft
					Total	483.00	Sft
					Total	4.83	%Sft
18	Extra cost of labour and material for red oxide pigment in cement pointing to match with the colour of bricks.						
					Total	4.83	%Sft
	Distempering						
19	Distempering:-						
	iii) three coats						
	Guard Room						
		2	10.00		10.50	210.00	Sft
		2	10.00		10.50	210.00	Sft
	Ceiling	1	10.00	10.00		100.00	Sft
	D/d Doors and Window						
	D-1	-1	3.50		7.00	(24.50)	Sft
	W-1	-1	4.00		4.00	(16.00)	Sft
					Total	479.50	Sft
					Total	4.80	%Sft
	Wooden Door						
20	Providing and fixing 1½" (40 mm) thick hollow flush doors and windows with commercial ply (3 ply) on both faces of deodar wood shutter frame 1¼" (30 mm) thick and partal wood braces at about 3" (75 mm) apart and deodar wood lipping 1½"x3/8" (40 mmx10 mm) fixed with M.S. chowkat (frame) including chromium plated fittings, etc. complete in all respects (without sliding bolt or lock):- M.S. angle iron 1½"x1½"x¼", welded (40 mmx40 mmx 6mm) with M.S. flat 2"x¼" (50 mm x 6 mm)						
	D-1	1	3.50		7.00	24.50	Sft
	53						
					Total	24.50	Sft

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CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Lock						
21	Providing and fixing, approved quality mortice lock.	1				1.00	Each
	Paint						
22	Painting new surface:- Preparing surface and painting of doors and windows any type (including edges):-						
	i) priming coat.						
	ii) Two coat					Total	0.49 Sft
	Steel Window						
23	Providing and fixing steel windows with openable glazed panels, using beam section for frame 1½"x1"x5/8"x1/8" (40x25x16x3 mm), Z-section for leaves ¾"x1"x¾"x1/8" (20x25x20x3 mm), T-section sashes 1"x1"x1/8" (25x25x3 mm), glass panes, wooden screed for glazing embedded over a thin layer of putty duly screwed with leaves, brass fittings, holdfast, duly painted, complete in all respects, including all cost of material and labour, etc. as per approved design and as directed by the Engineer-in-charge:-						
	b) fixed with wire gauze, 22 SWG						
	v) glass pane 5 mm thick						
	W-1	1	4.00		4.00	16.00	Sft
						Total	16.00 Sft
	Roof Insulation						
24	Single layer of tiles 9"x4½"x1½" (225x113x40 mm) laid over 4"(100 mm) earth and 1" (25 mm) mud plaster without Bhoosa, grouted with cement sand 1:3 on top of RCC roof slab, provided with 34 lbs. per %Sft. or 1.72 Kg/Sq.m bitumen coating sand blinded.						
	Roof area	1	11.50	11.50		132.25	Sft
						Total	132.25 Sft
						Total	1.32 %Sft

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CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
25	Supplying and laying polythene sheet over D.P.C. under floors and on roofs, etc.						
	ii) 500 gauge (.005" thick)					Total	132.00
							Sft
	Khurras						
26	Khuras on roof 2'x2'x6" (600 x 600 x 150 mm)	1				1.00	Each
	Bottom Khuras						
27	Bottom Khuras of brick masonry in cement mortar 1:6, 4'x2'x4½" (1200x600x113 mm) over 3" (75 mm) cement concrete 1:4:8.	1				1.00	Each

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DETAILED COST ESTIMATE

GUARD ROOM

PLUMBING WORKS

Sr. No.	2nd Bi-Annual- 2022 (July to Dec) Sheikhupura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		uPVC Pipe				
1	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)				
		(v) 4"(110 mm)	Rft	30.00	217.25	6,518
		Total Rs.				6,517.50

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GUARD ROOM

ELECTRICAL WORKS

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
		<u>Scheduled Items (A)</u>				
1	C-24/3-ii	Supply and erection of PVC pipe for wiring recessed in walls, including bends, inspection joints, boxes, pull boxes, hook, cutting and repair surface etc. completed with all specified. (20 mm i/d)	Rft.	150.00	81.70	12,255
2	C-24/3-iii	Supply and erection of PVC pipe for wiring recessed in walls, including bends, inspection joints, boxes, pull boxes, hook, cutting and repair surface etc. completed with all specified. (25 mm i/d)	Rft.	150.00	94.60	14,190
3	C-24/10a.i	Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only). (3.029)	Rft.	400.00	25.70	10,280
4	C-24/10a.iii	Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only). (7.029)	Rft.	300.00	40.75	12,225
5	C-24/14-i	Supply and erection of M.S. sheet box of 16 SWG, 10 cm (4") deep, with 4.75 mm thick (3/16") bakelite sheet top, for recessed wiring, including making holes for regulators, switches, plugs, etc. (4"x4")	Each	3.00	270.60	812
6	C-24/14-ii	Supply and erection of M.S. sheet box of 16 SWG, 10 cm (4") deep, with 4.75 mm thick (3/16") bakelite sheet top, for recessed wiring, including making holes for regulators, switches, plugs, etc. (7"x4")	Each	1.00	372.35	372
7	C-24/32-ii	Supply and erection of switches 10/15 Amp. (Recessed Type)	Each	3.00	87.35	262
8	C-24/36-i	Supply and erection of 3 pin switch and Plug combined, recessed type. (5Amps) 57	Each	1.00	112.00	112

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ELECTRICAL WORKS

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
9	C-24/36-ii	Supply and erection of 3 pin switch and Plug combined recessed type (10/15Amps)	Each	2.00	149.80	300
10	C-24/43	Supply and erection of tube light, including rod, choke, starter with frame, flexible wire, including connection from ceiling rose, etc., complete				
		ii) single rod (40 watts) with one choke and one starter.	Each	2.00	1,221.70	2,443
		Sub Total (A)				53,251
11	N.S	Supply, Installation, testing and commissioning of following size 56" steel body, complete with capacitor, hanging rod, canopy, blades, dimmers nuts and bolts complete in all respect.	Each	1.00	7,000	7,000
		Sub Total (B)				7,000
		Sub Total (A+B)				60,251

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CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Schedule Item				
		Excavation				
1	3/21/a/ii	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.	1000Cft	1.28	10,677.75	13,668
		Anti-Termite				
2	26/43	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concentrate (SC), Mixing Ability-HEXTAR with Ratio (1:250) = 540 Sft or equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10-years complete in all respect as approved by the Engineer Incharge.	Sft	2,094.39	9.25	19,373
		Plain Cement Concrete				
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(i) Ratio 1: 4: 8	100 Cft	1.19	28,986.90	34,494
		Brick work in Foundation				
4	7/4/i	Pacca brick work in foundation and plinth in:-				
		Cement, sand mortar:- Ratio 1:5	100 Cft	3.49	31,756.30	110,829
		Horizontal D.P.C				
5	6/36	Providing and laying damp proof course of cement concrete 1 : 2 : 4 (using cement, sand and shingle), including bitumen coating :-				
		(a) with one coat bitumen and one coat polythene sheet 500gauge				
		i) 1½" thick (40 mm)	100 Sft	0.54	8,661.35	4,677
		Vertical D.P.C				
6	6/37	Providing and laying vertical damp proof course with cement sand plaster and bitumen coating:-				
		(a) with one coat of bitumen and one coat of polythene sheet 500 gauge:				

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Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		ii) Ratio 1:3 ¾ " thick (20 mm)	100 Sft	0.73	6,481.60	4,732
		Brick work in Super Structure				
7	7/5	Pacca brick work in ground floor:-				
		i) Cement, sand mortar:- Ratio 1:5	100 Cft	6.01	33,940.10	203,980
		Concrete Work				
8	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.):-				
		In Foundation				
		(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)	P.Cft	192.50	457.75	88,117
		Above foundation				
		(a) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-				
		Type C (nominal mix 1: 2: 4)	P.Cft	174.34	556.50	97,022
		Steel Work.				
9	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):-				
		Deformed bars (Grade-60)	100kg	12.23	31,769.80	388,545
		Sand Filling				
10	7/30	Supplying and filling sand under floor; or plugging in wells.	100 Cft	22.09	2,943.30	65,017

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WORK SHOP

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)	
		Brick ballast					
11	6/2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.	100 Cft	0.58	9,353.50	5,425	
		Plain Cement Concrete					
12	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):					
		Ratio 1: 2: 4	100 Cft	0.12	38,178.90	4,581	
		Sub Base Course					
13	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. (Pit run or bed run gravel from sargodha quarry to site, actual compacted depth shall be considered for payment)	100Cft	2.31	18,232.80	42,118	
		Water Bound Macadam					
14	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 quarry to site, actual compacted depth shall be considered for payment)	100Cft	2.31	21,353.62	49,327	
		Tuff Paver					
15	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)					
		For Tool Room b) 60-mm thick	62	Per Sft	102.00	151.35	15,438

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SUPERVISION IN 16 CITIES OF PUNJAB

DETAILED COST ESTIMATE

WORK SHOP

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		For Work shop c) 80-mm thick	Per Sft	700.00	189.85	132,895
		Ceramic Tile				
16	10/24	Providing and laying superb quality Ceramic tile floors of Master brand of specified size, Glossy/Matt/Texture of approved Color and Shade as per approved design with adhesive bond, over 3/4" thick (1;2) cement sand plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects and as approved and directed by the Engineer Incharge.				
		i) 12"x18"/12"x24"/10"x24" /8"x24"/12"x36"	Per Sft	74.00	240.00	17,760
17	10/25	Providing and laying superb quality Ceramic tiles dado of Master brand of specified size, Glossy/Matt/Texture skirting / dado of approved Color and Shade with adhesive bond over 1/2" thick (1:2)cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects as approved and directed by the Engineer Incharge.				
		i) 12"x18"/12"x24"/10"x24" /8"x24"/12"x36"	Per Sft	241.50	292.75	70,699
		Slab Plaster				
18	11/10/b	Cement plaster 3/8" (10 mm) thick under soffit of R.C.C. roof slabs only, upto 20' height. (Ratio:- 1:3)	100 Sft	1.76	3,708.60	6,527
		Cement Plaster				
19	11/9	Cement plaster 1:4 upto 20' (6.00 m) height:- 3/4" (20 mm) thick	100 Sft	7.35	4,220.85	31,023
		Pointing				
20	11/18/a	Cement pointing struck joints, on walls, upto 20' (6.00 m) height:- a) ratio 1:2	100 Sft	7.04	3,518.35	24,769
21	11/31	Extra cost of labour and material for red oxide pigment in cement pointing to match with the colour of bricks.	100 Sft	7.04	652.50	4,594
		Distempering				
22	11/23	Distempering:- iii) three coats	100 Sft	9.11	1,295.00	11,797

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DETAILED COST ESTIMATE

WORK SHOP

CIVIL WORK

Sr. No.	2nd Bi-Annual- 2022 (July to Dec) Sheikhupura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)

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DETAILED COST ESTIMATE

WORK SHOP

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Wooden Door				
23	12/49-i	Providing and fixing 1½" (40 mm) thick hollow flush doors and windows with commercial ply (3 ply) on both faces of deodar wood shutter frame 1¼" (30 mm) thick and partial wood braces at about 3" (75 mm) apart and deodar wood lipping 1½"x3/8" (40 mmx10 mm) fixed with M.S. chowkat (frame) including chromium plated fittings, etc. complete in all respects (without sliding bolt or lock):- M.S. angle iron 1½"x1½"x¼", welded (40 mmx40 mmx 6mm) with M.S. flat 2"x¼" (50 mm x 6 mm)	Per Sft	42.00	2,024.90	85,046
		Lock				
24	12/21	Providing and fixing, approved quality mortice lock.	Each	2.00	771.50	1,543
		Paint				
25	13/5/c	Painting new surface:- Preparing surface and painting of doors and windows any type (including edges):-				
		i) priming coat.	100 Sft	0.84	1,292.00	1,085
		ii)Two coat	100 Sft	0.84	711.40	598
		Steel Window				
26	25/41/b	Providing and fixing steel windows with openable glazed panels, using beam section for frame 1½"x1"x5/8"x1/8" (40x25x16x3 mm), Z-section for leaves ¾"x1"x¾"x1/8" (20x25x20x3 mm), T-section sashes 1"x1"x1/8" (25x25x3 mm), glass panes, wooden screed for glazing embedded over a thin layer of putty duly screwed with leaves, brass fittings, holdfast, duly painted, complete in all respects, including all cost of material and labour, etc. as per approved design and as directed by the Engineer-in-charge:-				
		b) fixed with wire gauze, 22 SWG				
		v) glass pane 5 mm thick	Per Sft	21.00	1,081.65	22,715

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DETAILED COST ESTIMATE

WORK SHOP

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Roof Insulation				
27	9/5	Single layer of tiles 9"x4½"x1½" (225x113x40 mm) laid over 4"(100 mm) earth and 1" (25 mm) mud plaster without Bhoosa, grouted with cement sand 1:3 on top of RCC roof slab, provided with 34 lbs. per %Sft. or 1.72 Kg/Sq.m bitumen coating sand blinded.	100 Sft	2.30	11,389.85	26,197
28	26/37/ii	Supplying and laying polythene sheet over D.P.C. under floors and on roofs, etc.				
		ii) 500 gauge (.005" thick)	Per Sft	230.00	7.85	1,806
		Khurras				
29	9/15	Khuras on roof 2'x2'x6" (600 x 600 x 150 mm)	Each	1.00	855.00	855
		Bottom Khuras				
30	9/16	Bottom Khuras of brick masonry in cement mortar 1:6, 4'x2'x4½" (1200x600x113 mm) over 3" (75 mm) cement concrete 1:4:8.	Each	1.00	1,747.40	1,747
		Parking Shed				
31	N.S	Providing, laying and fixing in position shed as per drawings, manufacturer's specifications and as directed by Engineer Incharge. This item includes Aluzinc corrugated sheet of 0.5 to 0.6 mm thick fixed with rivet and bolts over Purlins and truss frame of 50X50X4.75 mm with approved Colour/paint supported with Steel Hexagonal / round shaped Columns size 200 to 300 mm diameter fitted with J-Type bolt having length 450 to 500 mm and not less than 38mm diameter. This item includes all kind of leads, lifts, fitting charges etc. complete in all respect excluding Cost of substructure i.e. foundation. Approval of manufacturer must be sought prior to placing order.	Sft	530.00	1,800.00	954,000
		Total Rs.				2,542,999

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WORK SHOP

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	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)						
	ii) in ordinary soil.						
	Tool Room wall	1	44.50	2.50	2.50	278.13	Cft
	Toilet wall	1	28.00	2.50	2.50	175.00	Cft
	Columns	4	7.50	6.00	4.58	824.40	Cft
					Total	1,277.53	Cft
					Total	1.28	%oCft
	Anti-Termite						
2	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concentrate (SC), Mixing Ability-HEXTAR with Ratio (1:250) = 540 Sft or equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10-years complete in all respect as approved by the Engineer Incharge.						
	Tool Room wall	1	44.50	7.50		333.75	Sft
	Toilet wall	1	28.00	7.50		210.00	Sft
	Floor	1	12.75	8.00		102.00	Sft
		1	9.25	8.00		74.00	Sft
		1	35.00	20.00		700.00	Sft
	Columns	4	27.00	4.58		494.64	Sft
		4	7.50	6.00		180.00	Sft
					Total	2,094.39	Sft
	Plain Cement Concrete						
3	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(i) Ratio 1: 4: 8						
	Tool Room wall	1	44.50	2.50	0.33	36.71	Cft
	Toilet wall	1	28.00	2.50	0.33	23.10	Cft
	Columns	4	7.50	6.00	0.33	59.40	Cft
					Total	119.21	Cft
					Total	1.19	%Cft

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WORK SHOP

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Brick work in Foundation						
4	Pacca brick work in foundation and plinth in:- Cement, sand mortar:- Ratio 1:5						
	Tool Room wall						
	Step - 1	1	44.50	1.875	0.25	20.86	Cft
	Step - 2	1	44.50	1.500	0.25	16.69	Cft
	Step - 3	1	44.50	1.125	0.25	12.52	Cft
	Step - 4	1	44.50	0.750	4.92	164.21	Cft
	Toilet wall						
	Step - 1	1	28.00	1.875	0.25	13.13	Cft
	Step - 2	1	28.00	1.500	0.25	10.50	Cft
	Step - 3	1	28.00	1.125	0.25	7.88	Cft
	Step - 4	1	28.00	0.750	4.92	103.32	Cft
					Total	349.09	Cft
					Total	3.49	%Cft
	Horizontal D.P.C						
5	Providing and laying damp proof course of cement concrete 1 : 2 : 4 (using cement, sand and shingle), including bitumen coating :- (a) with one coat bitumen and one coat polythene sheet 500gauge i) 1½" thick (40 mm)						
	Tool Room wall	1	44.50	0.75		33.38	Sft
	Toilet wall	1	28.00	0.75		21.00	Sft
					Total	54.38	Sft
					Total	0.54	%Sft
	Vertical D.P.C						
6	Providing and laying vertical damp proof course with cement sand plaster and bitumen coating:- (a) with one coat of bitumen and one coat of polythene sheet 500 gauge: ii) Ratio 1:3 ¾ " thick (20 mm)						
	Tool Room wall	1	44.50		1.00	44.50	Sft
	Toilet wall	1	28.00		1.00	28.00	Sft
					Total	72.50	Sft
					Total	0.73	%Sft

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WORK SHOP

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Brick work in Super Structure						
7	Pacca brick work in ground floor:- i) Cement, sand mortar:- Ratio 1:5						
	Tool Room wall	1	44.50	0.75	10.50	350.44	Cft
	Toilet wall	1	28.00	0.75	10.50	220.50	Cft
	Parapet Wall	1	67.00	0.38	2.50	62.81	Cft
	Entrance step	2	9.50	1.00	0.75	14.25	Cft
	D/d Doors and Window						
	D-1	-1	3.50	0.75	7.00	(18.38)	Cft
	D-2	-1	2.50	0.75	7.00	(13.13)	Cft
	W-1	-1	4.00	0.75	4.00	(12.00)	Cft
	V-1	-1	2.50	0.70	2.00	(3.50)	Cft
						Total	601.00 Cft
						Total	6.01 %Cft
	Concrete Work						
8	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.):-						
	In Foundation						
	(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:-						
	Columns	4	7.00	5.50	1.25	192.50	Cft
						Total	192.50 Cft
	Above foundation						
	(a) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-						
	Type C (nominal mix 1: 2: 4)	69					

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WORK SHOP

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Top Slab	1	24.25	9.50	0.50	115.19	Cft
	Sun shade	1	3.00	1.50	0.25	1.13	Cft
	Columns	4	1.25	1.50	6.50	48.75	Cft
	Doors and window Lintels						
	D-1	1	4.50	0.75	0.75	2.53	Cft
	D-2	1	3.50	0.75	0.75	1.97	Cft
	W-1	1	5.00	0.75	0.75	2.81	Cft
	V-1	1	3.50	0.75	0.75	1.97	Cft
						Total	174.34
							Cft
	Steel Work.						
9	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):-						
	Deformed bars (Grade-60)					366.84	Cft
	Top Slab, lintel & Columns @ 7 lbs / Cft		7.00		=	2,567.91	lbs/cft
				Total	=	2,567.91	lbs/cft
				Total	=	1,165.11	Kg.
				Add 5% Wastage.	=	58.26	Kg.
				Total	=	1,223	Kg
						Total	12.23
							%kg
	Sand Filling						
10	Supplying and filling sand under floor; or plugging in wells.						
	Tool Floor	1	12.75	8.00	2.50	255.00	Cft
	Toilet	1	9.25	8.00	2.75	203.50	Cft
	Work Shop Area	1	35.00	20.00	2.50	1,750.00	Cft
					Total	2,208.50	Cft
						Total	22.09
							%Cft
	Brick ballast						
11	Dry rammed brick or stone ballast, 1½" to 2"(40 mm to 50 mm) gauge.						
	Tool Floor	1	12.75	8.00	0.33	33.66	Cft
	Toilet	1	9.25	8.00	0.33	24.42	Cft
					Total	58.08	Cft
						Total	0.58
							%Cft

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WORK SHOP

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	P.C.C						
12	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	Ratio 1: 2: 4						
	Toilet	1	9.25	8.00	0.17	12.33	Cft
						Total	0.12 %Cft
	Sub Base Course						
13	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. (Pit run or bed run gravel from sargodha quarry to site, actual compacted depth shall be considered for payment)						
	Work Shop Area	1	35.00	20.00	0.33	231.00	Cft
						Total	2.31 %Cft
	Water Bound Macadam						
14	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 quarry to site, actual compacted depth shall be considered for payment)						
	Work Shop Area	1	35.00	20.00	0.33	231.00	Cft
						Total	2.31 %Cft

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WORK SHOP

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
15	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)						
	For Tool Room b) 60-mm thick						
	Tool Floor	1	12.75	8.00		102.00	Sft
	Work Shop Area	1	35.00	20.00		700.00	Sft
	Ceramic Tile						
16	Providing and laying superb quality Ceramic tile floors of Master brand of specified size, Glossy/Matt/Texture of approved Color and Shade as per approved design with adhesive bond, over 3/4" thick (1;2) cement sand plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects and as approved and directed by the Engineer Incharge.						
	i) 12"x18"/12"x24"/10"x24" /8"x24"/12"x36"	1	9.25	8.00		74.00	Sft
						Total	74.00 Sft
17	Providing and laying superb quality Ceramic tiles dado of Master brand of specified size, Glossy/Matt/Texture skirting / dado of approved Color and Shade with adhesive bond over 1/2" thick (1:2)cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects as approved and directed by the Engineer Incharge.						
	i) 12"x18"/12"x24"/10"x24" /8"x24"/12"x36"	2	9.25		7.00	129.50	Sft
		2	8.00		7.00	112.00	Sft
						Total	241.50 Sft
	Slab Plaster						
18	Cement plaster 3/8" (10 mm) thick under soffit of R.C.C. roof slabs only, upto 20' height. (Ratio:- 1:3)						
		1	12.75	8.00		102.00	Sft
		1	9.25	8.00		74.00	Sft
						Total	1.76 %Sft

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WORK SHOP

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Cement Plaster						
19	Cement plaster 1:4 upto 20' (6.00 m) height:- 3/4" (20 mm) thick						
	Tool Room wall						
		2	12.75		10.50	267.75	Sft
		2	8.00		10.50	168.00	Sft
	Toilet						
		2	9.25		10.50	194.25	Sft
		2	8.00		10.50	168.00	Sft
	D/d Doors and Window						
	D-1	-1	3.50		7.00	(24.50)	Sft
	D-2	-1	2.50		7.00	(17.50)	Sft
	W-1	-1	4.00		4.00	(16.00)	Sft
	V-1	-1	2.50		2.00	(5.00)	Sft
					Total	735.00	Sft
					Total	7.35	%Sft
	Pointing						
20	Cement pointing struck joints, on walls, upto 20' (6.00 m) height:-						
	a) ratio 1:2						
	Outer Walls	1	67.00		10.50	703.50	Sft
					Total	703.50	Sft
					Total	7.04	%Sft
21	Extra cost of labour and material for red oxide pigment in cement pointing to match with the colour of bricks.						
					Total	7.04	%Sft
	Distempering						
22	Distempering:-						
	iii) three coats						
	Tool Room wall						
		2	12.75		10.50	267.75	Sft
		2	8.00		10.50	168.00	Sft
	Toilet						
		2	9.25		10.50	194.25	Sft
		2	8.00		10.50	168.00	Sft
	Slab	1	12.75	8.00		102.00	Sft
		1	9.25	8.00		74.00	Sft

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WORK SHOP

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	D/d Doors and Window						
	D-1	-1	3.50		7.00	(24.50)	Sft
	D-2	-1	2.50		7.00	(17.50)	Sft
	W-1	-1	4.00		4.00	(16.00)	Sft
	V-1	-1	2.50		2.00	(5.00)	Sft
					Total	911.00	Sft
					Total	9.11	%Sft
	Wooden Door						
23	Providing and fixing 1½" (40 mm) thick hollow flush doors and windows with commercial ply (3 ply) on both faces of deodar wood shutter frame 1¼" (30 mm) thick and partial wood braces at about 3" (75 mm) apart and deodar wood lipping 1½"x3/8" (40 mmx10 mm) fixed with M.S. chowkat (frame) including chromium plated fittings, etc. complete in all respects (without sliding bolt or lock):- M.S. angle iron 1½"x1½"x¼", welded (40 mmx40 mmx 6mm) with M.S. flat 2"x¼" (50 mm x 6 mm)						
	D-1	1	3.50		7.00	24.50	Sft
	D-2	1	2.50		7.00	17.50	Sft
					Total	42.00	Sft
	Lock						
24	Providing and fixing, approved quality mortice lock.	2				2.00	Each
	Paint						
25	Painting new surface:- Preparing surface and painting of doors and windows any type (including edges):-						
	i) priming coat.						
	ii)Two coat				Total	0.84	Sft

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WORK SHOP

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Steel Window						
26	Providing and fixing steel windows with openable glazed panels, using beam section for frame 1½"x1"x5/8"x1/8" (40x25x16x3 mm), Z-section for leaves ¾"x1"x¾"x1/8" (20x25x20x3 mm), T-section sashes 1"x1"x1/8" (25x25x3 mm), glass panes, wooden screed for glazing embedded over a thin layer of putty duly screwed with leaves, brass fittings, holdfast, duly painted, complete in all respects, including all cost of material and labour, etc. as per approved design and as directed by the Engineer-in-charge:-						
	b) fixed with wire gauze, 22 SWG						
	v) glass pane 5 mm thick						
	W-1	1	4.00		4.00	16.00	Sft
	V-1	1	2.50		2.00	5.00	Sft
					Total	21.00	Sft
	Roof Insulation						
27	Single layer of tiles 9"x4½"x1½" (225x113x40 mm) laid over 4"(100 mm) earth and 1" (25 mm) mud plaster without Bhoosa, grouted with cement sand 1:3 on top of RCC roof slab, provided with 34 lbs. per %Sft. or 1.72 Kg/Sq.m bitumen coating sand blinded.						
	Roof area	1	24.25	9.50		230.38	Sft
					Total	230.38	Sft
					Total	2.30	%Sft
28	Supplying and laying polythene sheet over D.P.C. under floors and on roofs, etc.						
	ii) 500 gauge (.005" thick)				Total	230.00	Sft
	Khurras						
29	Khuras on roof 2'x2'x6" (600 x 600 x 150 mm)	1				1.00	Each
	Bottom Khuras						
30	Bottom Khuras of brick masonry in cement mortar 1:6, 4'x2'x4½" (1200x600x113 mm) over 3" (75 mm) cement concrete 1:4:8.	1				1.00	Each

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WORK SHOP

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Parking Shed						
31	Providing, laying and fixing in position shed as per drawings, manufacturer's specifications and as directed by Engineer Incharge. This item includes Aluzinc corrugated sheet of 0.5 to 0.6 mm thick fixed with rivet and bolts over Purlins and truss frame of 50X50X4.75 mm with approved Colour/ paint supported with Steel Hexagonal / round shaped Columns size 200 to 300 mm diameter fitted with J-Type bolt having length 450 to 500 mm and not less than 38mm diameter. This item includes all kind of leads, lifts, fitting charges etc. complete in all respect excluding Cost of substructure i.e. foundation. Approval of manufacturer must be sought prior to placing order.	1	530.00	1.00		530.00	Sft
					Total	530.00	Sft

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SUPERVISION IN 16 CITIES OF PUNJAB

DETAILED COST ESTIMATE

WORK SHOP

PLUMBING WORKS

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Schedule Item				
		Indian W.C				
1	19-4-i	Providing and fitting glazed earthen ware water closet, squatter type (Orisa pattern), combined with foot rest.				
		i) white	Each	1.00	2,218.35	2,218
2	19-13-i	Providing and fitting plastic made low down flushing cistern 13.63 litre (3 gallons) capacity, including bracket set, copper connection, etc. complete.				
		i) white	Each	1.00	2,649.35	2,649
3	19-7-i	Providing and fitting glazed earthen ware wash hand basin 56x40 cm (22"x16") including bracket set, waste pipe and waste coupling, etc.				
		i) white, with pedestal	Each	1.00	5,169.95	5,170
5	19-30	Providing and fixing, chromium plated mixing valve, for wash hand basin, sink or shower.	Each	1.00	2,228.75	2,229
7	19-15	Providing and fixing, chromium plated soap dish.	Each	1.00	278.75	279
8	19-20	Providing and fixing looking glass 55x40 cm (22"x16") size	Each	1.00	638.15	638
9	19-27	Providing and fixing chromium plated bib cock:-				
		i) 2 cm (¾")	Each	1.00	1,015.00	1,015
10	19-28	Providing and fixing chromium plated tee stop cock 15mm (½").	Each	3.00	955.00	2,865
11	19-34-i	Providing and fixing, floor trap of cast iron, including concrete chamber all round, and C.I. grating:-				
		i) 10x5 cm (4"x2")	Each	1.00	627.95	628
12	19-36	Providing and fitting 10 cm (4") gully trap, including cement concrete, cost of PVC grating 15x15 cm (6"x6") and masonry chamber 30x30 cm (12"x12").	Each	1.00	1,132.85	1,133

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DETAILED COST ESTIMATE

WORK SHOP

PLUMBING WORKS

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Shekhupura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
13	19-35-ii	Providing and fitting "P" trap:- ii) 10 cm (4") glazed.	Each	2.00	283.15	566
		PPRC Pipe				
14	23-47	Providing, laying, testing and commissioning of POLYPROPYLENE RANDOM COPOLYMER (PPRC)water supply pipe made of (Dadex/ Popular /Beta/ BBJ)with specified pressure rating PN (PRESSURE NOMINAL) and conforming to DIN8077-8078 code i/c cost of solvent, specials, making jharries complete in all respect as approved and directedby Engineer Incharge.(Internal / External Diameters mentioned).				
		b) PN-20 pipe				
		(ii) (3/4") 25 mm	Rft	33.00	66.50	2,195
		(iii) (1") 32 mm	Rft	33.00	106.90	3,528
		Valve				
15	23/46	Providing and fixing CP heavy duty brass Ball valve with CP handle of specified dia meter made of Faisal/ Sonex/ Master best quality or equivalent complete in all respect as approved and directed by the Engineer Incharge.				
		ii) 3/4" dia	Each	1.00	1,434.00	1,434
		iii) 1" dia	Each	1.00	1,674.00	1,674
		uPVC Pipe				
16	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)				
		(iii) 2"(60 mm)	Rft	10.00	88.45	885
		(v) 4"(110 mm)	Rft	50.00	217.25	10,863
		(vi) 6"(160 mm)	Rft	10.00	420.65	4,207

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DETAILED COST ESTIMATE

WORK SHOP

PLUMBING WORKS

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		HDPE Tank				
17	19/51	Providing and hoisting vertical /horizontal type storage tank of required capacity made of rotationally molded from (HDPE), double ply polyethelene of approved manufacturer i/c cost of making connection for inlet/outlet pipe, float valve i/c all cost of specials & labour complete in all respect as approved and directed by the Engineer Incharge.	P.Gln	200.00	106.60	21,320
		Total Rs. (A)				65,494
		Non-Schedule Item				
18	N.S	Providing and making Manhole 2'x2' internal size including 9" thick brick masonry (1:4), 1/2" th. Plastering (1:3) i/side, benching with PCC 1:2:4 4" th. with cement finish, including manhole cover, complete in all respects.	Each	1.00	17,749.77	17,750
		Total Rs. (B)				17,750
		Total Amount Rs. (A + B)				83,244

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DETAILED COST ESTIMATE

WORK SHOP

ELECTRICAL WORKS

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
		<u>Scheduled Items (A)</u>				
1	C-24/3-ii	Supply and erection of PVC pipe for wiring recessed in walls, including bends, inspection joints, boxes, pull boxes, hook, cutting and repair surface etc. completed with all specified. (20 mm i/d)	Rft.	250.00	81.70	20,425
2	C-24/3-iii	Supply and erection of PVC pipe for wiring recessed in walls, including bends, inspection joints, boxes, pull boxes, hook, cutting and repair surface etc. completed with all specified. (25 mm i/d)	Rft.	350.00	94.60	33,110
4	C-24/10a.i	Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only). (3.029)	Rft.	600.00	25.70	15,420
5	C-24/10a.iii	Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only). (7.029)	Rft.	800.00	40.75	32,600
6	C-24/10a.iv	Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only). (7.036)	Rft.	650.00	53.80	34,970
7	C-24/14-i	Supply and erection of M.S. sheet box of 16 SWG, 10 cm (4") deep, with 4.75 mm thick (3/16") bakelite sheet top, for recessed wiring, including making holes for regulators, switches, plugs, etc. (4"x4")	Each	10.00	270.60	2,706
8	C-24/14-ii	Supply and erection of M.S. sheet box of 16 SWG, 10 cm (4") deep, with 4.75 mm thick (3/16") bakelite sheet top, for recessed wiring, including making holes for regulators, switches, plugs, etc. (7"x4")	Each	4.00	372.35	1,489

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DETAILED COST ESTIMATE

WORK SHOP

ELECTRICAL WORKS

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
9	C-24/32-ii	Supply and erection of switches 10/15 Amp. (Recessed Type)	Each	12.00	87.35	1,048
10	C-24/36-i	Supply and erection of 3 pin switch and Plug combined, recessed type. (5Amps)	Each	3.00	112.00	336
11	C-24/36-ii	Supply and erection of 3 pin switch and Plug combined recessed type (10/15Amps)	Each	6.00	149.80	899
12	C-24/43	Supply and erection of tube light, including rod, choke, starter with frame, flexible wire, including connection from ceiling rose, etc., complete				
		i) double rod (80 watts) with two chokes and 2 starters.	Each	2.00	2,164.65	4,329
13	C-24/102/a	Providing and fixing Copper winded Exhaust fan with louver and shutter made of Pak/Younas /G.F.C. i/c the cost of necessary cable and hardware for connection from ceiling rose complete as approved and directed by Engineer Incharge.				
		(a) Plastic body (ii) 12 " dia	Each	1.00	3,133.00	3,133
Sub Total (A)						165,886
14	N.S	Supply, installation and commissioning of wall mounted mirror LED light 10 watt with tube rod and frame all necessary fixing accessories, complete in all respects	Each	1.00	2,000.00	2,000
15	N.S	Supply, installation and commissioning recessed 10W LED Down Light complete in all respects	Each	2.00	1,200.00	2,400
16	N.S	Supply, Installation, testing and commissioning of following size 56" steel body, complete with capacitor, hanging rod, canopy, blades, dimmers nuts and bolts complete in all respect.	Each	3.00	7,000.00	21,000
17	N.S	Supply, installation and commissioning high bay light 100W with 120lm/w LED hanging with all accessories complete in all respects	Each	6.00	25,000.00	150,000
Sub Total (B)						175,400

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DETAILED COST ESTIMATE

WORK SHOP

ELECTRICAL WORKS

Sr. No.	2nd Bi-Annual- 2022 (July to Dec) Sheikhupura	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
		Sub Total (A+B)				341,286

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SUPERVISION IN 16 CITIES OF PUNJAB

DETAILED COST ESTIMATE

PARKING SHED (SIZE 120' x 32')

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhupura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Schedule Item				
		Excavation				
1	3/21/a/ii	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.	1000Cft	2.92	10,677.75	31,179
		Anti-Termite				
2	26/43	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concentrate (SC), Mixing Ability-HEXTAR with Ratio (1:250) = 540 Sft or equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10-years complete in all respect as approved by the Engineer Incharge.	Sft	5,943.10	9.25	54,974
		Plain Cement Concrete				
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(i) Ratio 1: 4: 8	100 Cft	2.10	28,986.90	60,872
		Concrete Work				
4	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.):-				
		In Foundation				
		(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: 2: 4) 83	P.Cft	700.00	457.75	320,425

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DETAILED COST ESTIMATE

PARKING SHED (SIZE 120' x 32')

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Above foundation				
		(a) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-				
		(2) Type B (nominal mix 1: 1½: 3)	P.Cft	165.00	612.30	101,030
		Steel Work.				
5	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):-				
		Deformed bars (Grade-60)	100kg	49.45	31,769.80	1,571,017
		Sand Filling				
6	7/30	Supplying and filling sand under floor; or plugging in wells.	100 Cft	38.40	2,943.30	113,023
		Sub Base Course				
7	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. (Pit run or bed run gravel from sargodha quarry to site, actual compacted depth shall be considered for payment)	100Cft	12.67	18,232.80	231,010

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DETAILED COST ESTIMATE

PARKING SHED (SIZE 120' x 32')

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Water Bound Macadam				
8	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 quarry to site, actual compacted depth shall be considered for payment)	100Cft	12.67	21,353.62	270,550
		Tuff Paver				
9	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	Per Sft	3,840.00	189.85	729,024
		Parking Shed				
10	N.S	Providing, laying and fixing in position shed as per drawings, manufacturer's specifications and as directed by Engineer Incharge. This item includes Aluzinc corrugated sheet of 0.5 to 0.6 mm thick fixed with rivet and bolts over Purlins and truss frame of 50X50X4.75 mm with approved Colour/paint supported with Steel Hexagonal / round shaped Columns size 200 to 300 mm diameter fitted with J-Type bolt having length 450 to 500 mm and not less than 38mm diameter. This item includes all kind of leads, lifts, fitting charges etc. complete in all respect excluding Cost of substructure i.e. foundation. Approval of manufacturer must be sought prior to placing order.	Sft	3,840.00	1,800.00	6,912,000
		Total Rs.				10,395,103

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PARKING SHED (SIZE 120' x 32')

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	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)						
	ii) in ordinary soil.						
	Columns	10	8.50	7.50	4.58	2,919.75	Cft
					Total	2,919.75	Cft
					Total	2.92	%oCft
	Anti-Termite						
2	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concentrate (SC), Mixing Ability-HEXTAR with Ratio (1:250) = 540 Sft or equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10-years complete in all respect as approved by the Engineer Incharge.						
	Floor	1	120.00	32.00		3,840.00	Sft
	Columns	10	32.00	4.58		1,465.60	Sft
		10	8.50	7.50		637.50	Sft
					Total	5,943.10	Sft
	Plain Cement Concrete						
3	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(i) Ratio 1: 4: 8						
	Columns	10	8.50	7.50	0.33	210.38	Cft
					Total	210.38	Cft
					Total	2.10	%Cft

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PARKING SHED (SIZE 120' x 32')

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Concrete Work						
4	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.):-						
	In Foundation						
	(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:-						
	Columns	10	8.00	7.00	1.25	700.00	Cft
					Total	700.00	Cft
	Above foundation						
	(a) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-						
	(2) Type B (nominal mix 1: 1½: 3)						
	Columns	10	1.50	2.00	5.50	165.00	Cft
					Total	165.00	Cft
	Steel Work.						
5	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):-						
	Deformed bars (Grade-60)					865.00	Cft
	Columns @ 12 lbs / Cft		12.00		=	10,380	lbs/cft
				Total	=	10,380	lbs/cft
				Total	=	4,710	Kg.
				Add 5% Wastage.	=	235	Kg.
				Total	=	4,945	Kg
					Total	49.45	%kg

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PARKING SHED (SIZE 120' x 32')

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Sand Filling						
6	Supplying and filling sand under floor; or plugging in wells.						
	Shed	1	120.00	32.00	1.00	3,840.00	Cft
					Total	3,840.00	Cft
					Total	38.40	%Cft
	Sub Base Course						
7	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. (Pit run or bed run gravel from sargodha quarry to site, actual compacted depth shall be considered for payment)						
	Shed	1	120.00	32.00	0.33	1,267.20	Cft
					Total	12.67	%Cft
	Water Bound Macadam						
8	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 quarry to site, actual compacted depth shall be considered for payment)						
	Shed	1	120.00	32.00	0.33	1,267.20	Cft
					Total	12.67	%Cft

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PARKING SHED (SIZE 120' x 32')

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
9	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)						
	Shed	1	120.00	32.00		3,840	Sft
	Parking Shed						
10	Providing, laying and fixing in position shed as per drawings, manufacturer's specifications and as directed by Engineer Incharge. This item includes Aluzinc corrugated sheet of 0.5 to 0.6 mm thick fixed with rivet and bolts over Purlins and truss frame of 50X50X4.75 mm with approved Colour/ paint supported with Steel Hexagonal / round shaped Columns size 200 to 300 mm diameter fitted with J-Type bolt having length 450 to 500 mm and not less than 38mm diameter. This item includes all kind of leads, lifts, fitting charges etc. complete in all respect excluding Cost of substructure i.e. foundation. Approval of manufacturer must be sought prior to placing order.						
		1	120.00	32.00		3,840	Sft

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SUPERVISION IN 16 CITIES OF PUNJAB

DETAILED COST ESTIMATE

PARKING SHED (SIZE 120' x 32')

ELECTRICAL WORKS

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
		<u>Scheduled Items (A)</u>				
1	C-24/3-iii	Supply and erection of PVC pipe for wiring recessed in walls, including bends, inspection joints, boxes, pull boxes, hook, cutting and repair surface etc. completed with all specified. (25 mm i/d)	Rft.	350.00	81.70	28,595
2	C-24/10a.i	Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only). (3.029)	Rft.	875.00	25.70	22,488
3	C-24/10a.iii	Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only). (7.029)	Rft.	300.00	40.75	12,225
4	C-24/14-ii	Supply and erection of M.S. sheet box of 16 SWG, 10 cm (4") deep, with 4.75 mm thick (3/16") bakelite sheet top, for recessed wiring, including making holes for regulators, switches, plugs, etc. (7"x4")	Each	2.00	372.35	745
5	C-24/32-ii	Supply and erection of switches 10/15 Amp. (Recessed Type)	Each	8.00	87.35	699
		Sub Total (A)				64,751
6	N.S	Supply, installation and commissioning high bay light 100W with 120lm/w LED hanging with all accessories complete in all respects	Each	8.00	25,000	200,000
		Sub Total (B)				200,000
		Sub Total (A+B)				264,751

PUNJAB CITIES PROGRAM (PCP)
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SUPERVISION IN 16 CITIES OF PUNJAB

DETAILED COST ESTIMATE

PARKING SHED (SIZE 72' x 32')

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Schedule Item				
		Excavation				
1	3/21/a/ii	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.	1000Cft	1.75	10,677.75	18,686
		Anti-Termite				
2	26/43	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concentrate (SC), Mixing Ability-HEXTAR with Ratio (1:250) = 540 Sft or equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10-years complete in all respect as approved by the Engineer Incharge.	Sft	3,565.86	9.25	32,984
		Plain Cement Concrete				
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(i) Ratio 1: 4: 8	100 Cft	1.26	28,986.90	36,523
		Concrete Work				
4	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.):-				
		In Foundation				
		(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:-				

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DETAILED COST ESTIMATE

PARKING SHED (SIZE 72' x 32')

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		(2) Type B (nominal mix 1: 2: 4)	P.Cft	420.00	457.75	192,255
		Above foundation				
		(a) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-				
		(2) Type B (nominal mix 1: 1½: 3)	P.Cft	99.00	612.30	60,618
		Steel Work.				
5	6/11/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):-				
		Deformed bars (Grade-60)	100kg	29.67	31,769.80	942,610
		Sand Filling				
6	7/30	Supplying and filling sand under floor; or plugging in wells.	100 Cft	23.04	2,943.30	67,814
		Sub Base Course				
7	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. (Pit run or bed run gravel from sargodha quarry to site, actual compacted depth shall be considered for payment)	100Cft	7.60	18,232.80	138,569

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DETAILED COST ESTIMATE

PARKING SHED (SIZE 72' x 32')

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Water Bound Macadam				
8	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 quarry to site, actual compacted depth shall be considered for payment)	100Cft	7.60	21,353.62	162,287
		Tuff Paver				
9	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	Per Sft	2,304.00	189.85	437,414
		Parking Shed				
10	N.S	Providing, laying and fixing in position shed as per drawings, manufacturer's specifications and as directed by Engineer Incharge. This item includes Aluzinc corrugated sheet of 0.5 to 0.6 mm thick fixed with rivet and bolts over Purlins and truss frame of 50X50X4.75 mm with approved Colour/paint supported with Steel Hexagonal / round shaped Columns size 200 to 300 mm diameter fitted with J-Type bolt having length 450 to 500 mm and not less than 38mm diameter. This item includes all kind of leads, lifts, fitting charges etc. complete in all respect excluding Cost of substructure i.e. foundation. Approval of manufacturer must be sought prior to placing order.	Sft	2,304.00	1,800.00	4,147,200
		Total Amount Rs.				6,236,961

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PARKING SHED (SIZE 72' x 32')

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	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)						
	ii) in ordinary soil.						
	Columns	6	8.50	7.50	4.58	1,751.85	Cft
					Total	1,751.85	Cft
					Total	1.75	%oCft
	Anti-Termite						
2	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concentrate (SC), Mixing Ability-HEXTAR with Ratio (1:250) = 540 Sft or equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10-years complete in all respect as approved by the Engineer Incharge.						
	Floor	1	72.00	32.00		2,304.00	Sft
	Columns	6	32.00	4.58		879.36	Sft
		6	8.50	7.50		382.50	Sft
					Total	3,565.86	Sft
	Plain Cement Concrete						
3	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(i) Ratio 1: 4: 8						
	Columns	6	8.50	7.50	0.33	126.23	Cft
					Total	126.23	Cft
					Total	1.26	%Cft

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PARKING SHED (SIZE 72' x 32')

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Concrete Work						
4	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.):-						
	In Foundation						
	(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:-						
	Columns	6	8.00	7.00	1.25	420.00	Cft
					Total	420.00	Cft
	Above foundation						
	(a) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-						
	(2) Type B (nominal mix 1: 1½: 3)						
	Columns	6	1.50	2.00	5.50	99.00	Cft
					Total	99.00	Cft
	Steel Work.						
5	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):-						
	Deformed bars (Grade-60)					519.00	Cft
	Columns @ 12 lbs / Cft		12.00		=	6,228	lbs/cft
				Total	=	6,228	lbs/cft
				Total	=	2,826	Kg.
				Add 5% Wastage.	=	141	Kg.
				Total	=	2,967	Kg

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PARKING SHED (SIZE 72' x 32')

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
					Total	29.67	%kg
	Sand Filling						
6	Supplying and filling sand under floor; or plugging in wells.						
	Shed	1	72.00	32.00	1.00	2,304.00	Cft
					Total	2,304.00	Cft
					Total	23.04	%Cft
	Sub Base Course						
7	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. (Pit run or bed run gravel from sargodha quarry to site, actual compacted depth shall be considered for payment)						
	Shed	1	72.00	32.00	0.33	760.32	Cft
					Total	7.60	%Cft
	Water Bound Macadam						
8	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 quarry to site, actual compacted depth shall be considered for payment)						
	Shed	1	72.00	32.00	0.33	760.32	Cft
					Total	7.60	%Cft

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PARKING SHED (SIZE 72' x 32')

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
9	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)						
	Shed	1	72.00	32.00		2,304	Sft
	Parking Shed						
10	Providing, laying and fixing in position shed as per drawings, manufacturer's specifications and as directed by Engineer Incharge. This item includes Aluzinc corrugated sheet of 0.5 to 0.6 mm thick fixed with rivet and bolts over Purlins and truss frame of 50X50X4.75 mm with approved Colour/paint supported with Steel Hexagonal / round shaped Columns size 200 to 300 mm diameter fitted with J-Type bolt having length 450 to 500 mm and not less than 38mm diameter. This item includes all kind of leads, lifts, fitting charges etc. complete in all respect excluding Cost of substructure i.e. foundation. Approval of manufacturer must be sought prior to placing order.						
		1	72.00	32.00		2,304	Sft

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DETAILED COST ESTIMATE

PARKING SHED (SIZE 72' x 32')

ELECTRICAL WORKS

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
		<u>Scheduled Items (A)</u>				
1	C-24/3-iii	Supply and erection of PVC pipe for wiring recessed in walls, including bends, inspection joints, boxes, pull boxes, hook, cutting and repair surface etc. completed with all specified. (25 mm i/d)	Rft.	230.00	81.70	18,791
2	C-24/10a.i	Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only). (3.029)	Rft.	575.00	25.70	14,778
3	C-24/10a.iii	Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only). (7.029)	Rft.	150.00	40.75	6,113
4	C-24/14-ii	Supply and erection of M.S. sheet box of 16 SWG, 10 cm (4") deep, with 4.75 mm thick (3/16") bakelite sheet top, for recessed wiring, including making holes for regulators, switches, plugs, etc. (7"x4")	Each	2.00	372.35	745
5	C-24/32-ii	Supply and erection of switches 10/15 Amp. (Recessed Type)	Each	6.00	87.35	524
		Sub Total (A)				40,950
6	N.S	Supply, installation and commissioning high bay light 100W with 120lm/w LED hanging with all accessories complete in all respects	Each	6.00	25,000	150,000
		Sub Total (B)				150,000
		Sub Total (A+B)				190,950

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DETAILED COST ESTIMATE

PARKING SHED (SIZE 72' x 32')

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Schedule Item				
		Excavation				
1	3/21/a/ii	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.	1000Cft	1.17	10,677.75	12,493
		Anti-Termite				
2	26/43	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concentrate (SC), Mixing Ability-HEXTAR with Ratio (1:250) = 540 Sft or equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10-years complete in all respect as approved by the Engineer Incharge.	Sft	1,801.24	9.25	16,661
		Plain Cement Concrete				
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(i) Ratio 1: 4: 8	100 Cft	0.84	28,986.90	24,349
		Concrete Work				
4	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.):-				
		In Foundation				
		(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: 2: 4)	99	P.Cft	280.00	457.75
					128,170	

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PARKING SHED (SIZE 72' x 32')

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Above foundation				
		(a) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-				
		(2) Type B (nominal mix 1: 1½: 3)	P.Cft	66.00	612.30	40,412
		Steel Work.				
5	6/11/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):-				
		Deformed bars (Grade-60)	100kg	19.78	31,769.80	628,407
		Sand Filling				
6	7/30	Supplying and filling sand under floor; or plugging in wells.	100 Cft	9.60	2,943.30	28,256
		Sub Base Course				
7	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. (Pit run or bed run gravel from sargodha quarry to site, actual compacted depth shall be considered for payment)	100Cft	3.17	18,232.80	57,798

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DETAILED COST ESTIMATE

PARKING SHED (SIZE 72' x 32')

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhupura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Water Bound Macadam				
8	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 quarry to site, actual compacted depth shall be considered for payment)	100Cft	3.17	21,353.62	67,691
		Tuff Paver				
9	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	Per Sft	960.00	189.85	182,256
		Parking Shed				
10	N.S	Providing, laying and fixing in position shed as per drawings, manufacturer's specifications and as directed by Engineer Incharge. This item includes Aluzinc corrugated sheet of 0.5 to 0.6 mm thick fixed with rivet and bolts over Purlins and truss frame of 50X50X4.75 mm with approved Colour/paint supported with Steel Hexagonal / round shaped Columns size 200 to 300 mm diameter fitted with J-Type bolt having length 450 to 500 mm and not less than 38mm diameter. This item includes all kind of leads, lifts, fitting charges etc. complete in all respect excluding Cost of substructure i.e. foundation. Approval of manufacturer must be sought prior to placing order.	Sft	960.00	1,800.00	1,728,000
		No of One unit cost				2,914,492
		No of two unit cost				5,828,985

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PARKING SHED (SIZE 72' x 32')

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	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)						
	ii) in ordinary soil.						
	Columns	4	8.50	7.50	4.58	1,167.90	Cft
					Total	1,167.90	Cft
					Total	1.17	%oCft
	Anti-Termite						
2	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concentrate (SC), Mixing Ability-HEXTAR with Ratio (1:250) = 540 Sft or equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10-years complete in all respect as approved by the Engineer Incharge.						
	Floor	1	30.00	32.00		960.00	Sft
	Columns	4	32.00	4.58		586.24	Sft
		4	8.50	7.50		255.00	Sft
					Total	1,801.24	Sft
	Plain Cement Concrete						
3	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(i) Ratio 1: 4: 8						
	Columns	4	8.50	7.50	0.33	84.15	Cft
					Total	84.15	Cft
					Total	0.84	%Cft

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PARKING SHED (SIZE 72' x 32')

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Concrete Work						
4	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.):-						
	In Foundation						
	(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:-						
	Columns	4	8.00	7.00	1.25	280.00	Cft
					Total	280.00	Cft
	Above foundation						
	(a) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-						
	(2) Type B (nominal mix 1: 1½: 3)						
	Columns	4	1.50	2.00	5.50	66.00	Cft
					Total	66.00	Cft
	Steel Work.						
5	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):-						
	Deformed bars (Grade-60)					346.00	Cft
	Columns @ 12 lbs / Cft		12.00		=	4,152	lbs/cft
				Total	=	4,152	lbs/cft
				Total	=	1,884	Kg.
				Add 5% Wastage.	=	94	Kg.
				Total	=	1,978	Kg

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PARKING SHED (SIZE 72' x 32')

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
					Total	19.78	%kg
	Sand Filling						
6	Supplying and filling sand under floor; or plugging in wells.						
	Shed	1	30.00	32.00	1.00	960.00	Cft
					Total	960.00	Cft
					Total	9.60	%Cft
	Sub Base Course						
7	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. (Pit run or bed run gravel from sargodha quarry to site, actual compacted depth shall be considered for payment)						
	Shed	1	30.00	32.00	0.33	316.80	Cft
					Total	3.17	%Cft
	Water Bound Macadam						
8	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 quarry to site, actual compacted depth shall be considered for payment)						
	Shed	1	30.00	32.00	0.33	316.80	Cft
					Total	3.17	%Cft

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PARKING SHED (SIZE 72' x 32')

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
9	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)						
	Shed	1	30.00	32.00		960	Sft
	Parking Shed						
10	Providing, laying and fixing in position shed as per drawings, manufacturer's specifications and as directed by Engineer Incharge. This item includes Aluzinc corrugated sheet of 0.5 to 0.6 mm thick fixed with rivet and bolts over Purlins and truss frame of 50X50X4.75 mm with approved Colour/paint supported with Steel Hexagonal / round shaped Columns size 200 to 300 mm diameter fitted with J-Type bolt having length 450 to 500 mm and not less than 38mm diameter. This item includes all kind of leads, lifts, fitting charges etc. complete in all respect excluding Cost of substructure i.e. foundation. Approval of manufacturer must be sought prior to placing order.						
		1	30.00	32.00		960	Sft

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SUPERVISION IN 16 CITIES OF PUNJAB

DETAILED COST ESTIMATE

PARKING SHED (SIZE 30' x 32')

ELECTRICAL WORKS

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
		<u>Scheduled Items (A)</u>				
1	C-24/3-iii	Supply and erection of PVC pipe for wiring recessed in walls, including bends, inspection joints, boxes, pull boxes, hook, cutting and repair surface etc. completed with all specified. (25 mm i/d)	Rft.	100.00	81.70	8,170
2	C-24/10a.i	Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only). (3.029)	Rft.	250.00	25.70	6,425
3	C-24/10a.iii	Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only). (7.029)	Rft.	100.00	40.75	4,075
4	C-24/14-i	Supply and erection of M.S. sheet box of 16 SWG, 10 cm (4") deep, with 4.75 mm thick (3/16") bakelite sheet top, for recessed wiring, including making holes for regulators, switches, plugs, etc. (4"x4")	Each	2.00	372.35	745
5	C-24/32-ii	Supply and erection of switches 10/15 Amp. (Recessed Type)	Each	2.00	87.35	175
		Sub Total (A)				19,589
6	N.S	Supply, installation and commissioning high bay light 100W with 120lm/w LED hanging with all accessories complete in all respects	Each	2.00	25,000	50,000
		Sub Total (B)				50,000
		Sub Total (A+B)				69,589

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DETAILED COST ESTIMATE

PARKING SHED (SIZE 72' x 32')

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Schedule Item				
		Excavation				
1	3/21/a/ii	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.	1000Cft	1.17	10,677.75	12,493
		Anti-Termite				
2	26/43	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concentrate (SC), Mixing Ability-HEXTAR with Ratio (1:250) = 540 Sft or equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10-years complete in all respect as approved by the Engineer Incharge.	Sft	1,641.24	9.25	15,181
		Plain Cement Concrete				
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(i) Ratio 1: 4: 8	100 Cft	0.84	28,986.90	24,349
		Concrete Work				
4	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.):-				
		In Foundation				
		(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: 2: 4) 107	P.Cft	280.00	457.75	128,170

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DETAILED COST ESTIMATE

PARKING SHED (SIZE 72' x 32')

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Above foundation				
		(a) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-				
		(2) Type B (nominal mix 1: 1½: 3)	P.Cft	66.00	612.30	40,412
		Steel Work.				
5	6/11/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):-				
		Deformed bars (Grade-60)	100kg	19.78	31,769.80	628,407
		Sand Filling				
6	7/30	Supplying and filling sand under floor; or plugging in wells.	100 Cft	8.00	2,943.30	23,546
		Sub Base Course				
7	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. (Pit run or bed run gravel from sargodha quarry to site, actual compacted depth shall be considered for payment)	100Cft	2.64	18,232.80	48,135

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DETAILED COST ESTIMATE

PARKING SHED (SIZE 72' x 32')

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhupura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Water Bound Macadam				
8	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 quarry to site, actual compacted depth shall be considered for payment)	100Cft	2.64	21,353.62	56,374
		Tuff Paver				
9	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	Per Sft	800.00	189.85	151,880
		Parking Shed				
10	N.S	Providing, laying and fixing in position shed as per drawings, manufacturer's specifications and as directed by Engineer Incharge. This item includes Aluzinc corrugated sheet of 0.5 to 0.6 mm thick fixed with rivet and bolts over Purlins and truss frame of 50X50X4.75 mm with approved Colour/paint supported with Steel Hexagonal / round shaped Columns size 200 to 300 mm diameter fitted with J-Type bolt having length 450 to 500 mm and not less than 38mm diameter. This item includes all kind of leads, lifts, fitting charges etc. complete in all respect excluding Cost of substructure i.e. foundation. Approval of manufacturer must be sought prior to placing order.	Sft	800.00	1,800.00	1,440,000
		No of One unit cost				2,568,946
		No of two unit cost				5,137,893

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SUPERVISION IN 16 CITIES OF PUNJAB**

PARKING SHED (SIZE 72' x 32')

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	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)						
	ii) in ordinary soil.						
	Columns	4	8.50	7.50	4.58	1,167.90	Cft
					Total	1,167.90	Cft
					Total	1.17	%oCft
	Anti-Termite						
2	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concentrate (SC), Mixing Ability-HEXTAR with Ratio (1:250) = 540 Sft or equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10-years complete in all respect as approved by the Engineer Incharge.						
	Floor	1	25.00	32.00		800.00	Sft
	Columns	4	32.00	4.58		586.24	Sft
		4	8.50	7.50		255.00	Sft
					Total	1,641.24	Sft
	Plain Cement Concrete						
3	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(i) Ratio 1: 4: 8						
	Columns	4	8.50	7.50	0.33	84.15	Cft
					Total	84.15	Cft
					Total	0.84	%Cft

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PARKING SHED (SIZE 72' x 32')

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Concrete Work						
4	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.):-						
	In Foundation						
	(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:-						
	Columns	4	8.00	7.00	1.25	280.00	Cft
					Total	280.00	Cft
	Above foundation						
	(a) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-						
	(2) Type B (nominal mix 1: 1½: 3)						
	Columns	4	1.50	2.00	5.50	66.00	Cft
					Total	66.00	Cft
	Steel Work.						
5	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):-						
	Deformed bars (Grade-60)					346.00	Cft
	Columns @ 12 lbs / Cft		12.00		=	4,152	lbs/cft
				Total	=	4,152	lbs/cft
				Total	=	1,884	Kg.
				Add 5% Wastage.	=	94	Kg.
				Total	=	1,978	Kg

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SUPERVISION IN 16 CITIES OF PUNJAB**

PARKING SHED (SIZE 72' x 32')

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
					Total	19.78	%kg
	Sand Filling						
6	Supplying and filling sand under floor; or plugging in wells.						
	Shed	1	25.00	32.00	1.00	800.00	Cft
					Total	800.00	Cft
					Total	8.00	%Cft
	Sub Base Course						
7	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. (Pit run or bed run gravel from sargodha quarry to site, actual compacted depth shall be considered for payment)						
	Shed	1	25.00	32.00	0.33	264.00	Cft
					Total	2.64	%Cft
	Water Bound Macadam						
8	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 quarry to site, actual compacted depth shall be considered for payment)						
	Shed	1	25.00	32.00	0.33	264.00	Cft
					Total	2.64	%Cft

**PUNJAB CITIES PROGRAM (PCP)
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PARKING SHED (SIZE 72' x 32')

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
9	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)						
	Shed	1	25.00	32.00		800	Sft
	Parking Shed						
10	Providing, laying and fixing in position shed as per drawings, manufacturer's specifications and as directed by Engineer Incharge. This item includes Aluzinc corrugated sheet of 0.5 to 0.6 mm thick fixed with rivet and bolts over Purlins and truss frame of 50X50X4.75 mm with approved Colour/paint supported with Steel Hexagonal / round shaped Columns size 200 to 300 mm diameter fitted with J-Type bolt having length 450 to 500 mm and not less than 38mm diameter. This item includes all kind of leads, lifts, fitting charges etc. complete in all respect excluding Cost of substructure i.e. foundation. Approval of manufacturer must be sought prior to placing order.						
		1	25.00	32.00		800	Sft

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DETAILED COST ESTIMATE

PARKING SHED (SIZE 25' x 32')

ELECTRICAL WORKS

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
		<u>Scheduled Items (A)</u>				
1	C-24/3-iii	Supply and erection of PVC pipe for wiring recessed in walls, including bends, inspection joints, boxes, pull boxes, hook, cutting and repair surface etc. completed with all specified. (25 mm i/d)	Rft.	80.00	81.70	6,536
2	C-24/10a.i	Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only). (3.029)	Rft.	200.00	25.70	5,140
3	C-24/10a.iii	Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only). (7.029)	Rft.	100.00	40.75	4,075
4	C-24/14-i	Supply and erection of M.S. sheet box of 16 SWG, 10 cm (4") deep, with 4.75 mm thick (3/16") bakelite sheet top, for recessed wiring, including making holes for regulators, switches, plugs, etc. (4"x4")	Each	2.00	372.35	745
5	C-24/32-ii	Supply and erection of switches 10/15 Amp. (Recessed Type)	Each	2.00	87.35	175
		Sub Total (A)				16,670
6	N.S	Supply, installation and commissioning high bay light 100W with 120lm/w LED hanging with all accessories complete in all respects	Each	2.00	25,000	50,000
		Sub Total (B)				50,000
		Sub Total (A+B)				66,670

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DETAILED COST ESTIMATE

WASHING PIT

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhupura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Excavation				
1	3/21/a/ii	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.	1000Cft	0.96	10,677.75	10,251
		Sand Filling				
2	7/30	Supplying and filling sand under floor; or plugging in wells.	100Cft	1.12	2,943.30	3,296
		Plain Cement Concrete				
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(c) Ratio 1: 1½: 3	100 Cft	0.57	43,876.50	25,010
		(f) Ratio 1: 2: 4	100 Cft	0.15	38,178.90	5,727
		(i) Ratio 1: 4: 8	100 Cft	1.12	28,986.90	32,465
		Brick work in Foundation				
4	7/4/i	Pacca brick work in foundation and plinth in:-				
		Cement, sand mortar:- Ratio 1:4	100 Cft	11.04	31,756.30	350,590
		Plaster				
5	11/8/b	Cement plaster 1:3 upto 20' (6.00 m) height:-				
		b) ½" (13 mm) thick	100 Sft	3.32	3,424.50	11,369
		Mosaic flooring				
6	10/22/a	1½"(40 mm) thick mosaic flooring, consisting of ½ "(13 mm) mosaic topping of one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over 1"(25 mm) thick floor of 1:2:4 cement concrete, including rubbing and polishing complete with finishing :-				
		(a) using grey cement	100 Sft	0.88	19,573.00	17,224

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DETAILED COST ESTIMATE

WASHING PIT

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhupura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Mosaic dado or skirting				
7	10/37	Mosaic dado or skirting with one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over ½"(13 mm) thick cement plaster 1:3, including rubbing and polishing, complete with finishing:				
		(a) using grey cement:				
		ii) ½"(13 mm) thick	100 Sft	3.32	20,965.90	69,607
		Total Amount Rs.				525,539

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WASHING PIT

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	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)						
	ii) in ordinary soil.						
	Washing Pit	1	35.00	9.67	2.83	958.93	Cft
						Total	0.96 %oCft
2	Supplying and filling sand under floor; or plugging in wells.	1	35.00	9.67	0.33	111.69	Cft
						Total	1.12 %Cft
	Plain Cement Concrete						
3	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(c) Ratio 1: 1½: 3	2	35.00	3.25	0.25	56.88	Cft
						Total	0.57 %Cft
	(f) Ratio 1: 2: 4	1	35.00	2.50	0.17	14.58	Cft
						Total	0.15 %Cft
	(i) Ratio 1: 4: 8						
	Washing Pit	1	35.00	9.67	0.33	111.69	Cft
						Total	1.12 %Cft
	Brick work in Foundation						
4	Pacca brick work in foundation and plinth in:-						
	Cement, sand mortar:- Ratio 1:4						
	Washing Pit						
	Step - 1	1	9.00	1.875	0.50	8.44	Cft
	Step - 2	1	9.00	1.500	0.50	6.75	Cft
	Step - 3	1	9.00	1.125	5.50	55.69	Cft
	Side walls	2	19.00	3.250	6.00	741.00	Cft
		2	15.00	3.250	3.00	292.50	Cft
						Total	1,104.38 Cft
						Total	11.04 %Cft

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WASHING PIT

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Plaster						
5	Cement plaster 1:3 upto 20' (6.00 m) height:- b) ½" (13 mm) thick						
	Wall	1	2.50		5.50	13.75	Sft
	Side Wall	2	19.00		6.00	228.00	Sft
		2	15.00		3.00	90.00	Sft
					Total	331.75	Sft
					Total	3.32	%Sft
	Mosaic flooring						
6	1½"(40 mm) thick mosaic flooring, consisting of ½" (13 mm) mosaic topping of one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over 1"(25 mm) thick floor of 1:2:4 cement concrete, including rubbing and polishing complete with finishing :-						
	(a) using grey cement	1	35.00	2.50		87.50	Sft
					Total	0.88	%Sft
	Mosaic dado or skirting						
7	Mosaic dado or skirting with one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over ½"(13 mm) thick cement plaster 1:3, including rubbing and polishing, complete with finishing:						
		1	2.50		5.50	13.75	Sft
		2	19.00		6.00	228.00	Sft
		2	15.00		3.00	90.00	Sft
					Total	331.75	Sft
					Total	3.32	%Sft

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DETAILED COST ESTIMATE

GENERATOR PAD

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Excavation				
1	3/21/a/ii	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.	1000Cft	0.08	10,677.75	854
		Plain Cement Concrete				
2	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(i) Ratio 1: 4: 8	100 Cft	0.17	28,986.90	4,928
		Concrete Work				
3	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.):-				
		In Foundation				
		(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)	P.Cft	80.00	457.75	36,620
		Steel Work.				
4	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):-				
		Deformed bars (Grade-60)	100kg	3.05	31,769.80	96,898
		119				

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DETAILED COST ESTIMATE

GENERATOR PAD

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhupura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Thermopore Sheet				
5	6/35	Providing and fixing thermopore (foamed polythene) sheet in horizontal and vertical expansion joints:				
		a) 1" (25 mm) thick thermopore sheet	Sft	34.58	18.10	626
		Heavy Steel Work				
6	25/10	Fabrication of heavy steel work, with angle, tees, flat iron round iron and sheet iron for making trusses, girders, tanks, etc., including cutting, drilling, reworking, handling, assembling and fixing, but excluding erection in position.	100Kg	0.45	32,464.05	14,661
7	25/11	Erection and fitting in position iron trusses, staging of water tanks, etc.	100Kg	0.45	1,277.25	577
		Total Amount Rs.				155,163

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GENERATOR PAD

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	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)						
	ii) in ordinary soil.						
	Generator Pad	1	8.84	5.84	1.50	77.44	Cft
					Total	77.44	Cft
					Total	0.08	%oCft
	Plain Cement Concrete						
2	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(i) Ratio 1: 4: 8						
	Generator Pad	1	8.84	5.84	0.33	17.04	Cft
					Total	17.04	Cft
					Total	0.17	%Cft
	Concrete Work						
3	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.):-						
	In Foundation						
	(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:-						
		1	8.00	5.00	2.00	80.00	Cft
					Total	80.00	Cft

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GENERATOR PAD

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Steel Work.						
4	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):-						
	Deformed bars (Grade-60)					80.00	Cft
	Pad @ 8 lbs / Cft		8.00		=	640.00	lbs/cft
				Total	=	640.00	lbs/cft
				Total	=	290.38	Kg.
				Add 5% Wastage.	=	14.52	Kg.
				Total	=	305	Kg
						Total	3.05 %kg
	Thermopore Sheet						
5	Providing and fixing thermopore (foamed polythene) sheet in horizontal and vertical expansion joints:						
	a) 1" (25 mm) thick thermopore sheet	1	26.00		1.33	34.58	Sft
	Heavy Steel Work						
6	Fabrication of heavy steel work, with angle, tees, flat iron round iron and sheet iron for making trusses, girders, tanks, etc., including cutting, drilling, rebitting, handling, assembling and fixing, but excluding erection in position.						
	Angle Iron 1-1/2" x1-1/2"x3/8"	1	26.00	0.25	0.03	0.20	Cft
	Steel Density 490lbs/cft					99.53	lbs
						45.16	Kg
					Total	0.45	%Kg
7	Erection and fitting in position iron trusses, staging of water tanks, etc.					Total	0.45 %Kg

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DETAILED COST ESTIMATE

PUMP PAD

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Excavation				
1	3/21/a/ii	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.	1000Cft	0.01	10,677.75	107
		Plain Cement Concrete				
2	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(i) Ratio 1: 4: 8	100 Cft	0.03	28,986.90	870
		Concrete Work				
3	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.):-				
		In Foundation				
		(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)	P.Cft	8.00	457.75	3,662
		Steel Work.				
4	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):-				
		Deformed bars (Grade-60)	100kg	0.30	31,769.80	9,531
		Total Amount Rs.				14,169

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DETAILED COST ESTIMATE

PUMP PAD

CIVIL WORK

Sr. No.	2nd Bi-Annual- 2022 (July to Dec) Sheikhupura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)

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PUMP PAD

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	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)						
	ii) in ordinary soil.						
	Pump Pad	1	2.50	2.50	1.00	6.25	Cft
						Total	0.01 %oCft
	Plain Cement Concrete						
2	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(i) Ratio 1: 4: 8						
	Pump Pad	1	2.50	2.50	0.50	3.13	Cft
						Total	3.13 Cft
						Total	0.03 %oCft
	Concrete Work						
3	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.):-						
	In Foundation						
	(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:-						
		1	2.00	2.00	2.00	8.00	Cft
						Total	8.00 Cft

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PUMP PAD

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Steel Work.						
4	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):-						
	Deformed bars (Grade-60)					8.00	Cft
	Pad @ 8 lbs / Cft		8.00		=	64.00	lbs/cft
				Total	=	64.00	lbs/cft
				Total	=	29.04	Kg.
				Add 5% Wastage.	=	1.45	Kg.
				Total	=	30	Kg
					Total	0.30	%kg

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DETAILED COST ESTIMATE

SEPTIC TANK

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Excavation				
1	3/21/a/ii	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.	1000Cft	0.71	10,677.75	7,581
		Plain Cement Concrete				
2	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(f) Ratio 1: 2: 4	100 Cft	0.34	38,178.90	12,981
		(i) Ratio 1: 4: 8	100 Cft	0.55	28,986.90	15,943
		Brick work				
3	7/7/i	Pacca brick work other than building upto 10ft. (3 m)				
		Ratio 1:3	100 Cft	4.21	35,226.10	148,302
		Concrete Work				
4	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) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-				
		Type C (nominal mix 1: 2: 4)	P.Cft	50.63	556.50	28,173

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DETAILED COST ESTIMATE

SEPTIC TANK

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Steel Work.				
5	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):-				
		Deformed bars (Grade-60)	100kg	1.27	31,769.80	40,209
		Cement Pointing				
6	11/18/a	Cement pointing struck joints, on walls, upto 20' (6.00 m) hieght:-				
		a) ratio 1:2	100Sft	5.19	3,518.35	18,260
		RCC Manhole Cover				
7	21/15/A	Providing and fixing 6" thick R.C.C. manhole cover with tee shaped C.I. frame of 22" I/d (frame weighing 37.324 Kg. or one maund as per Standard Drawing STD/PD No. 6, of 1977, complete in all respect.	Each	2.00	11,558.25	23,117
		Angle Iron Step				
8	21/13	Providing and fixing 1¼"x1¼"x3/16" (31x31x5 mm) angle iron step, in manhole chambers, including carriage and setting the same in work to correct lines and levels.	Each	14.00	590.40	8,266
		Total Amount Rs.				302,831

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SEPTIC TANK

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	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)						
	ii) in ordinary soil.						
	Septic tank	1	13.50	7.50	7.00	708.75	Cft
					Total	708.75	Cft
					Total	0.71	%Cft
	Plain Cement Concrete						
2	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(f) Ratio 1: 2: 4	3	3.75	6.00	0.50	33.75	Cft
					Total	33.75	Cft
					Total	0.34	%Cft
	(i) Ratio 1: 4: 8						
	Septic tank	3	3.75	6.00	0.33	22.50	Cft
	Outer Wall	1	39.00	2.00	0.33	26.00	Cft
	Baffle wall	2	6.00	1.50	0.33	6.00	Cft
					Total	54.50	Cft
					Total	0.55	%Cft
	Brick work						
3	Pacca brick work other than building upto 10ft. (3 m)						
	Ratio 1:3						
	Outer wall	1	39.00	1.88	0.50	36.56	Cft
		1	39.00	1.50	0.50	29.25	Cft
		1	39.00	1.13	0.50	21.94	Cft
		1	39.00	0.75	9.00	263.25	Cft
	Baffle wall	2	6.00	1.13	0.50	6.75	Cft
		2	6.00	0.75	7.00	63.00	Cft
					Total	420.75	Cft
					Total	4.21	%Cft

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SEPTIC TANK

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Concrete Work						
4	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) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-						
	Type C (nominal mix 1: 2: 4)	1	13.50	7.50	0.50	50.63	Cft
	Steel Work.						
5	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):-						
	Deformed bars (Grade-60)		2.50 kg/cft			126.56	Kg
					Total	1.27	%Kg
	Cement Pointing						
6	Cement pointing struck joints, on walls, upto 20' (6.00 m) hieght:-						
	a) ratio 1:2	1	39.00		9.00	351.00	Sft
		4	6.00		7.00	168.00	Sft
					Total	519.00	Sft
					Total	5.19	%Sft
	RCC Manhole Cover						
7	Providing and fixing 6" thick R.C.C. manhole cover with tee shaped C.I. frame of 22" I/d (frame weighing 37.324 Kg. or one maund as per Standard Drawing STD/PD No. 6, of 1977, complete in all respect.	2				2.00	Nos.

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SEPTIC TANK

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Angle Iron Step						
8	Providing and fixing 1¼"x1¼"x3/16" (31x31x5 mm) angle iron step, in manhole chambers, including carriage and setting the same in work to correct lines and levels.	14				14.00	Nos.

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DETAILED COST ESTIMATE

TUBE WELL

Installation of Tubewell (0.25 Cusec)

Sr. No	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
1	23/6	Direct Rotary/Reverse Rotary drilling of bore for tubewells, in all types of soil except shingle, gravel and rock:-				
		a) from ground level to 200 ft. (60 m) below ground level:-				
		i) 15" to 18" (375 to 450 mm) i/d	P.Rft	200.00	1,738.05	347,610
		b) exceeding 200 ft. (60 m) depth below ground level:-				
		i) 15" to 18" (375 to 450 mm) i/d	P.Rft	300.00	1,738.05	521,415
2	23/7	Providing strong substantially built box of deodar wood 4'x2½'x9" (1200x750x225 mm), with compartments, lock and locking arrangement, for preserving samples of strata from bore hole.	Job	1.00	37,136.30	37,136
3	23/8	Furnishing sample of water from borehole each set of 2 bottles.	Per Set of Two bottles	2.00	183.95	368
4	6/5-f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(f) Ratio 1: 2: 4	100Cft	0.18	38,178.90	6,872
		Housing Pipe				
5	23/17	Providing and installing P.V.C. blind pipe, B.S.S. Class 'D', in tubewell bore hole, including sockets and solvents and jointing with strainer, etc. complete.				
		g) 6" i/d (150 mm).	Per Rft	130.00	1,683.10	218,803
		Blind Pipe				
6	23/17	Providing and installing P.V.C. blind pipe, B.S.S. Class 'D', in tubewell bore hole, including sockets and solvents and jointing with strainer, etc. complete.				
		e) 4" i/d (100 mm)	Per Rft	300.00	794.40	238,320
		Strainer				
7	23/13	Providing and installing Fiberglass reinforced Polypropelene (FRP) strainer of specifid wall thickness having slot size of 0.9mm to1.00mm in Tubewell bore hole i/c the cost of male/ female coupling with Nylone Strip, studs complete in all respect as approved and directed by the Engineer Incharge.				
		iii) 4" inch dia (5 mm thickness)	Per Rft	60.00	1,268.25	76,095
		Bail Plug				
8	23/14	Providing and installing P.V.C. Bail/End plug, in tubewell bore hole:-				

		b) B.S.S. Class `D'				
		v) 4" i/d (100 mm)	Each	2.00	155.75	312
		Pea Gravel				
9	23/19	Shrouding with graded pea gravel 3/8" to 1/8" around tubewell in borehole	Per Cft	736.00	168.00	123,648
10	23/18 i	Development and Testing (D&T) at 150 % of the rated capacity of tubewell for a minimum period of 72 hours. D&T will include pumping, disposal and backwashing as approved by the Engineer.	Per hour	72.00	1,475.20	106,214
11	23/16 a	Providing and installing PVC gravel makeup pipe 3" dia class 'B' in tube well bore hole for gravel feeding including sockets, solvents and jointing etc complete in all respect.	Per Rft	40.00	319.50	12,780
		Sluice Valve				
12	23/52	Providing and fixing heavy duty Gate valve of specified diameter and material for pressure rating PN-16 mde of Crane (USA), Hatersly (UK) or Scon (Pakistan) i/c the cost of all accessories flanges,nut/bolt and gaskit where required complete in all respect as approved and directed by the Engineer Incharge.				
		(b) Flange Ended Ductile Iron Valve				
		(ix) 4" dia	Each	1.00	40,404.00	40,404
		Air Valve				
13	23/34b	Providing and fixing, air valve 2½ (65mm) dia of B.S.S.quality and weight (complete with jointing material). Double	Each	1.00	11,458.05	11,458
		Non Return Valve				
14	23/54	Providing and fixing heavy duty Check valve of specified diameter and material for pressure rating PN-16 made of Crane (USA), Hatersly (UK) or Scon (Pakistan) i/c the cost of all accessories flanges,nut/bolt and gaskit where required complete in all respect as approved and directed by the Engineer Incharge				
		(b) Flange Ended Ductile Iron Valve				
		(ix) 4" dia	Each	1.00	30,132.00	30,132
		M.S Plate				
15	25/10	Fabrication of heavy steel work, with angle, tees, flat iron round iron and sheet iron for making trusses, girders, tanks, etc., including cutting, drilling, revitting, handling, assembling and fixing, but excluding erection in position.	100Kg	0.21	32,464.05	6,766
16	25/11	Erection and fitting in position iron trusses, staging of water tanks, etc.	100Kg	0.21	1,277.25	266
					Total. A	1,778,600
		NON SCHEDULE ITEMS				
17	NS	Grouting of top 100 ft of annular space between bore and pump housing casing with 1:1 cement sand mortar complete in all respect as per drawings and specifications (Sanitary seal)	Per Rft	100.00	500.00	50,000

18	NS	Taking samples and preserving of strata from borehole, from each strata change or as directed by Engineer including submission of strata charts along with results of strata analysis.	Each	10.00	1,000.00	10,000
		PUMP & MOTOR				
19	NS	Providing, installing, testing and lowering submersible pump of 0.25 cusecs capacity against a pumping head of 200 ft. including lowering of bowl assembly about 150 ft. column pipe/setting along with flow meter, pressure guage, CI. Bends tail pieces etc. upto duck foot bend, motor control unit and earthing, testing complete in all respects as per specifications, drawings and as approved by the Engineer incharge.	Each	1.00	1,800,000	1,800,000
					Total. B	1,860,000
		Total Amount Rs.			Total A+B	3,638,600

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DETAILED COST ESTIMATE

EXTERNAL WORK

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		BOUNDARY WALL				
		Cement Plaster				
1	11/9	Cement plaster 1:4 upto 20' (6.00 m) height:- 3/4" (20 mm) thick	100 Sft	50.39	4,379.60	220,688
		Pointing				
2	11/18/a	Cement pointing struck joints, on walls, upto 20' (6.00 m) height:- a) ratio 1:2	100 Sft	50.39	3,518.35	177,290
3	11/31	Extra cost of labour and material for red oxide pigment in cement pointing to match with the colour of bricks.	100 Sft	50.39	652.50	32,879
		Distempering				
4	11/23	Distempering:- iii) three coats	100 Sft	48.80	1,295.00	63,196
		Painting new surface:-				
6	13/5/d	d) Preparing surface and painting guard bars, gates of iron bars, gratings, railing (including standards, braces, etc.) and in similar open work:-				
		i) priming coat.	100 Sft	3.12	824.15	2,571
		ii) each subsequent coat of paint.	100 Sft	3.12	490.55	1,531
		Razor Wire				
7	26/46	Providing and fixing anti climb high security galvanized razor cut wire having double sharp four U-shaped pointed 0.5 mm thick (22mmx15 mm barbs) spaced @ 33 mm c/c clad over 2.5 mm dia high tensile Core wire making coil fencing of specified diameter @ 4" c/c fixed on 2'-3" high M/S angle iron post 1½"x1½"x3/16" embeded in base of PCC (1:2:4) (4"x4"x9") @ 4' apart i/c the cost of 2 No. bars 3/8" dia welded horizontally with angle iron posts , binding wire, painting of posts, etc. complete in all respects as approved and directed by the Engineer incharge.				
		(ii) 18 " diameter	Rft	610.00	499.85	304,909
		Total Rs. "A"				803,064

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DETAILED COST ESTIMATE

EXTERNAL WORK

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Tuff Paver				
		Jungle clearance				
8	3/47	Jungle clearance and removing within 100 ft. (30 m).				
		b) thick	1000Sft	21.85	507.95	11,099
		Borrow Earth				
9	3/5/i + 3/17	Earthwork in ordinary soil for embankment including ploughing and mixing with blade grade or disc harrow or other suitable equipment and compaction by mechanical means at optimum moisture content and dressing to designed section, complete in all respects:- 90% to 95% maximum modified dry density as determined according to AASHTO T-180 method-D including Transportation of earth.	1000Cft	11.70	17,222.30	201,501
		Sub Base Course				
10	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. (Pit run or bed run gravel from sargodha quarry to site, actual compacted depth shall be considered for payment)	100Cft	38.59	18,232.80	703,604
		Water Bound Macadam				
11	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 quarry to site, actual compacted depth shall be considered for payment)	100Cft	38.59	21,353.62	824,036
		136	100Cft	38.59	21,353.62	824,036

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DETAILED COST ESTIMATE

EXTERNAL WORK

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhupura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Tuff Paver				
12	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	Per Sft	11,695.00	189.85	2,220,296
13	3/32	Turfing slopes of banks or lawns with grass sods including ploughing, laying, setting and watering (Turf got from within a distance of 5 miles (8 Km.) and maintenance for 15 days).	100 Sft	5.70	1,693.10	9,651
		Total Rs. "B"				3,970,186
		Total Rs. "A+B"				4,773,249

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EXTERNAL WORK

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	BOUNDARY WALL						
	Cement Plaster						
1	Cement plaster 1:4 upto 20' (6.00 m) height:- 3/4" (20 mm) thick						
	Boundary wall	1	550.38		8.00	4,403.00	Sft
	Columns	53	1.50		8.00	636.00	Sft
					Total	5,039.00	Sft
					Total	50.39	%Sft
	Pointing						
2	Cement pointing struck joints, on walls, upto 20' (6.00 m) height:- a) ratio 1:2						
	Outer Walls	1	550.38		8.00	4,403.00	Sft
	Columns	53	1.50		8.00	636.00	Sft
					Total	5,039.00	Sft
					Total	50.39	%Sft
3	Extra cost of labour and material for red oxide pigment in cement pointing to match with the colour of bricks.						
					Total	50.39	%Sft
	Distempering						
4	Distempering:- iii) three coats						
	Boundary wall	1	610.00		8.00	4,880.00	Sft
					Total	4,880.00	Sft
					Total	48.80	%Sft
	Painting new surface:-						
6	d) Preparing surface and painting guard bars, gates of iron bars, gratings, railing (including standards, braces, etc.) and in similar open work:-						
	i) priming coat.					3.12	%Sft
	ii) each subsequent coat of paint.					3.12	%Sft

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EXTERNAL WORK

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Razor Wire						
7	Providing and fixing anti climb high security galvanized razor cut wire having double sharp four U-shaped pointed 0.5 mm thick (22mmx15 mm barbs) spaced @ 33 mm c/c clad over 2.5 mm dia high tensile Core wire making coil fencing of specified diameter @ 4" c/c fixed on 2'-3" high M/S angle iron post 1½"x1½"x3/16" embedded in base of PCC (1:2:4) (4"x4"x9") @ 4' apart i/c the cost of 2 No. bars 3/8" dia welded horizontally with angle iron posts , binding wire, painting of posts, etc. complete in all respects as approved and directed by the Engineer incharge.						
	(ii) 18 " diameter	1	610.00			610.00	Rft
	Tuff Paver						
8	Jungle clearance and removing within 100 ft. (30 m).						
	b) thick	1	21850	1.00		21,850.00	Sft
						Total	21.85 %oSft
	Borrow Earth						
9	Earthwork in ordinary soil for embankment including ploughing and mixing with blade grade or disc harrow or other suitable equipment and compaction by mechanical means at optimum moisture content and dressing to designed section, complete in all respects:- 90% to 95% maximum modified dry density as determined according to AASHTO T-180 method-D including Transportation of earth.						
	Total Area	1	11,695	1.00	1.00	11,695	Cft
						Total	11,695 Cft
						Total	11.70 %oCft
	Sub Base Course						

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EXTERNAL WORK

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
10	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. (Pit run or bed run gravel from sargodha quarry to site, actual compacted depth shall be considered for payment)						
		1	11,695	1.00	0.33	3,859.35	Cft
					Total	38.59	%Cft
	Water Bound Macadam						
11	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 quarry to site, actual compacted depth shall be considered for payment)						
		1	11,695	1.00	0.33	3,859.35	Cft
					Total	38.59	%Cft
	Tuff Paver						
12	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	1	11,695	1.00		11,695	Sft
13	Turfing slopes of banks or lawns with grass sods including ploughing, laying, setting and watering (Turf got from within a distance of 5 miles (8 Km.) and maintenance for 15 days).	1	570	1.00		570	Sft
					Total	5.70	%Sft
	140						

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DETAILED COST ESTIMATE

EXTERNAL WORKS

PLUMBING WORKS

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Excavation				
1	3/44	Excavation of trenches in all kinds of soil, except cutting rock, for watersupply pipelines upto 5 ft. (1.5 m) depth from ground level, including trimming, dressing sides, leveling the beds of trenches to correct grade and cutting pits for joints, etc. complete in all respects.	1000Cft	3.83	7,622.75	29,157
		PPRC Pipe				
2	23-47	Providing, laying, testing and commissioning of POLYPROPYLENE RANDOM COPOLYMER (PPRC) water supply pipe made of (Dadex/ Popular /Beta/ BBJ)with specified pressure rating PN (PRESSURE NOMINAL) and conforming to DIN8077-8078 code i/c cost of solvent, specials, making jharries complete in all respect as approved and directedby Engineer Incharge.(Internal / External Diameters mentioned).				
		b) PN-20 pipe				
		(iii) (1") 32 mm	Rft	75.00	106.90	8,018
		(iv) (1-1/4") 40 mm	Rft	120.00	161.30	19,356
		(vi) (2") 63 mm	Rft	150.00	377.95	56,693
		Valve				
3	23/46	Providing and fixing CP heavy duty brass Ball valve with CP handle of specified dia meter made of Faisal/ Sonex/ Master best quality or equivalent complete in all respect as approved and directed by the Engineer Incharge.				
		iii) 1" dia	Each	2.00	1,674.00	3,348
		vi) 2" dia	Each	2.00	2,550.00	5,100
		uPVC Pipe				
4	19/47	Providing, fixing, testing and commissioning of u-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				

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DETAILED COST ESTIMATE

EXTERNAL WORKS

PLUMBING WORKS

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Type (SDR 41/SN-4)				
		(vi) 6"(160 mm)	Rft	300.00	420.65	126,195
5	N.S	Providing and making Manhole 2'x2' internal size including 9" thick brick masonry (1:4), 1/2" th. Plastering (1:3) i/side, benching with PCC 1:2:4 4" th. with cement finish, including manhole cover, complete in all respects.	Each	2.00	17,749.77	35,500
		HDPE Tank				
6	19/51	Providing and hoisting vertical /horizontal type storage tank of required capacity made of rotationally molded from (HDPE), double ply polyethelene of approved manufacturer i/c cost of making connection for inlet/outlet pipe, float valve i/c all cost of specials & labour complete in all respect as approved and directed by the Engineer Incharge.	P.Gln	1,500	106.60	159,900
		Pump				
7	N.S	Providing, installing, Fixing and commisioning of reciprocating pump with a capacity of 30 USGPM against a total head of 90 ft Cast Iron, Cylinder & Piston Rod in S.S., Crank Shaft in super finish S.G. Iron, Gland Nut in Brass and abrasion proof silently working Valves fitted on easily Feat accessible S.S., ABS or Cast Iron Valve Plate with Brass Seats, All Gaskets are in Rubber and Rocker Rail in Galvanized Mild Steel with Insulation Bushes complete system installed upto satisfaction of engineer in charge, complete in all respects	Each	1.00	20,000	20,000
		Total Rs				463,266

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DETAILED COST ESTIMATE

EXTERNAL WORKS

PLUMBING WORKS

Sr. No.	Description	No	Length	Width	Height	Qty.	Unit
	Excavation						
1	Excavation of trenches in all kinds of soil, except cutting rock, for watersupply pipelines upto 5 ft. (1.5 m) depth from ground level, including trimming, dressing sides, leveling the beds of trenches to correct grade and cutting pits for joints, etc. complete in all respects.						
	Water supply Pipe+Drainage pipe	1	850.00	1.50	3.00	3,825.00	Cft
					Total	3.83	%oCft
	PPRC Pipe						
2	Providing, laying, testing and commissioning of POLYPROPYLENE RANDOM COPOLYMER (PPRC) water supply pipe made of (Dadex/ Popular /Beta/ BBJ)with specified pressure rating PN (PRESSURE NOMINAL) and conforming to DIN8077-8078 code i/c cost of solvent, specials, making jharries complete in all respect as approved and directedby Engineer Incharge.(Internal / External Diameters mentioned).						
	b) PN-20 pipe						
	(iii) (1") 32 mm	1	75.00			75.00	Rft
	(iv) (1-1/4") 40 mm	1	120.00			120.00	Rft
	(vi) (2") 63 mm	1	150.00			150.00	Rft
	Valve						
3	Providing and fixing CP heavy duty brass Ball valve with CP handle of specified dia meter made of Faisal/ Sonex/ Master best quality or equivalent complete in all respect as approved and directed by the Engineer Incharge.						
	iii) 1" dia	2				2.00	Nos.
	vi) 2" dia	2				2.00	Nos.
	uPVC Pipe						
4	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)						
	(vi) 6"(160 mm)	1	300.00			300.00	Rft

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DETAILED COST ESTIMATE

EXTERNAL WORKS

PLUMBING WORKS

Sr. No.	Description	No	Length	Width	Height	Qty.	Unit
5	Providing and making Manhole 2'x2' internal size including 9" thick brick masonry (1:4), 1/2" th. Plastering (1:3) i/side, benching with PCC 1:2:4 4" th. with cement finish, including manhole cover, complete in all respects.	2				2.00	Nos.
	HDPE Tank						
6	Providing and hoisting vertical /horizontal type storage tank of required capacity made of rotationally molded from (HDPE), double ply polyethelene of approved manufacturer i/c cost of making connection for inlet/outlet pipe, float valve i/c all cost of specials & labour complete in all respect as approved and directed by the Engineer Incharge.	1500				1,500.00	Gln

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**DETAILED COST ESTIMATE
EXTERNAL ELECTRICAL WORKS**

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
		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.	1000Cft	3.29	10,677.75	35,173
		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:-				
		(2) Type B (nominal mix 1: 1½: 3)	Cft	144.00	513.65	73,966
		Steel Work				
3	6/12/	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-60)	100Kg	3.60	31,769.80	114,371
4	24/13b.iii	Supply and erection of 3 core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only). (7.029)	Rft.	250.00	105.15	26,288

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DETAILED COST ESTIMATE
EXTERNAL ELECTRICAL WORKS

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
5	24/6i	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	1,050.00	185.85	195,143
6	24/12	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in pre-laid 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	400.00	117.70	47,080
		iv) 16 mm sq (7/0.064")	Rft	100.00	173.95	17,395
7	24/13	Supply and erection of copper conductor cables for service connection, in pre-laid pipe/G.I. wire / trenches, etc. (rate for cable only):-				
		a) PVC insulated, PVC sheathed twin core, 250/440 volts.				
		v) 7/1.12 mm (7/0.044")	Rft	250.00	160.20	40,050
		vi) 7/1.63 mm (7/0.064")	Rft	50.00	306.30	15,315
		c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-				
		vi) 10 mm (7/0.052")	Rft	100.00	523.85	52,385
		vii) 16mm (7/0.064")	Rft	50.00	642.90	32,145
		viii) 25 mm (19/0.052")	Rft	100.00	1,204.55	120,455
8	24/68	Supplying, installation testing and commissioning of Octagonal shape electric street light pole, made of hot dipped 4.5 mm thick (7 SWG) galvanized steel ,tapered 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 pre-laid concrete foundation, foundation will be paid additionally as approved and directed by the Engineer Incharge.				
		a) Single Arm				
		(i) 10 mtr height	Each	4.00	106,222.60	424,890
		b) Double Arm				
		(i) 10 mtr height	Each	2.00	109,864.60	219,729

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Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
9	24/69	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming to IP 65, Philips/Osram/Thorn with corrosion resistant die casted aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection i/c the cost of all accessories/components required for proper operation , fully flexible for future upgradation and easy replacements for maintenance purposes,bucket elevator charges as approved and directed by the Engineer Incharge.				
		c) 120 Lm/Watt				
		(v) 90 Watt with 10800 Lumens	Each	8.00	51,675.00	413,400
10	24/77	Supply and erection of electric energy meter, including meter testing fee, etc.				
		b) three phase, 4 wires:				
		iii) 3x80 Amp, 400 volts	Each	1.00	14,659.25	14,659
11	24/86	Suppling,Installation and comissioning of MCB (Miniature Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY /SIEMEN GERMAN/TERASAKI JAPAN/ ABB SWITZERLAND in prelaid DBs and Panels i/c the cost of screws,necessary wire complete in all respect as approved and directed by the Engineer Incharge.				
		a) Single Pole				
		(ii) 6-40 Amp (6 KA)				
		DB Shed-1&2	Each	4.00	1,101.75	4,407
		DB Shed-3&4	Each	3.00	1,101.75	3,305
		DB-Office&Workshop	Each	12.00	1,101.75	13,221
		b) Double Pole				
		(ii) 6-40 Amp (6 KA)	Each			
		DB Shed-1&2	Each	1.00	3,351.75	3,352
		DB Shed-3&4	Each	1.00	3,351.75	3,352
		LCP Ext	Each	3.00	3,351.75	10,055
		MPB	Each	3.00	3,351.75	10,055
		c) Tripple Pole				
		(iii) 6-63 Amp (10 KA)	Each			
		MPB & All DBs	Each	8.00	8,433.00	67,464

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**DETAILED COST ESTIMATE
EXTERNAL ELECTRICAL WORKS**

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
12	24/88	Supplying, Installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN/ABB SWITZERL(with adjustable Thermal-Magnetic Trip) in prelaid DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge				
		a) Tripple Pole With Adjustable Thermal-Magnetic Trip /Electronic Trip (60-100%)				
		(i) 25-100 Amp(25 KA)				
		MPB	Each	1.00	26,853.00	26,853
13	24/90	P/F wall mounted DB (Distribution Board) made with 16SWG Sheet (Recessded/Surface mounted Type), Powder coated Paint, i/c the cost of Lock, Indication lights,Thimble, Copper Comb, Wiring, Netural & Earth Bar, Door Earthing, Digital Voltmeter, Digital Ammeter,Volt Selector Switch,Ammeter selector switch,Current Transformers and Controles Complete in all respect as approved and directed by the Engineer Incharge (Breakers will be Paid Separately).				
		(a) 6" deep				
		(i) 20~60A (18"x24"x6")				
		DB Shed-1&2	Cft	1.50	18,634.45	27,952
		DB Shed-3&4	Cft	1.50	18,634.45	27,952
		DB-Office&Workshop	Cft	1.50	18,634.45	27,952
		LCP Ext	Cft	1.50	18,634.45	27,952
		MPB	Cft	1.50	18,634.45	27,952

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EXTERNAL ELECTRICAL WORKS**

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
14	25/92	P/F floor mounted ATS (Auto Transfer Switch) panel board , fabricarted with 14S WG M.S sheet (Indoor Type) duly painted with 100 microns powder coated paint in approved colour , front access ,extendable,insulation class of 600 volts IP-44, incoming & outgoing connections from bottom with flexible copper cable suitable for 415 VAC, 3-phase 4 wire, 50 HZ TPN&E system having rated service, short circuit breaking capacity at 400VAC conforming to IEC-947-2 to accomodate given no of circuit components, instruments & accessories,assembled & wired with Electrolitic Copper bus bars at 50 deg and cables duly cleaned down to bare shining metal phosphate, manual change Over i/c the cost of Lock, Indication lights,thimbles, Copper Comb, Wiring, Netural & Earth Bar,CTs,Contactors,Relays, Door Earthing, Brass glands complete in all respects as approved and directed by the Engineer Incharge. (Breakers will be paid additionally)				
		a) 1.00 Ft deep				
		(i) 15-40 KVA	Each	1.00	789,790.75	789,791
15	24/105/ii	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				
		(ii) 15 KVA	Each	1.00	203,427.70	203,428

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**DETAILED COST ESTIMATE
EXTERNAL ELECTRICAL WORKS**

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
16	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	6.00	9,592.65	57,556
17	24/72	Bonding to earth with wire on surface, including cost of wire, clamps, thimbles, etc.				
		a) G.I. wire:				
		i) 8 SWG	Per Rft.	100.00	23.25	2,325
Sub Total Scheduled Items: (A)						3,177,365
18	N.S	Supply at site brand new 25KVA Prime Power Diesel Generator with fuel tank for 8 hour operation and Sound and Weather Proof canopy installed and commission at site on RCC PAD as per Manufacturer specifications to bear the Load of 25KVA DGSet complete in all respect, Loding and unloading on site to install on PAD and Control wires from ATS panel to DG Set for smooth operation including all necessary accessories required to complete this job as per enigneer incharge instructions.	Set	1.00	2,000,000	2,000,000
Total Cost (Part B)					Rs.	2,000,000
Grand Total (Part A + Part B)					Rs.	5,177,365

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DETAILED COST ESTIMATE

ENVIRONMENTAL MITIGATION COST

Sr No	Description	Unit	Quantity	Unit Rate (Rs.)	Amount Rs.
	Labor Safety				
1	Face Masks (3 PLY)	Nos	40.00	500.00	20,000
2	Safety Gum Shoes	Nos	25.00	1,000.00	25,000
3	Hand Gloves	Nos	25.00	1,000.00	25,000
4	First Aid Box (Including essential Medicine)	Nos	2.00	5,000.00	10,000
5	Safety Hard Helmets MSA	Nos	25.00	2,000.00	50,000
6	Safety Goggles	Nos	25.00	500.00	12,500
7	Reflective Safety Vests	Nos	25.00	500.00	12,500
8	Infrared Thermometer (Benetech GM-2200 OR equivalent)	Nos	1.00	45,000.00	45,000
				Sub Total	200,000
	Working Site Safety				
1	Reflective Safety Signs Boards	Nos	10.00	10,000.00	100,000
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	2,500.00	25,000
4	Reflective Safety Barricading Tape	Nos	50.00	1,500.00	75,000
5	Emergency Portable Light	Nos	3.00	5,000.00	15,000
6	Solid Waste Collection Drums	Nos	2.00	5,000.00	10,000
7	Fire Extinguishers DCP	Nos	2.00	5,000.00	10,000
				Sub Total	247,000
	Others				
1	Pole Hanging Waste Bins	Nos.	5.00	10,000	50,000
2	Water Sprinkling	L.S	1.00	200,000	200,000
3	*Digital Sound Level Meter	L.S	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)	L.S	1.00	300,000	300,000
5	Hiring of Environmentalist (03 Months)	L.S	1.00	250,000	250,000
6	Uprooting & Replation Cost	Nos.	80.00	2,500	200,000
7	Labor Campsite Management	L.S	1.00	200,000	200,000
				Sub Total	1,250,000
	Total Amount (Rs)				1,697,000

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

DETAILED COST ESTIMATE

DISMANTLING WORK

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
1		Room				
		Dismantling				
1	4/13	Dismantling brick work in lime or cement mortar.	100Cft	10.90	4,317.45	47,066
2	4/20	Dismantling cement concrete reinforced, separating reinforcement from concrete, cleaning and straightening the same	100Cft	3.40	18,285.70	62,171
3	4/32	a) Removing door with chowkat.	No.	1.00	438.00	438
4	4/32	b) Removing windows and sky lights with chowkat.	No.	2.00	341.50	683
5	4/19	c) Dismantling cement concrete 1:2:4 plain.	100Cft	1.70	11,174.60	18,997
					Total Rs.	129,355
2		Room				
		Dismantling				
1	4/13	Dismantling brick work in lime or cement mortar.	100Cft	6.12	4,317.45	26,423
2	4/20	Dismantling cement concrete reinforced, separating reinforcement from concrete, cleaning and straightening the same	100Cft	1.28	18,285.70	23,406
3	4/32	a) Removing door with chowkat.	No.	1.00	438.00	438
4	4/32	b) Removing windows and sky lights with chowkat.	No.	2.00	341.50	683
5	4/19	c) Dismantling cement concrete 1:2:4 plain.	100Cft	0.64	11,174.60	7,152
					Total Rs.	58,101

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

DETAILED COST ESTIMATE

DISMANTLING WORK

CIVIL WORK

Sr. No.	2nd Bi-Annual-2022 (July to Dec) Sheikhupura	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
3		Well				
		Dismantling				
1	4/13	Dismantling brick work in lime or cement mortar.	100Cft	7.84	4,317.45	33,865
2	4/20	Dismantling cement concrete reinforced, separating reinforcement from concrete, cleaning and straightening the same	100Cft	2.63	18,285.70	48,000
3	4/32	a) Removing door with chowkat.	No.	1.00	438.00	438
4	4/32	b) Removing windows and sky lights with chowkat.	No.	2.00	341.50	683
5	4/19	c) Dismantling cement concrete 1:2:4 plain.	100Cft	1.31	11,174.60	14,667
					Total Rs.	97,652
					Total Rs. (1+2+3)	285,108

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

DISMANTLING WORK
CALCULATION OF QUANTITIES
CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Room						
	Dismantling						
1	Dismantling brick work in lime or cement mortar.						
		1	114	0.75	11.00	940.50	Cft
		1	114	1.13	0.50	64.13	Cft
		1	114	1.50	0.50	85.50	Cft
					Total	1,090.13	Cft
					Total	10.90	%Cft
2	Dismantling cement concrete reinforced, separating reinforcement from concrete, cleaning and straightening the same						
		1	40.00	17.00	0.50	340.00	Cft
					Total	3.40	%Cft
3	a) Removing door with chowkat.	1				1.00	No
4	b) Removing windows and sky lights with chowkat.	2				2.00	No
5	c) Dismantling cement concrete 1:2:4 plain.	1	40.00	17.00	0.25	170.00	Cft
					Total	1.70	%Cft
	Room						
	Dismantling						
1	Dismantling brick work in lime or cement mortar.	1	64	0.75	11.00	528.00	Cft
		1	64	1.13	0.50	36.00	Cft
		1	64	1.50	0.50	48.00	Cft
					Total	612.00	Cft
					Total	6.12	%Cft
2	Dismantling cement concrete reinforced, separating reinforcement from concrete, cleaning and straightening the same						
		1	16.00	16.00	0.50	128.00	Cft
					Total	1.28	%Cft
3	a) Removing door with chowkat.	1				1.00	No

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

DISMANTLING WORK

CALCULATION OF QUANTITIES

CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
4	b) Removing windows and sky lights with chowkat.	2				2.00	No
5	c) Dismantling cement concrete 1:2:4 plain.	1	16.00	16.00	0.25	64.00	Cft
						Total	0.64
							%Cft
	Well						
	Dismantling						
1	Dismantling brick work in lime or cement mortar.	1	82	0.75	11.00	676.71	Cft
		1	82	1.13	0.50	46.14	Cft
		1	82	1.50	0.50	61.52	Cft
						Total	784.36
							%Cft
						Total	7.84
2	Dismantling cement concrete reinforced, separating reinforcement from concrete, cleaning and straightening the same						
		1	525.00	1.00	0.50	262.50	Cft
						Total	2.63
							%Cft
3	a) Removing door with chowkat.	1				1.00	No
4	b) Removing windows and sky lights with chowkat.	2				2.00	No
5	c) Dismantling cement concrete 1:2:4 plain.	1	525.00	1.00	0.25	131.25	Cft
						Total	1.31
							%Cft

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

EARTH WORK LEAD CHART

Rate Analysis Road- 1

Sr. No.	#REF!	Description	Lead	Unit.	Qty	Rate (Rs)	Amount (Rs)
1	3/5/i	Earthwork in ordinary soil for embankments lead upto 100 ft. (30 m), including ploughing and mixing with blade grade or disc harrow or other suitable equipment, and compaction by mechanical means at optimum moisture content and dressing to designed section, complete in all respects:-	1	1000Cft	1	9,527.90	9,527.90
		i) 95% to 100% maximum modified AASHO dry density.					
2	3/17a.b.c	Carriage					
		upto ¼ mile (400 m).	1	1000 Cft	1	4,248.00	4,248.00
		for every 330 ft. (100 m) additional lead or part thereof, beyond ¼ mile (400 m) upto one mile. (1.6 Km.)	12	1000 Cft	1	47.50	570.00
		for every ¼ mile (400 m) additional lead or part thereof, beyond one mile (1.6 Km.) upto 5 mile (8 Km).	8.5	1000 Cft	1	338.40	2,876.40
		for every ½ mile (800 m) additional lead or part thereof, beyond 5 miles (8 Km).	0	1000 Cft	1	320.35	-
		Total Amount I,000 (Rs.).					17,222.30
		Total Amount Per Cft					17.22

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. (Pit run or bed run gravel from sargodha quarry to site, actual compacted depth shall be considered for payment)							
Crush Stone							
Sr. No.	2nd BI-Annual-2022 (July to Dec) Sheikhpura	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs)
1		Material					
	18-3 a(i)	Pit run or bed run gravel.	100 Cft	1	1	6,621.00	6,621.00
2		Carriage					
	1/1	1st KM	100 Cft	1	1.2	299.40	359.28
		2nd KM	100 Cft	1	1.2	145.25	174.30
		3rd KM	100 Cft	1	1.2	116.85	140.22
		4th KM	100 Cft	1	1.2	85.30	102.36
		5th KM	100 Cft	1	1.2	80.20	96.24
		6th KM	100 Cft	1	1.2	79.00	94.80
		7th KM	100 Cft	1	1.2	74.25	89.10
		8th KM	100 Cft	1	1.2	73.50	88.20
		9th KM	100 Cft	1	1.2	69.55	83.46
		10th KM	100 Cft	1	1.2	65.70	78.84
			From 11 km to 200 km	100 Cft	150.00	1.2	57.25
		Total.					18,232.80
		Total Amount per 100 Cft					18,232.80
		Total cast for Per Cft					182.33

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

Sr. No.	2nd BI-Annual-2022 (July to Dec) Sheikhpura	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 quarry to site, actual compacted depth shall be considered for payment)	100 Cft		1	13,919.85	13,919.85
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 contractor.					
		1st KM	100 Cft	1	1.22	255.30	311.47
		2nd KM	100 Cft	1	1.22	118.75	144.88
		3rd KM	100 Cft	1	1.22	89.50	109.19
		4th KM	100 Cft	1	1.22	61.15	74.60
		5th KM	100 Cft	1	1.22	56.45	68.87
		6th KM	100 Cft	1	1.22	55.35	67.53
		7th KM	100 Cft	1	1.22	51.05	62.28
		8th KM	100 Cft	1	1.22	50.40	61.49
		9th KM	100 Cft	1	1.22	46.90	57.22
		10th KM	100 Cft	1	1.22	43.40	52.95
		From 11 km to 200 km	100 Cft	150.00	1.22	35.10	6,423.30
		Total.					21,353.62
		Total Amount per 100 Cft					21,353.62
		Total cast for Per Cft					213.54

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

Rate Analysis Road - 4

Manhole Construction 2 x 2 Ft										Unit	Each
Sr. No.	2nd BI-Annual-2022 (July to Dec) Sheikhpura	Description	No.	Length	Width	Height	Qty	Unit	Rate (Rs)	Amount (Rs)	
1	3-42-i	Excavation. (0 to 7 feet depth)	1	3.50	3.50	3.00	36.75	1000 Cft	11,740.40	431.46	
2	6-3-b	Cement concrete brick or stone ballast (1:4:8)	1	3.50	3.50	0.33	4.04	100 Cft	24,796.45	1,002.40	
3	6-5-f	Base slab	1	3.50	3.50	0.25	3.06	100 Cft	38,178.90	1,169.23	
4	6-6-(a)(i)	Top ring Beam Ratio 1:2:4	1	3.500	3.50	0.33	4.04	100 Cft	457.75	1,850.45	
5	6/12 (c)	Steel work		3.00 kg per cft			14.15	kg	31,784.50	4,497.11	
6	7-7-i	Brick Work Ratio 1:3 Step - 1	1	11.00	0.75	2.00	16.50	100 Cft	32,796.10	5,411.36	
7	11-8-c	3/4" thick Plaster Ratio 1:3 (External)	1	11.00		2.00	22.00	100 Sft	4,589.85	1,009.77	
8	11-18-a	Cement pointing struck joints, on walls (1:2) (Internal)	1	8.00		2.00	16.00	100 Sft	3,518.35	562.94	
9	13-9-i	Bitumen Coating on External Plaster	1	11.00		2.00	22.00	100 Sft	2,148.00	472.56	
10	19-40-ii	Supply and fitting of cast iron manhole cover ii) 45 cm (18") dia	1				1.00	Each	1,342.50	1,342.50	
Grand Total.									17,750		

ANNEXURE C
ECONOMIC BENEFITS

Economic Benefits

The construction of parking shed can be beneficial for the community in multiple ways. The Economic benefits of a parking shed are given below:

- A safe yard is provided for SWM vehicles in mechanized form.
- Parking shed helps to save a lot of energy. Car parking shade can be very beneficial to save a lot of energy by protecting it from the heat sun. The shades can allow maintaining a cooler environment for the vehicles and also reduces the amount of energy required to cool down from the heat of the sun.
- The parking shed helps in prevention of vehicles from rusting, sunlight, weather conditions, etc.
- In-house workshops are provided for the repairing and maintenance of vehicles.
- The parking shed provides safety to SWM vehicles.
- The parking shed helps in prevention from heating up of engines.

Annexure-D

Gant Chart

**TENTATIVE PROJECT IMPLEMENTATION SCHEDULE FOR CONSTRUCTION OF PARKING SHED FOR SWM MACHINERY
YEAR (2022-2023)**

Sr.No	Activity Name	AUG -22			SEP -22			OCT -22			NOV -22			DEC -22			JAN-23		
1	Boundary wall & Gate	■	■	■	■	■													
2	Building & Allied Structures				■	■	■	■	■	■	■	■	■	■					
3	Parking Shed								■	■	■	■	■	■	■				
4	Workshop & Washing area									■	■	■	■	■	■	■			
5	Walkways & Pathways													■	■	■	■	■	

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 document² of sub-projects at planning stage and will be duly signed by the relevant ESFP and endorsed by the respective DPO-ESM

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

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

Name of ESFP: *M. Asim*

Name of MC: *Mundkey*

Sub-Project Sector: *Solid waste Management*

Sub-Project Title: *Parking area for Solid waste machinery old, dowlkey Road Mundkey*

Sub-Project Categorization:

E-1		S-1
E-2	✓	S-2
E-3		S-3 ✓

Date of Screening:

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		X	
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project ³	✓	X	<i>60 meters away canal from the site</i>
Estuarine		X	

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

³ Ibid.

Screening Questions	Yes	No	Remarks
Special area for protecting biodiversity		X	
Buffer zone of protected area		X	
Mangroves Forest		X	
Man-made forest /game reserve, orchid /crops or any other area of environmental importance	✓	.	orchid
Socially sensitive /important areas/communities/people?			
PCRs and or any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, <i>Gordwarah</i> , Temple, Fort, archeological/historical site) within 100 m of the proposed subproject ⁴		X	Not observed.
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project ⁵		X	Not Observed
Any graveyard of local community (Muslims or Christians)		X	"
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)?		X	"
Already existing infrastructure ⁷ (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		X	"
B. Potential Environmental Impacts			
Will the Sub-Project cause...			
1. Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?	✓	X	
2. Cutting of trees?	✓		Approx 80% shrubs will be relocated
3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?		✓	cutting of trees will cause disruption.
4. Generation of wastewater during construction or operation?		X	Safe disposal of waste water will be ensured.
5. Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of waste water?		X	Not anticipated.

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.

Screening Questions	Yes	No	Remarks
6. Alteration of surface water hydrology of waterways resulting in increased sediment in streams/ rivers or due to increased soil erosion at construction site?		X	
7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		X	
8. Over pumping of ground water, leading to salinization and ground subsidence?		X	
9. Serious contamination of soil due to construction works?		X	Noi anticipated.
10. Aggravation of solid waste problems in the area?		X	
11. Generation of hazardous waste?		X	No hazardous waste generation is anticipated.
12. Increased air pollution due to sub-project construction and operation?	✓	X	During construction air pollution is anticipated.
13. Noise and vibration due to sub-project construction or operation?	✓	X	During construction impact is expected.
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/liquid?	✓	X	may have impact if disposal improper.
15. Use of chemicals during construction?		X	
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)?			Noi anticipated.
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)		X	4
3. Disproportionate impacts on the poor, women and children and or other vulnerable groups ⁸ (mentioned above)?		X	1
4. Temporary impediments in movements of people/transport and animals?		X	11

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

Screening Questions	Yes	No	Remarks
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)?		X	No such impact is anticipated.
6. Social conflicts if workers from other areas are hired?		X	There is no such impact anticipated.
7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?		X	
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?		X	Negligible impact, otherwise labour will ensure use of proper PPEs.
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?		X	Not anticipated. Proper signage will be used at site.
10. Any impact on sensitive receptors (mentioned above)		X	
11. Any impact of negative nature on already existing infrastructure including public amenities		X	

Prepared By: *M. M. ASIM*
Name: 01/3/21 Mr. M. ASIM.
Signature:
Date:

Endorsed By: *Lehmina Krawi*
Name:
Signature: *[Signature]*
Date: 1/3/21.

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	<p>Camp sites for construction workers are the important locations that have significant impacts such as health and safety hazards on labor/workers</p> <p>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.</p>	<p>The Contractor shall:</p> <p>Locate the construction camps at areas which are acceptable from environmental, cultural or social point of view.</p> <p>Consider the location of construction camps away from communities in order to avoid social conflict with the surrounding communities.</p> <p>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.</p> <p>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</p>
Construction Camp Facilities	<p>Lack of proper infrastructure facilities, such as housing, water supply and sanitation facilities will generate social issues and impacts on health and environment.</p>	<p>Contractor shall provide the following facilities in the campsites:</p> <p>Adequate ventilation facilities</p> <p>Safe and reliable drinking water supply for personal hygiene (washing or bathing)</p> <p>Adequate housing for all workers</p> <p>Safe and reliable drinking water supply. Water supply from tube wells that meets the Punjab Environment Quality Standards</p> <p>Hygienic sanitary facilities, hand washing facilities and sewerage system.</p> <p>The toilets and domestic waste water will be collected</p>

Activity/ Impact Source	EHS Concerns/issues	Mitigation Measures/ Management Guidelines
		<p>through a common sewerage.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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</p> <p>Provide in-house community/common entertainment facilities. Dependence of local entertainment outlets by construction camps to be discouraged/prohibited to the extent possible.</p>
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	<p>The Contractor shall:</p> <p>Ensure proper collection and disposal of solid wastes within the construction camps</p> <p>Insist waste separation by source; organic wastes in one pot and inorganic wastes in another pot at household level.</p> <p>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.</p> <p>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</p>

Activity/ Impact Source	EHS Concerns/issues	Mitigation Measures/ Management Guidelines
		<p>contamination.</p> <p>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.</p> <p>All solid waste will be collected and removed from the work camps and disposed in approval waste disposal sites.</p>
Fuel supplies for cooking purposes	Illegal sourcing of fuel wood by construction workers will impact the natural flora and fauna	<p>The Contractor shall:</p> <p>Provide fuel to the construction camps for their domestic purpose, in order to discourage them to use fuel wood or other biomass.</p> <p>Make available alternative fuels like natural gas or kerosene on ration to the workforce to prevent them using biomass for cooking.</p> <p>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.</p>
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.	<p>The Contractor shall:</p> <p>Provide adequate health care facilities within construction sites.</p> <p>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.</p> <p>Provide ambulance facility for the laborers during emergency to be transported to nearest hospitals and telephone/mobile facility to call for Emergency Services 1122.</p> <p>Initial health screening of the laborers coming from outside areas</p> <p>Train all construction workers in basic sanitation and health care issues and safety matters, and on the specific hazards of their work</p> <p>Provide HIV awareness programming, including STI (sexually transmitted infections) and HIV information, education and communication for all workers on regular basis</p> <p>Provide adequate drainage facilities throughout camps to ensure that disease vectors habitats (stagnant water bodies, puddles) do not form.</p> <p>Regular mosquito repellent sprays in monsoon.</p> <p>Carryout short training sessions on best hygiene practices to</p>

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

Activity/ Impact Source	EHS Concerns/issues	Mitigation Measures/ Management Guidelines
		<p>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).</p> <p>Not make false promises to the laborers for future employment in O&M of the project.</p>

Table 2: Cultural and Religious Issues

Activity/ Impact Source	Environmental Impacts	Mitigation Measures/ Management Guidelines
Construction activities	Disturbance in performance of religious activities	<p>The Contractor shall:</p> <p>Provide separate prayer facilities (men and women) to the construction workers.</p> <p>Show appropriate and non-biased behavior with all construction workers irrespective of their religious or cultural affinities</p> <p>Allow the workers to participate in praying during construction time</p> <p>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</p> <p>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</p>

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,	<p>The Contractor shall:</p> <p>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</p> <p>Provide the workers with a safe and healthy work environment, taking into account inherent risks in its particular construction activity and specific classes of</p>

Activity/ Impact Source	Impacts	Mitigation Measures/ Management Guidelines
	<p>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.</p>	<p>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</p>
	<p>Child and pregnant labor</p>	<p>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 .</p>

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	<p>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</p> <p>Document and report occupational accidents, diseases, and incidents.</p> <p>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.</p> <p>Identify potential hazards to workers, particularly those that may be life-threatening and provide necessary preventive and protective measures.</p> <p>Provide awareness to the construction drivers to strictly follow the driving rules</p> <p>Provide adequate lighting in the construction area and along the roads</p>
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.	<p>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.</p> <p>Contractor should provide bottled drinking water facilities to the construction workers at all the construction sites.</p>
Other issues	Potential risks on health and hygiene of construction workers and general public	<p>The Contractor shall follow the following management measures to reduce health risks to the construction workers and nearby community:</p> <p>Drainage Management</p> <p>Air Quality Management</p> <p>Noise and Vibration Management</p> <p>Road Transport and Road Traffic Management</p>
Trainings	Lack of awareness and basic knowledge in health care among the construction workforce, make them susceptible to potential diseases.	<p>The Contractor shall:</p> <p>Train all construction workers in basic sanitation and health care issues (e.g., how to avoid COVID-19, malaria and transmission of sexually transmitted infections (STI) HIV/AIDS.</p> <p>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</p>

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

Activity/ Impact Source	Impacts	Mitigation Measures/ Management Guidelines
		<p>hazards, safe work practices, and emergency procedures for fire, evacuation, and natural disaster, as appropriate.</p> <p>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.</p> <p>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.</p>

Table 4: Summary of Recommended Personal Protective Equipment According to Hazard⁴

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