

Local Government & Community Development Department

Punjab Cities Program Construction of SWM Parking Area in Jhang City

PC-I

EstimatedCostMillionPKR 89.45

February 2023

Municipal Committee Jhang



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

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Punjab Cities Program

PC-I Form for Construction of SWM Parking Shed in Jhang City

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PC-I FORM

for

Construction of SWM Parking Area in Jhang 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 Jhang city				
2.Location	Jhang city serves as headquarters of Jhang District, and is located in the central portion of the Punjab province.The city is situated at 72°-20' East and 31°-16' north at a distance of 92 km from Faisalabad, and 252 km from Lahore. The city is located on the east bank of Chenab River.			
	Location map of the city is attached in Annexur	·e-A		
3. Authorities responsible	e for			
i- Sponsoring	Government of the Punjab (through World Bank	funding)		
ii- Execution	Municipal Committee Jhang			
iii- Operation and Maintenance	Municipal Committee Ihang			
iv-Concerned Provincial Department	Local Government and Community Development Department			
4a.Plan Provision				
 i. If the project is included in medium term/five year plan, 	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.			
specify actual	Total loan from World Bank	USD 200.00 million		
allocation	Component-1 Infrastructure development USD 180.00 million (PforR)			
	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 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	PKR. 1329.90 million
5. Project objectives and its relationship with sector objectives	 Sector Objectives The sector objectives include: Provision of efficient and effective municipality services to the masses. Community development through improving basic infrastructure. Clean and green environment for better living standards. Effective use of land through master planning of urban areas. Social uplifting and cohesion through provision of public open spaces and play grounds. Ease in mobility and communication. Cost efficient Solid Waste Management through waste to energy initiatives. Capacity building of Local Governments. Efficient Road network to make areas easily accessible Objectives of the Project 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. Scope of the work for this particular project includes the construction of Parking shed for SWM Machinery.
	The Project has the following objectives;1. 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.
	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.
6. Description, justification.	ion, technical parameters and technology transfer aspects
	 As per PLGA-12019 Urban Local Governments (ULGs) are basically and wholly responsible for delivery of the municipal services with a service delivery level which should satisfy the consumers and citizen. Unfortunately, the prevalent conditions of the service delivery are not encouraging in the city. The major reason of unsatisfactory service delivery is the lack of proper
	maintenance of the municipal infrastructure in all sectors causing consumer dissatisfaction at one end and degradation of the infrastructure on the other end apart from very low revenue recovery as the consumers are reluctant to pay because of deteriorated service delivery.
	MC Jhang 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 Jhang for provision of better solid waste management facilities to the people of Jhang.
	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 deterioration and compromise its safety that will lead to non- sustainability of solid waste management.

ii. Description of the	The project comprises of construction of Parking Area for solid waste				
subproject-	management and other machinery and equipment possessed by MC				
	over an area of 11.43 kanals in the city. Detail of the components of				
	Parking Area have been given in the table be	elow.			
iii Detail of civil works,	The detail of Parking Shed for SWM Machin				
equipment &	city, is given below:	·			
machinery and other	Location: Jhang City Road near Hilal-e-Ahmar Hospital				
physical facilities	S				
	N. Detail of wo	rks			
	1 Boundary wall and Entrance Gate				
	2 Sheds for vehicles with Steel Column	s and Aluzinc sheeting			
	$\frac{2}{2}$ at the top				
	3 Administrative Building				
	4 Workshop with tool room and toilet				
	5 Open Service Station				
	6 Parking aprons				
	7 Guard room				
	8 Silt Holding Tank & Septic Tank				
	9 External Water supply, Sewerage and	Drainage system			
iv Indicate governess issues of the sector relevant to the project and strategy to resolve them	 MC Jhang 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	The sum	mary of the works included in the project is give	en below;
Project			
			Cost
	S. No	Item of works	(PKR
			million)
	1	Admin Block	6.362
	2	Guard Room	0.501
	3	Workshop	3.669
	4	Parking Shed (Size 105' X 32')(2 Nos.)	24.637
	5	Parking Shed (Size 60' X 32')	7.119
	6	Parking Shed (Size 108' X 16')(2 Nos.)	11.450
	7	Washing Pit	1.878
	8	External Work (Boundary Wall + Tuff Paver + Lawn)	17.567
	9	Ejector Pump	0.266
	10	External Water Supply System	0.727
	11	External Sewerage System	0.788
	12	Septic Tank	0.168
	13	Drainage System	0.284
	14	Silt Holding Tank	0.225
	15	External Electrical Work	3.400
	16	Environmental and Social Mitigation Cost	0.112
		Total cost	79.162
		Contingencies @2%	1.583
		Punjab Sales Tax @5%	3.958
		Price Escalation @6%	4.74
		Grand Total	89.45
	See An	nexure-B for details	
- Indicate date of estimation of the project cost	The proj 2023	ect estimates have been framed during the month	n of February
i- Basis of determining the estimates be provided.	actually (MRS) i Annual o For item	estimates have been framed on the basis of bil required at site and unit rates from the Market assued by the Government of Punjab (District of year 2023). s not available in the MRS, the same have been a ng market rates.	t Rate System Jhang 1st B

	Phy	sical phasing of the project is included in	the follow	ving table:
iii- Provide year wise estimation of physical	S. 7	# Item of works	Year 2022-2023	
activities	1	Boundary wall and Entrance Gate		100%
	2	2 Sheds for vehicles with Steel Columns a		100%
	2	Aluzinc sheeting at the top		
	3	Administrative Building		100%
	4	4 Workshop with tool room and toilet5 Open Service Station		100%
	5			100%
	6	Parking aprons		100%
	7	Guard room		100%
	8	Silt Holding Tank & Septic Tank		100%
	9	External Water supply, Sewerage and system	Drainage	100%
iv- Phasing of capital cost on the basis of each		sing of capital cost of the project is inclue figures are in million rupees)	ded in the	following table:
item of work.	S. #	Items of Shed	Total co (Million]	
	1	Admin Block	6.362	6.362
	2 Guard Room 0.501		0.501	
	3	Workshop	3.669	3.669
	4	Parking Shed (Size 105' X 32') (2 Nos.)	24.637	7 24.637
	5	Parking Shed (Size 60' X 32')	7.119	7.119
	6	Parking Shed (Size 108' X 16') (2 Nos.)	11.450) 11.450
	7	Washing Pit	1.878	1.878
	8	External Work (Boundary Wall + Tuff Paver + Lawn)	17.567	7 17.567
	9	Ejector Pump	0.266	0.266
	10	External Water Supply System	0.727	0.727
	11	External Sewerage System	0.788	
	12	Septic Tank	0.168	
	13	Drainage System	0.284	
	14	Silt Holding Tank	0.204	
	15	External Electrical Work	3.400	
	16			
	10	Environmental & Social Mitigation Cost	0.112	0.112

		PST, contingencies and Price	10.00	10.00
	Escalation 10.29		10.29	10.29
	Total 89		89.45	89.45
8-Annual recurrent cost after completion of the project and source of financing	(See	t in Million = Rs. 1.091 e details in Annexure-1)		
9- Demand & Supply		xisting supply level		
Analysis i- Existing Capacity of services	R ● M	here is no existing parking facility a esultantly the vehicles are parked at open IC Jhang is unable to protect the solid ther MC vehicles because of non-av	n spaces with no waste transpor	protection. tation and
services			anability of a	ppropriate
ii- Projected Demand for 10 years	The trar •The com elem cons envi stree park oper SW •The effici leve •Ma the	 parking area. The Parking area is required to park and protect the solid waste transportation and other MC vehicles. 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 Jhang 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 46 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 		
 iii- Capacity of other similar projects being implemented in public/private sector 	No other project of this nature is being implemented in public as well as private sector because of funding constrains in the Unit.			
iv- Supply and Demand gaps	As explained above there is no parking area in Jhang City for solid waste transportation and other MC vehicles. So there is a large gap between the supply and demand.			

v-Designed capacity and	1)-Table showing details of the parking area is given below:				
output of the project	Leasting	Commonweato	No. of		Area
	Location	Components	Sheds	Total area	Shed area & Nos.
	Jhang City Road near Hilal-e- Ahmar Hospital	As listed in section-7	05	11.43 Kanals	2 Nos. = 105'x32' 2 Nos. = 108'x16' 1 No. = 60'x32'
		g shed is design	ed for 36	vehicles of	SWM Machinery.
10. Financial Plan	e		5	U	has been funded by
Sources of financing	World Bank for		3		USD 200 million
Debt a) Indicate the local and		Government of for Infrastructu		5	USD 200 million
foreign debt Loan	-			-	
	Component-2 for Investment Project Financing For capacity building of MCs & three Govt. USD 20 million organization and program management.				
	20% share of Municipalities is equivalent to USD 36 million				
	Total funds Development	Development			
	This project will be funded under this financing.				
b) Equity	 A. Loan/grant to MC The amount of loan converted to grant to MC Jhang will be Rs. 71.56 million. The financing of the project will be as give n below: 				
	Grant to MC (80% of cos	C Jhang from W t of PC-I)	/orld Bar	^{lk} PKR 7	1.56 million
	20% Co-finance by MCPKR 17.89 million				
	Total cost of project PKR 8			9.45 million	
	 B. Project Cost =Rs. 89.45 million *The loan is from World Bank to Government of Pakistan/Punjab 				
c) Grants	which will trickle down to MC Jhang as grant.				
	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 Pakistan/Punjab will trickle				
l	ao ii uo gruint (

d) Weighted cost of	Nil			
capital	nolysic			
11-Project benefits and an i.Financial:	• No income will be generated from the project and hence the Financial			
Income to the project with assumption	 Analysis is not required. 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	The completion of the project will result in:			
target group	 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	Primary and secondary data has been collected and used to assess the environmental impacts of the proposed Parking Area. 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 Safe Operating Procedures for Construction workers/labors; assessment indicators or an Environmental Screening Checklist has been developed			

iv.Quantifiable project outputs v.Unit cost analysis	 which is attached as Annexure E (A) of this PC-1. The checklist focuses on Environmental Issues and social concerns and ensure that all environmental and social dimensions are adequately considered. Based on the remarks of the screening checklist, Environment and Social Management Plans (ESMPs) does not need to be prepared. However, the necessary cost for Environment Health and Safety of Workers has been incorporated in the PC-1. The Environment, Health and Safety SOPs for labor/workers are provided as Annexure E (B). The quantifiable project out puts have been given above in Sr. No-9 (V). The social benefits to the citizen have been described at Sr. No-11(ii). A) Capital Unit Cost 		
	The unit cost analysis is produced below;		
	Project capital cost	PKR 89.45 million	
	Population of the city in year 2023	450,330 persons	
	Unit capital cost per capita	PKR 198	
	B)-Unit R&M cost:		
	Annual R&M cost	PKR 1,091,624	
	Population of the city in year 2023	450,330 persons	
	Unit R&M cost per capita	PKR 2.42	
vi.Employment generation (direct and indirect)			

	items of works included in these estimates /PC-I will be certified by these consultants.
	 iv. Execution of the project The project will be executed by MC Jhang 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 Jhang Unit as per PPRA Rules. v. Verification of quantities included in PC-Is and 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.
 ii)The manpower requirements by skills during execution and operation of the project and; The job description, qualification, experience, age and salary of each post 	 a) PMDFC experts and staff For rendering assistance in implementation of infrastructure projects in 16 MCs, PMDFC has the experts and staff in the required fields. In order to facilitate the Program Units, three regional offices have been established by PMDFC at Gujranwala, Faisalabad and Multan/Khanewal. b) Resident Supervision Consultants The project will be supervised by consultants. The tentative staff to be employed/deployed by the consultants for the certification of quantities of works and resident supervision of the project is given below:

S #	Personnel	Nos	Qualification		
1	Chief Resident Engineer/Team Leader	01	BSc;/BE in Civil engineering from HEC approved University with minimum 20 years' professional experience and 5 years' experience on similar assignment or MSC; Civil Engineering/Public Health Engineering/Environmental Engineering with Bachelor in Civil Engineering and minimum 15 years, experience, with 5 years on similar assignments on urban planning, designing and construction supervision assignment.		
2	Assistant Resident Engineer	01	Bachelor Degree in Civil engineering with minimum 8 years' experience in site supervision and execution for projects of similar nature		
3	Site Inspectors	01	DAE in Civil with minimum 10 years' experience in site supervision for projects of similar nature		
4	Environment Specialist	01	Required Qualification and Experience 16 years of education in Environmental Sciences/Environmental Engineering from a HEC recognized university; Demonstrated experience of 05 years dealing with environment and social management and implementation ,preferably in WB funded projects; have sound knowledge of local laws/policies on environmental management, Environmental policies and procedures of WB and their compliance in field including monitoring and supervision of site-specific ESMMPs and EHS practices during projects execution and implementation.		
5	Social Safeguards/Resettleme nt Specialist	01	Required Qualification and Experience 16 years of education in Sociology or Anthropology from a HEC recognized university; Demonstrated experience of at-least 05 years in dealing with social management and implementation, preferably in WB funded projects; have sound knowledge of local laws/policies and WB resettlement, social safeguards and gender policies and compliance of social safeguards and resettlement and abbreviated resettlement plans in infrastructure development projects.		
c)	Contractor's Techn	nical sta	off, skilled & non skilled labor		
		-	oy the supervisory technical staff and		
			or execution of works. The works will be		
	supervised by experienced Engineers and sub engineers and the number of slots for engineers and skilled and non-skilled will depend				
	upon the type and quantity of work and its period of completion.d) Repair & maintenance of the project				
d)					
	-		f which has been deployed for repair and		
	maintenance of the m	nunicipa	al services infrastructure. However, it has		
	been observed that	the exis	sting staff is not adequate to repair and		

	maintain the services in a manner which can give good service				
	delivery. Hence it is proposed to;				
	• Fill up the presently vacant slots				
	• Recruit additional staff as per need of the infrastructure after				
	obtaining the sanctions from the competent authorities.				
14-Additional projects	1)Shortage & frequent transfers of Provincially appointed staff				
/decisions required to	MC is facing shortage in provincially appointed and locally				
optimize the investment	appointed cadres. This will seriously affect the pace of progress of				
being undertaken	the program and the implementation of the infrastructure projects				
	may be delayed. Provincial Government should fill up the vacant				
	staff immediately for optimizing the investments in MC.				
	2) Repair & Maintenance (R&M) staff				
	The R&M staff is also deficient and this is adversely affecting the				
	service delivery level. Number of slots are vacant but MC is no				
	allowed to recruit the persons to fill these slots due to ban on				
	recruitments.				
	Further the sanctioned strength of the field staff is much lesser than				
	the actual requirement because with the increase in population and				
	extension of services, additionally required staff has not been				
	sanctioned by the competent authorities.				
	Both of the above issues need to be addressed for optimal utilization				
	of the investments and giving targeted benefits to the resident				
	population of these cities.				
15-Certificate	Certified that the project proposal has been prepared on the basis of				
	guidelines provided by the Planning Commission for the preparation				
	of PC-I for social sectors projects.				

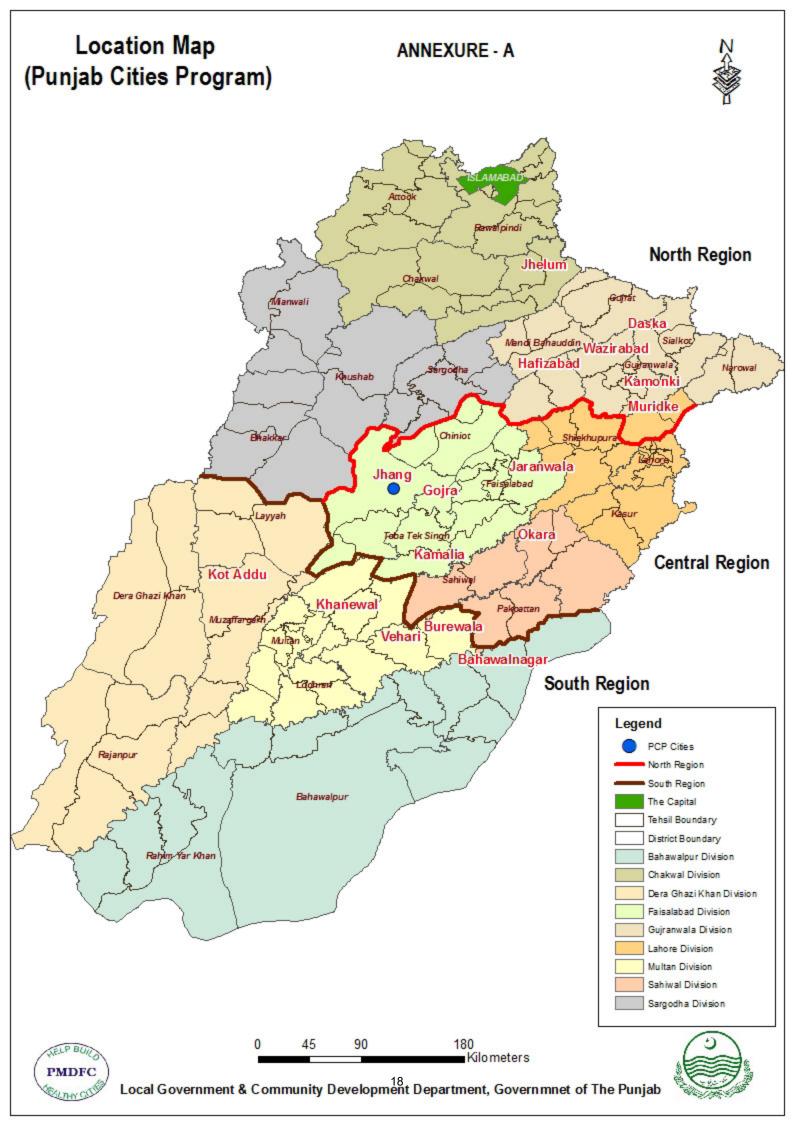
Prepared by	JERS Consultancy (Pvt) Ltd	Stamp & Signatures	
Checked by	Municipal Officer (Infrastructure) MC Jhang	Stamp & Signatures	
Checked by	Chief Officer MC Jhang	Stamp & Signatures	
Forwarded by	Administrator MC Jhang	Stamp & Signatures	
Vetted by	Senior Program Officer (PMDFC)	Stamp & Signatures	

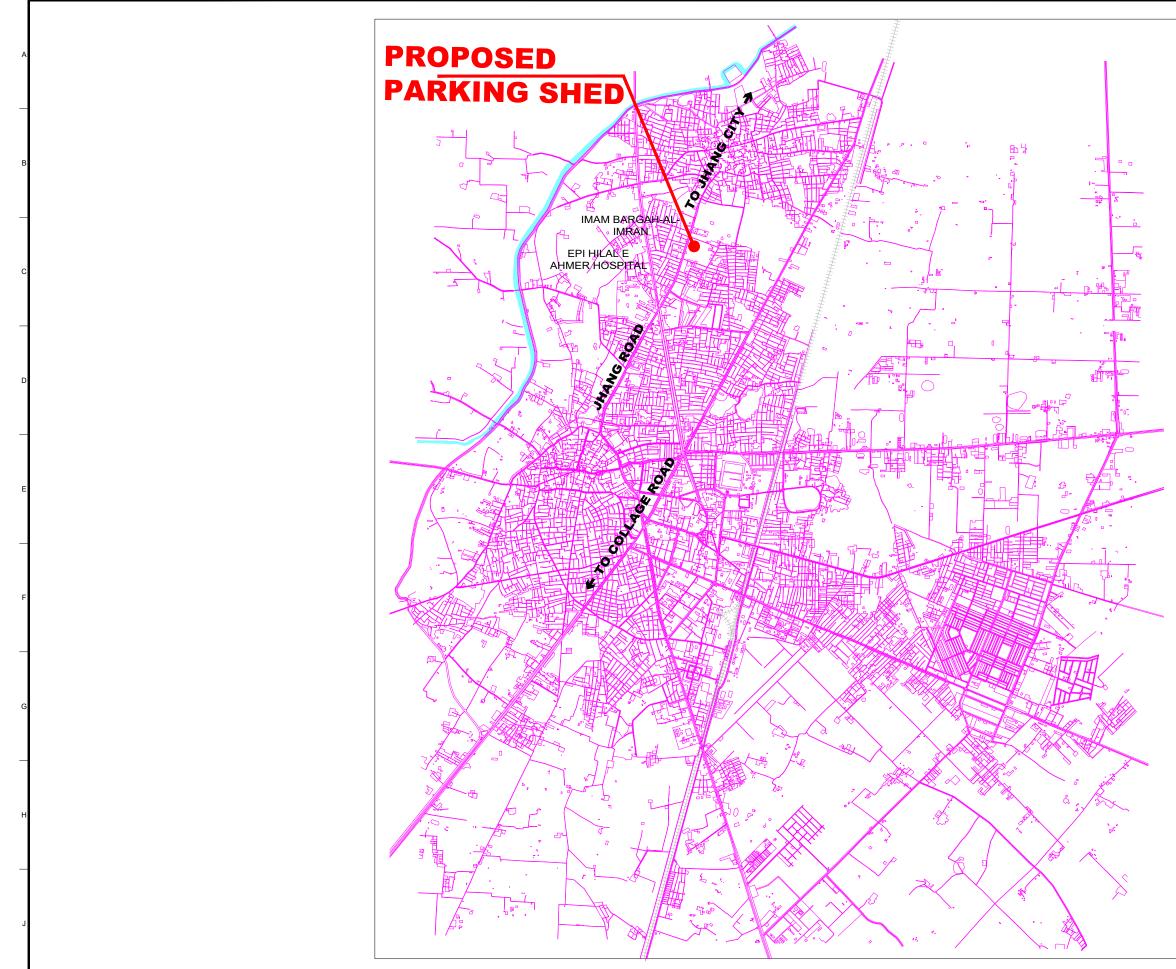
Annexure-1 Annual Recurrent Cost

Annual Recurrent Cost after Completion of the Project

Cost Category	Cost Breakup	Cost per Annum
Annual Maintenance Cost of The Civil Works	1% of Project Cost = 0.01*(79,162,434)	791,624
Annual Manpower Cost of One Guard	Rs. 25,000/month	300,000
	Total cost per Annum (Rs.)	1,091,624

Annexure-A Location Map





CLIENT:	CONSULTANTS:	PROJECT:	DRAWING TITLE:			DRAWN BY:	DRAWING NO:	
						MUNIR	БС	5-01
HELP BUILD PUNJAB MUNICIPAL DEVELOPMENT	JERS CONSULTANCY (PVT) LTD	PUNJAB CITIES PROGRAM (PCP)	PROJECT KEY PLAN			CHECKED BY:	- F3	,-01
(PMDFC) FUND COMPANY	Tel: +92 42 35113123, +92 42 35113124	DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN	(JHANG)			SADAT WALEED	SCALE:	SHEET:
(PMDFC)	Fax: +92 42 35113125 E-mail: info@jers.com.pk, mail@jers.com.pk	16 CITIES OF PUNJAB.				DATE:	UNIT=FEET	-
	Web: http://www.jers.com.pk	19		REV. DATE	DESCRIPTION	-	1"=600'	JOB NO:
				REV. DATE	DESCRIPTION	Oct,2022		488-01
1 2	3 4 5	6 7	8 9 10		11 12	13		14



Annexure-B 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

<u>Construction of SWM Parking Area</u> <u>MC Jhang</u>

Detailed Cost Estimate

February 2023



JERS CONSULTANCY (PVT) LTD

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	PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND R SUPERVISION IN 16 CITIES OF PUNJAB DETAILED COST ESTIMATE	ESIDENTS
	SWM PARKING AREA (JHANG)	
	SUMMARY	
Sr.		
No.	Description	Amount (Rs)
1	ADMIN BLOCK	
i	Civil Work	5,752,498
ii	Plumbing Work	346,483
iii	Electrical Work	263,367
2	GUARD ROOM	
i	Civil Work	456,530
ii	Plumbing Work	6,540
iii	Electrical Work	38,928
3	WORK SHOP	
i	Civil Work	3,477,285
ii	Plumbing Work	55,275
iii	Electrical Work	137,236
4	PARKING SHED (SIZE 105' x 32') (2 Nos.)	
i	Civil Work	24,275,924
ii	Electrical Work	362,014
5	PARKING SHED (SIZE 60' x 32')	
i	Civil Work	7,022,414
ii	Electrical Work	97,377
	$\mathbf{D} = \mathbf{D} \mathbf{U} \mathbf{D} \mathbf{U} \mathbf{D} \mathbf{U} \mathbf{D} \mathbf{U} \mathbf{D} \mathbf{U} \mathbf{D} \mathbf{U} \mathbf{U} \mathbf{U} \mathbf{U} \mathbf{U} \mathbf{U} \mathbf{U} U$	
6 i	PARKING SHED (SIZE 108' x 16') (2 Nos.) Civil Work	11 211 650
ii	Electrical Work	11,211,650 238,449
7	WASHING PIT	
/		1,878,498
8	EXTERNAL WORK (BOUNDARY WALL + TUFF PVER)	17,567,764
9	EJECTOR PUMP	266,725
10	EXTERNAL WATER SUPPLY	727,608
11	EXTERNAL SEWERAGE SYSTEM	788,811
12	SEPTIC TANK	168,503
13	DRAINAGE SYSTEM	284,193

	PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB DETAILED COST ESTIMATE SWM PARKING AREA (JHANG) SUMMARY				
Sr. No.	Description	Amount (Rs)			
14	SILT HOLDING TANK	225,268			
15	EXTERNAL ELECTRICAL WORK	3,400,669			
16	ENVIRONMENTAL MITIGATION COST	112,425			
	Total Rs.	79,162,434			
	Contingencies @ 2%	1,583,249			
	PRA Charges @ 5%	3,958,122			
	Price Escalation @ 6%	4,749,746			
	Total Amount. Rs.	89,453,551			

DETAILED COST ESTIMATE

	1nd BI-Annual-					
Sr. No.	2023 (Jan to June) Jhang	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	2.85	11,658.25	33,226
		Anti-Termite				
2	26/43	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concenterate (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.				
		approved by the Engineer menalge.	Sft	4,347.66	9.90	43,042
3	6/5	Plain Cement Concrete Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(i) Ratio 1: 4: 8	100 Cft	4.75	29,723.50	141,187
					,	,
		Brick work in Foundation				
4	7/4/i	Pacca brick work in foundation and plinth in:-				
		Cement, sand mortar:- Ratio 1:5	100 Cft	22.91	29,928.60	685,664
		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	4.35	9,240.05	40,194
		Vertical D.P.C	100 511	55	9,240.05	-0,17-
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:				

DETAILED COST ESTIMATE

ADMIN BLOCK

CIVIL WORK

Sr. No.	1nd BI-Annual- 2023 (Jan to June)	Description	Unit	Quantity	Unit Rate	Amount (Rs)		
1101	Jhang				(13)	(13)		
		Brick work in Super Structure						
7	7/5	Pacca brick work in ground floor:-						
		i) Cement, sand mortar:- Ratio 1:5	100 Cft	25.51	32,331.00	824,764		
		Concernate Work						
8	6/6	Concrete Work Providing and laying reinforced cement concrete						
0	0/0	(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	922.86	583.25	538,258		
						,		
		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	26.38	31,946.30	842,743		
		Sand Filling						
10	7/30	Supplying and filling sand under floor; or plugging	100 00	14.00	a a a a a a	10.011		
		in wells.	UnitQuantity(Rs)Image: Rest of the second secon	2,982.00	42,344			
		Brick ballast						
11	6/2	Dry rammed brick or stone ballast, $1\frac{1}{2}$ " to 2"(40						
11	0/2	mm to 50 mm) gauge.		4.69	9.768.00	45,812		
					. ,	- 7 -		
		Plain Cement Concrete						
12	6/5	Cement concrete plain including placing,						

DETAILED COST ESTIMATE

		CIVIL WORK				
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Porcelain Tile				
13	10/42/c	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.				
		c) (Non-Skid Chequred Tiles) 300mmx300mm	Per Sft	978.00	225.65	220,686
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	82.50	310.10	25,583
15	10/24	Ceramic Tile 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	442.00	255.50	112,931
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	1,208.75	310.10	374,833

DETAILED COST ESTIMATE

Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)		
17	10/47	Marble Providing and laying 3/4" thick full width Prepolished Marble slab for Vanities / Shelves / Treads/Window Cills , having Uniform texture (Spotless) with adhesive bond over 3/4" thick (1:2) cement sand mortor i/c the cost of matching sealer complete in all respects as approved and directed by the Engineer Incharge.						
		i) China Verona	Sft	83.75	496.95	41,620		
18	11/10/b	Slab Plaster Cement plaster 3/8" (10 mm) thick under soffit of R.C.C. roof slabs only, upto 20' height. (Ratio:- 1:3)	100 Sft	14.20	3,963.30	56,279		
		Cement Plaster						
19	11/9	Cement plaster 1:4 upto 20' (6.00 m) height:- 3/4" (20 mm) thick	100 Sft	49.91	4,650.85	232,124		
		Pointing						
20	11/18/a	Cement pointing struck joints, on walls, upto 20' (6.00 m) hiehgt:-						
		a) ratio 1:2	100 Sft	19.80	3,776.40	74,773		
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	19.80	822.00	16,276		
22	11/23	Distempering Distempering:-						
	11/23	iii) three coats	100 Sft	64.11	1,446.35	92,725		
23	12/52	Wooden Door P/F 1-1/2" thick solid flush door comprising of 2.5 mm thick Deodar/Ash/Oak ply with grooves , compressed over 2.5 mm thick commercial ply over 1" thick packing wood in style and rails under proper pressure i/c the cost of nails, tower bolt , handles, glue, sawing charges and lacquar polishing to show the grains of ply properly, sand papering and 3/8" thick matching wooden lipping as approved and directed by the Engineer Incharge.	Per Sft	241.50	795.70	192,162		

DETAILED COST ESTIMATE

	1nd BI-Annual-					
Sr. No.	2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
24	25/51	Providing and fixing all types of partly fixed and partly openable glazed anodised/ powder coated aluminium doors, using delux section of M/s Al- Cop or Pakistan Cables, having chowkat frame of size 40 x 100 mm ($1\frac{1}{2}$ " x 4") and leaf frame of 60x40mm ($2\frac{1}{2}$ "x1 $\frac{1}{2}$ ") wide sections including the cost of $\frac{1}{4}$ " (5 mm) thick imported tinted glass with aluminium triangular gola and rubber gasket to support the glass and leaf edging, using approved standard fittings, locks, 3" (75 mm) wide long handles etc., and hardware any required as approved by the engineer in-charge	Sft	68.00	1,549.35	105,356
		Formica Sheet				
25	Rate Analysis	Providing and fixing Formica sheet on bathroom door as per drawing and design complete in all respect.	Sft	87.50	75.11	6,572
26	12/17	Providing and fixing 2" wide MS/ GI Chowkat singel/double rebate made of 16 SWG MS sheet pressed/welded / supported with M.S. flat 1- 1/4"x1/8" i/c 6"long M.S. Flat 1"x1/8"hold fasts (6- Nos) welded/screwed, punching of lock hole covered with MS Box,coating with antirust paint including filling with cement sand mortar (1:8) and embedding hold fast in cement concrete (1:2:4) ,complete in all respect as approved and directed by Engineer Incharge				
		(ii) 10.50 " wide	Sft	105.00	660.45	69,347
27	12/28	Providing and fixing 3"x4-1/2" chowkat for doors, windows and C. windows, including holdfast, etc.				
		b) Deodar wood	Sft	40.10	844.45	33,866
28	12/53	Providing and laying 24 SWG aluminum kick plate 4" (100 mm) high, fixed with screws 4" (100 mm) centre to centre, on bottom rail of flush doors only of commercial ply.	Rft	35.00	79.75	2,791
29	12/58	Providing and fixing ornamental wooden architrave 3" x (1 ¹ / ₂ " tapered to ¹ / ₄ ") all along the door frame complete in all respect.				
		b) Deodar wood architrave	Sft	30.00	100.50	3,015

DETAILED COST ESTIMATE

ADMIN BLOCK

CIVIL WORK

		CIVIL WORK	CIVIL WORK									
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)						
30	12/22	Lock Providing and fixing, approved quality mortice lock.	Each	14.00	774.00	10,836						
31	13/5/c	PaintPainting new surface:-Preparing surface and painting of doors andwindows any type (including edges):-										
		i) priming coat. ii)Two coat	100 Sft 100 Sft	4.83 4.83	1,460.05 841.65	7,052 4,065						
32	25/52	Aluminium Window Providing and fitting all types of glazed aluminium windows of anodised/ powder coated partly fixed and partly sliding using delux sections of approved manufacturer having frame size of 100 x 30 mm (4"x1-1/4") and leaf frame sections of 50 x 20 mm (2"x³/4"), all of 1.6mm thickness including 5 mm thick imported tinted glass with rubber gasket using approved standard latches, hardware etc., as approved by the Engineer in-charge										
			Per Sft	145.00	1,336.55	193,800						
33	9/5	Roof Insulation 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	16.15	11,779.95	190,246						
34	9/45	Providing and Laying Insulation material of Extruded Polystyrene XPS in Rigid Insulation / Foam Board on roof or walls, Density 32-38Kg/M, compressive strength 250-400 kpa, R-value 5 per inch thickness and water obsorption (1% by volume, closed cell type structure) i/c cutting and placing in position. complete in all respect.										
		c) 2" thick	100 Sft	16.15	12,039.60	194,440						
35	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	3,230.00	8.65	27,940						
			I CI DIL	5,250.00	0.05	27,740						

DETAILED COST ESTIMATE

ADMIN BLOCK

CIVIL WORK

Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)	
		Khurras					
36	9/15	Khuras on roof 2'x2'x6" (600 x 600 x 150 mm)	Each	2.00	905.23	1,810	
		Bottom Khuras					
37	9/16	Bottom Khuras of brick masonry in cement mortar 1:6, 4'x2'x4 ¹ / ₂ " (1200x600x113 mm) over 3" (75		2.00	1 000 50	2 001	
		mm) cement concrete 1:4:8.	Each	2.00	1,900.60	3,801	
38	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (crushed stone aggregate and bajri used in concrete items) (Lead 105 Km)					
		in concrete items) (Lead 105 Kin)	Cft	1,470.83	60.20	88,541	
		Total Rs.				5,752,498	

ADMIN BLOCK

CALCULATION OF QUANTITIES

¥
CIVIL WORK

Sr.	Description	No.	Length	Width	Height	Qty.	Unit
No.	Description	110.	Length	wiuui	mengint	Qıy.	Umt
	Excavation						
1	Excavation Excavation in foundation of building, bridges and						
1	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 9" Thick Wall	1	250.00	3.00	3.00	2,250.00	Cft
	Center wall 4-1/2" Thick Wall	1	80.00	2.50	3.00	600.00	Cft
					Total	2,850.00	Cft
					Total	2.85	%oCf
	Anti-Termite						
2	Spraying termite proofing by using liquid						
2	FMC/Biflex/Terminex Exin/Ms Hextar or						
	equivalent @ specified suspension concenterate						
	(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 9" Thick Wall	1	250.00	9.00		2,250.00	Sft
	Center wall 4-1/2" Thick Wall	1	80.00	8.50		680.00	Sft
	Floor	1	52.75	26.88		1,417.66	Sft
		-	02110	20.00		_,	510
					Total	4,347.66	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 9" Thick Wall	1	250.00	3.00	0.50	375.00	Cft
	Center wall 4-1/2" Thick Wall	1	80.00	2.50	0.50	100.00	Cft
					Total	475.00	Cft
					Total	4.75	%Cft
					TULAI	4./3	/0UII

ADMIN BLOCK CALCULATION OF QUANTITIES CIVIL WORK

		VUK	1				
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 9" Thick Wall						
	Step - 1	1	250.00	2.250	0.50	281.25	Cft
	Step - 2	1	250.00	1.875	0.50	234.38	Cft
	Step - 3	1	250.00	1.500	0.50	187.50	Cft
	Step - 4	1	250.00	1.125	0.50	140.63	Cft
	Step - 5	1	250.00	0.750	5.00	937.50	Cft
	Center wall 4-1/2" Thick Wall						
	Step - 1	1	80.00	1.875	0.50	75.00	Cft
	Step - 2	1	80.00	1.500	0.50	60.00	Cft
	Step - 3	1	80.00	1.125	0.50	45.00	Cft
	Step - 4	1	80.00	0.750	5.50	330.00	Cft
					Total	2,291.25	Cft
					Total	22.91	%Cf
	Horizontal D.P.C						
5	Providing and laying damp proof course of cement						
5	concrete $1:2:4$ (using cement, sand and shingle),						
	including bitumen coating :-						
	(a) with one coat bitumen and one coat polythene sheet 500gauge						
	i) 1 ¹ / ₂ " thick (40 mm)						
	Office wall 9" Thick Wall	2	250.00	0.75		375.00	Sft
	Center wall 4-1/2" Thick Wall	1	80.00	0.75		60.00	Sft
					Total	435.00	Sft
					Total	4.35	%Sf
					Total	4.33	7051
	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 ³/₄ " thick (20 mm) 						
	Office wall 9" Thick Wall	1	250.00		2.00	500.00	Sft
	Center wall 4-1/2" Thick Wall	1	80.00		1.00	80.00	Sft
	Center wan 4-1/2 TINCK Wall	1	00.00		Total	580.00	Sft
					10141	500.00	511
					Total	5.80	%Sf

ADMIN BLOCK 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 9" Thick Wall	1	250.00	0.75	11.00	2,062.50	Cft
	Center wall 4-1/2" Thick Wall	1	80.00	0.75	11.00	660.00	Cft
	Parapet Wall	1	165.00	0.38	2.50	154.69	Cft
	Entrance step	2	10.00	1.00	0.75	15.00	Cft
	D/d Doors and Window						
	D-1	-3	3.50	0.75	7.00	(55.13)	Cft
	D-2	-3	3.00	0.75	7.00	(47.25)	Cft
	D-3	-1	2.50	0.75	7.00	(13.13)	Cft
	D-4	-7	2.50	0.75	5.00	(65.63)	Cft
	DW-1	-1	8.00	0.75	8.50	(51.00)	Cft
	W-1	-3	6.00	0.75	4.00	(54.00)	Cft
	W-2	-1	5.00	0.75	4.00	(15.00)	Cft
	W-3	-2	3.00	0.75	3.50	(15.75)	Cft
	V-1	-8	2.00	0.75	2.00	(24.00)	Cft
					Total	2,551.31	Cft
					Total	25.51	%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	1,625.00	1.00	0.50	812.50	Cft
	Kitchen slab and Record room	1	25.00	2.00	0.50	25.00	Cft
	CB-1	1	50.00	0.75	0.75	28.13	Cft
	Doors and window Lintels						
	D-1 22	3	4.50	0.38	0.75	3.80	Cft
	D-2 33	3	4.00	0.75	0.75	6.75	Cft

ADMIN BLOCK

CALCULATION OF QUANTITIES CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	D-3	1	3.50	0.38	0.75	0.98	Cft
	D-4	7	3.50	0.38	0.75	6.89	Cft
	DW-1	1	10.00	0.75	0.75	5.63	Cft
	W-1	3	7.00	0.75	0.75	11.81	Cft
	W-2	1	6.00	0.75	0.75	3.38	Cft
	W-3	2	4.00	0.75	0.75	4.50	Cft
	V-1	8	3.00	0.75	0.75	13.50	Cft
					Total	922.86	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)					922.86	Cft
	Top Slab & lintel @ 6 lbs / Cft		6.00		=	5,537.16	lbs/cft
				Total	=	5,537.16	lbs/cft
				Total	=	2,512.32	Kg.
			Add 5% V	Wastage.	=	125.62	Kg.
				Total	=	2,638	Kg
					Total	26.38	%kg
	Sand Filling						
10	Supplying and filling sand under floor; or plugging in wells.						
	Floor	1	1,420.00	1.00	1.00	1,420.00	Cft
					Total	1,420.00	Cft
					Total	14.20	%Cft
					IUIAI	17,40	/0011
	Brick ballast						
11	Dry rammed brick or stone ballast, 1 ¹ / ₂ " to 2"(40 mm to 50 mm) gauge.						
	Floor	1	1,420.00	1.00	0.33	468.60	Cft
					Total	468.60	Cft

ADMIN BLOCK

CALCULATION OF QUANTITIES

CIVIL WORK	

No. Description No. Length Width Height Qty. P.C.C Image: Compacting, finishing and curing complete (including screening and washing of stone aggregate): Image: Compacting, finishing and curing complete (including screening and washing of stone aggregate): Image: Compacting, finishing and curing complete (including screening and washing of stone aggregate): Image: Compacting, finishing and curing complete (including screening and washing of stone aggregate): Image: Compacting, finishing and curing complete (including screening and washing of stone aggregate): Image: Compacting, finishing and curing complete (including screening 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 scaler for finishing the joints i/c curing grinding complete in all respect as approved and directed by the Engineer Incharge. Image: Color and Shade with adhesive / bond over 3/4" thick (1:2) cement plaster i/c the cost of and scaler for finishing the joints i/c curing grinding complete in all respect as approved and directed by the Engineer Incharge. Image: Color and Shade with adhesive / bond over 1/2" thick (1:2) cement plaster i/c the cost of and scaler for finishing the joints i/c the cost of and scaler for finishing the joints i/c the cost of and scaler for finishing the joints i/c the cost of and scaler for finishing the joints i/c the cost of and scaler for finishing the joints i/c the cost of and scaler for finishing the joints i/c the cost of and scaler for finishing the joints i/c the cost of scaler finishing the joints i/c the cost of scaler for thishing the joints i/c the cost of scal								
12 Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): Image: compacting and mashing of stone aggregate): Ratio 1: 2: 4 1 1,420.00 1.00 0.17 236.67 Porcelain Tile 1 1,420.00 1.00 0.17 236.67 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 curiting grinding complete in all respect as approved and directed by the Engineer Incharge. Image: Total 978.00 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, curiting grinding complete in all respect as approved and directed by the Engineer Incharge. Image: Total 978.00 14 Providing and laying superb quality Ceramic tile floors of Master brand, skirting/ dado of specified size, Color and Shade with adhesive/ bond ower 1/2" thick (1:2)cement plaster i/c the cost of and sealer for finishing the joints, curiting grinding complete in all respect as approved and directed by the Engineer Incharge. Image: Total 82.50 14 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	Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
compacting, finishing and curing complete (including screening and washing of stone aggregate): Image: Stone aggregate): Image: Stone 								
(including screening and washing of stone aggregate): Image: Stone aggregate): Image: Stone aggregate): Ratio 1: 2: 4 Image: Stone aggregate): Image: Stone aggregate): Image: Stone aggregate): Floor 1 1,420.00 1.00 0.17 236.67 Porcelain Tile Image: Stone aggregate): Image: Stone aggregate:	12							
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Ratio 1: 2: 4Image: constraint of the second s								
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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 1 250.00 1.00 0.33 82.50 Ceramic Tile Image: 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 and as approved and directed by the Engineer Incharge. Image: 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. Image: Color and Shade as approved and directed by the Engineer Incharge. Image: Color and Shade as approved and directed by the Engineer Incharge. Image: Color and Shade as approved and directed by the Engineer Incharge. Image: Color and Shade as approved and directed by the Engineer Incharge. Image: Color and Shade as approved and directed by the Engineer Incharge. Image: Color and Shade as approved and directed by the Engineer Incharge. Image: Color and Shade as approved and directed by the Engineer Incharge. Image: Color and Shade as approved and directed by the Engineer Incharge. Image: Color and Shade as approved and directed by the Engineer Incharge. Image: Color and Shade as approved and directed by the Engineer						Total	978.00	Sft
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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. Image: Complete in all respects and as approved and directed by the Engineer Incharge. Image: Imag						Total	82.50	Sft
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. Image: Complete in all respects and as approved and directed by the Engineer Incharge. i) 12"x18"/12"x24"/10"x24" /8"x24"/12"x36" Image: Complete in all respects and as approved and directed by the Engineer Incharge.		Coromia Tilo						
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		i) 12"x18"/12"x24"/10"x24" /8"x24"/12"x36"	1	442.00	1.00		442.00	Sft
I I I I I I I I I I I I I I I I I I I 						Total	442.00	Sft
35		~~~						

ADMIN BLOCK

CALCULATION OF QUANTITIES

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 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"						
	Washroom	10	5.50		5.00	275.00	Sft
		10	3.00		5.00	150.00	Sft
	Washroom	2	6.375		5.00	63.75	Sft
		2	5.00		5.00	50.00	Sft
	Changing Room	4	4.00		5.00	80.00	Sft
		4	4.75		5.00	95.00	Sft
	Lockers Area	2	9.50		5.00	95.00	Sft
		1	100.00		5.00	500.00	Sft
	D/d	1	2.50		7 00	(10.50)	
	D-3	-1	2.50		5.00	(12.50)	Sft
	D-4	-7	2.50		5.00	(87.50)	Sft
					Total	1,208.75	Sft
	Marble						
17	Providing and laying 3/4" thick full width						
1/	Prepolished Marble slab for Vanities / Shelves /						
	Treads/Window Cills , having Uniform texture						
	(Spotless) with adhesive bond over 3/4" thick (1:2)						
	cement sand mortor i/c the cost of matching sealer						
	complete in all respects as approved and directed						
	by the Engineer Incharge.						
	i) China Verona						
	W-1	3	6.00	0.75		13.50	Sft
	W-2	1	5.00	0.75		3.75	Sft
	W-3	2	3.00	0.75		4.50	Sft
	V-1	8	2.00	0.75		12.00	Sft
	Kitchen	1	25.00	2.00		50.00	Sft
					Tatal	92 75	64
	Slab Plaster				Total	83.75	Sft
18	Cement plaster 3/8" (10 mm) thick under soffit of						
	R.C.C. roof slabs only, upto 20' height. (Ratio:- 1:3)						
		1	1,420.00	1.00		1,420.00	Sft
	36						
	30				Total	14.20	%Sft

CALCULATION OF QUANTITIES CIVIL WORK

Sr.		NT	т. 4	XX 7• 141	TT . • • • 4	04	F T •·
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						
	Office wall 9" Thick Wall	2	250.00		11.00	5,500.00	Sft
	Center wall 4-1/2" Thick Wall	2	80.00		11.00	1,760.00	Sft
	D/d outer wall	-1	165.00		11.00	(1,815.00)	Sft
	D/d Doors and Window						
	D-1	-3	3.50		7.00	(73.50)	Sft
	D-2	-3	3.00		7.00	(63.00)	Sft
	D-3	-1	2.50		7.00	(17.50)	Sft
	D-4	-7	2.50		5.00	(87.50)	Sft
	DW-1	-1	8.00		8.50	(68.00)	Sft
	W-1	-3	6.00		4.00	(72.00)	Sft
	W-2	-1	5.00		4.00	(20.00)	Sft
	W-3	-2	3.00		3.50	(21.00)	Sft
	V-1	-8	2.00		2.00	(32.00)	Sft
					Total	4,990.50	Sft
					Total	49.91	%Sf
					10(a)	47.71	7051
	Pointing						
20	Cement pointing struck joints, on walls, upto 20' (6.00 m) hiehgt:-						
	a) ratio 1:2	1	165.00		12.00	1 020 00	0.0
	Outer Walls	1	165.00		12.00	1,980.00	Sft
					Total	19.80	%Sf
21	Extra cost of labour and material for red oxide						
	pigment in cement pointing to match with the						
	colour of bricks.				Total	19.80	%Sf
					1000	17100	/001
	Distempering						
22	Distempering:-						
	iii) three coats						
	Office wall 9" Thick Wall	2	250.00		11.00	5,500.00	Sft
	Center wall 4-1/2" Thick Wall	2	80.00		11.00	1,760.00	Sft
	D/d outer wall	-1	165.00		11.00	(1,815.00)	Sft
	Slab	1	1,420.00	1.00		1,420.00	Sft
	D/d Doors and Window	-	1,.20.00	1.00			Sit
	D-1	-3	3.50		7.00	(73.50)	Sft
	D-2	-3	3.00		7.00	(63.00)	Sft
	D-3	_1	2 50		/ (1()		N ⁺⁺
	D-3 D-4	-1 -7	2.50		7.00	(17.50) (87.50)	Sft Sft

ADMIN BLOCK CALCULATION OF QUANTITIES

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	W-1	-3	6.00		4.00	(72.00)	Sft
	W-2	-1	5.00		4.00	(20.00)	Sft
	W-3	-2	3.00		3.50	(21.00)	Sft
	V-1	-8	2.00		2.00	(32.00)	Sft
					Total	6,410.50	Sft
					Total	64.11	%Sft
	Wooden Door						
23	P/F 1-1/2" thick solid flush door comprising of 2.5 mm thick Deodar/Ash/Oak ply with grooves , compressed over 2.5 mm thick commercial ply over 1" thick packing wood in style and rails under proper pressure i/c the cost of nails, tower bolt , handles, glue, sawing charges and lacquar polishing to show the grains of ply properly, sand papering and 3/8" thick matching wooden lipping as approved and directed by the Engineer Incharge.						
	D-1	3	3.50		7.00	73.50	Sft
	D-2	3	3.00		7.00	63.00	Sft
	D-3	1	2.50		7.00	17.50	Sft
	D-4	7	2.50		5.00	87.50	Sft
					Total	241.50	Sft
24	Providing and fixing all types of partly fixed and partly openable glazed anodised/ powder coated aluminium doors, using delux section of M/s Al- Cop or Pakistan Cables, having chowkat frame of size 40 x 100 mm (1 ¹ / ₂ " x 4") and leaf frame of 60x40mm (2 ¹ / ₂ "x1 ¹ / ₂ ") wide sections including the cost of ¹ / ₄ " (5 mm) thick imported tinted glass with aluminium triangular gola and rubber gasket to support the glass and leaf edging, using approved standard fittings, locks, 3" (75 mm) wide long handles etc., and hardware any required as approved by the engineer in-charge						
	DW-1	1	8.00		8.50	68.00	Sft
							SIL

ADMIN BLOCK CALCULATION OF QUANTITIES

	CIVIL WORK										
Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit				
	Formica Sheet										
25	Providing and fixing Formica sheet on bathroom door as per drawing and design complete in all respect.										
	D-4	7	2.50		5.00	87.50	Sft				
26	Providing and fixing 2" wide MS/ GI Chowkat singel/double rebate made of 16 SWG MS sheet pressed/welded / supported with M.S. flat 1- 1/4"x1/8" i/c 6"long M.S. Flat 1"x1/8"hold fasts (6- Nos) welded/screwed, punching of lock hole covered with MS Box,coating with antirust paint including filling with cement sand mortar (1:8) and embedding hold fast in cement concrete (1:2:4) ,complete in all respect as approved and directed by Engineer Incharge										
	(ii) 10.50 " wide										
	D-1	3	17.50	0.875		45.94	Sft				
	D-2	3	17.00	0.875		44.63	Sft				
	D-3	1	16.50	0.875		14.44	Sft				
					Total	105.00	Sft				
27	Providing and fixing 3"x4-1/2" chowkat for doors, windows and C. windows, including holdfast, etc.										
	b) Deodar wood										
	D-4	7	12.50	0.46		40.10	Sft				
					Total	40.10	Sft				
28	Providing and laying 24 SWG aluminum kick plate 4" (100 mm) high, fixed with screws 4" (100 mm) centre to centre, on bottom rail of flush doors only of commercial ply.	14	2.50			35.00	Rft				
29	Providing and fixing ornamental wooden architrave $3" \ge (1\frac{1}{2}" \text{ tapered to } \frac{1}{4}")$ all along the door frame complete in all respect.										
	b) Deodar wood architrave										
	D-1	3	17.50	0.25		13.13	Sft				
	D-2	3	17.00	0.25		12.75	Sft				
	D-3	1	16.50	0.25		4.13	Sft				
					Total	30.00	Sft				

ADMIN BLOCK CALCULATION OF QUANTITIES

Sr.	Description	No.	Length	Width	Height	Qty.	Unit
No.	Lock		- 8-				
30	Providing and fixing, approved quality mortice						
50	lock.	14				14.00	Eacl
	Paint						
31	Painting new surface:-						
	Preparing surface and painting of doors and						
	windows any type (including edges):-						
	i) priming coat.						
	ii)Two coat				Total	4.83	Sft
	Aluminium Window						
32	Providing and fitting all types of glazed aluminium						
	windows of anodised/ powder coated partly fixed						
	and partly sliding using delux sections of approved						
	manufacturer having frame size of 100 x 30 mm						
	(4"x1-1/4") and leaf frame sections of 50 x 20 mm						
	(2"x ³ / ₄ "), all of 1.6mm thickness including 5 mm						
	thick imported tinted glass with rubber gasket						
	using approved standard latches, hardware etc., as						
	approved by the Engineer in-charge						
	W-1	3	6.00		4.00	72.00	Sft
	W-2	1	5.00		4.00	20.00	Sft
	W-3	2	3.00		3.50	21.00	Sft
	V-1	8	2.00		2.00	32.00	Sft
					Total	145.00	Sft
	Roof Insulation						
33	Single layer of tiles $9"x4\frac{1}{2}"x1\frac{1}{2}"$ (225x113x40)						
00	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	1,615.00	1.00		1,615.00	Sft
					Total	1,615.00	Sft
					Total	16.15	%Sf
24							
34	Supplying and laying polythene sheet over D.P.C. under floors and on roofs, etc.						
	ii) 500 gauge (.005" thick)				Total	3,230.00	Sft
	40						

	PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB ADMIN BLOCK CALCULATION OF QUANTITIES CIVIL WORK									
Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit			
	Khurras									
35	Khuras on roof 2'x2'x6" (600 x 600 x 150 mm)	2				2.00	Each			
	Bottom Khuras									
36	Bottom Khuras of brick masonry in cement mortar									
	1:6, 4'x2'x4 ¹ /2" (1200x600x113 mm) over 3" (75									
	mm) cement concrete 1:4:8.	2				2.00	Each			

DETAILED COST ESTIMATE

	1	PLUMBING WORKS				
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	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	3.00	2,461.85	7,386
2	19-3	Providing and fitting one piece Europeon Coupled set of Water Closet (WC) and flushing Cistern of PORTA brand (full size) i/c the cost of CP/rubber connection, thimble, normal seat cover and rawal bolts complete in all respects as approved and directed by the Engineer Incharge.		2.00	35,817.00	71,634
3	19-13-i	Providing and fitting plastic made low down flushing cistern 13.63 litre (3 gallons) capacity, including bracket set, copper connection, etc.				
		i) white	Each	3.00	3,061.65	9,185
4	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	5.00	6,160.50	30,803
5	19-8	Providing and fixing stainless steel sink with drain board, size 120x60 cm (48"x24") including bracket set, waste pipe and waste coupling.		1.00	7,747.55	7,748
6	19-30	Providing and fixing, chromium plated mixing valve, for wash hand basin, sink or shower.	Each	6.00	2,477.00	14,862
7	19-16	Providing and fixing, chromium plated soap dish.	Each	5.00	538.60	2,693
8	19-20	Providing and fixing looking glass 55x40 cm (22"x16") size	Each	5.00	800.30	4,002
9	19-27	Providing and fixing chromium plated bib cock:-				
		i) 2 cm (³ / ₄ ")	Each	5.00	1,081.60	5,408
10	19-28	Providing and fixing chromium plated tee stop cock 15mm (1/2").	Each	15.00	1,081.60	16,224
11	19-34-i	Providing and fixing, floor trap of cast iron, including concrete chamber all round, and C.I. grating:- 42				

DETAILED COST ESTIMATE

Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		i) 10x5 cm (4"x2")	Each	8.00	670.20	5,362
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	2.00	1,178.75	2,358
13	19-35-ii	Providing and fitting "P" trap:- ii) 10 cm (4") glazed.	Each	10.00	323.25	3,233
		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				
		(i) (1/2") 20 mm	Rft	50.00	48.75	2,438
		(ii) (3/4") 25 mm	Rft	70.00	67.15	4,701
		(iii) (1") 32 mm	Rft	25.00	107.65	2,691
		(iv) (1-1/4") 40 mm	Rft	25.00	162.05	4,051
		G.I Pipe on Roof				
15	23-23	Providing, laying, cutting, jointing, testing and disinfecting G.I. pipeline in trenches, with socket joints, using G.I. pipes of B.S.S. 1387-1967 complete in all respects, with specials and valves.				
		iii) Heavy Quality b) ¾" i/d (20 mm) 3.25mm thick	Rft	75.00	279.15	20,936
		Valve				
16	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	2.00	1,545.60	3,091

DETAILED COST ESTIMATE

		PLUMBING WORKS				
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		uPVC Pipe				
17	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	89.25	1,785
		(v) 4"(110 mm)	Rft	100.00	218.00	21,800
		(vi) 6"(160 mm)	Rft	10.00	422.55	4,226
		HDPE Tank				
18	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.		500	117.30	58,650
		Total Rs. (A)				308,882
		Non-Schedule Item				
19	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.		2.00	18,800.57	37,601
		Total Rs. (B)				37,601
		Total Amount Rs. (A + B)				346,483
		i otai Amount KS. (A + B)				340,483

DETAILED COST ESTIMATE

ADMIN BLOCK

FI FCTRICAL WORKS

		ELECTRICAL WOR	KS			
Sr. No.	2nd Bi-Annual- 2022 (July to Dec) Jhang	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
1	C-24/3-ii	<u>Scheduled Items (A)</u> 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	Dû	500.00	0.6.40	12 200
		i/d)	Rft.	500.00	86.40	43,200
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	DA	220.00	101.60	22 512
		i/d)	Rft.	320.00	101.60	32,512
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.	Rft.	950.00	27.85	26,458
		wire/trenches (rate for cables only). (3.029)	KII.	930.00	21.03	20,438
4	C-24/10a.ii	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.	340.00	23.70	8,058
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). (7.036)	Rft.	260.00	44.05	11,453
6	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	14.00	296.00	4,144
7	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") 45	Each	2.00	409.95	820

DETAILED COST ESTIMATE

		ELECTRICAL WOR	KS			
Sr. No.	2nd Bi-Annual- 2022 (July to Dec) Jhang	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
8	C-24/32-ii	Supply and erection of switches 10/15 Amp. (Recessed Type)	Each	16.00	96.95	1,551
9	C-24/36-ii	Supply and erection of 3 pin switch and Plug combined recessed type (10/15Amps)	Each	18.00	167.75	3,020
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				
	C-24/43-i	Double rod (80 watts) with two chokes and 2 starters.	Each	20.00	2,579.25	51,585
	C-24/43-ii	Single rod (40 watts) with one choke and one starter.	Each	15	1,444.20	21,663
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	5.00	3,380.85	16,904
		Sub Total (A)				221,367
12	N.S	Supply, Installation, testing and commissioning of following size 56" ceiling fan, complete with capacitor, hanging rod, canopy, blades, dimmers nuts and bolts complete in all respect.		6.00	7,000.00	42,000
		Sub Total (B)				42,000
		Sub Total (A+B)				263,367

DETAILED COST ESTIMATE

GUARD ROOM CIVIL WORK

	CIVIL WORK										
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	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	0.32	11,658.25	3,731					
		Anti-Termite									
2	26/43	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concenterate (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	169.00	9.90	1,673					
		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	0.53	29,723.50	15,753					
		Brick work in Foundation									
4	7/4/i	Pacca brick work in foundation and plinth in:-									
•	,, ,, ,, ,	Cement, sand mortar:- Ratio 1:5	100 Cft	2.49	29,928.60	74,522					
5	6/36	Horizontal D.P.C 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) 1 ¹ / ₂ " thick (40 mm)	100 Sft	0.53	9,240.05	4,897					
		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 ³ / ₄ " thick (20 mm) 47	100 Sft	0.70	6,900.05	4,830					

DETAILED COST ESTIMATE

GUARD ROOM CIVIL WORK

Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	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	2.59	32,331.00	83,737
		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	53.28	583.25	31,076
		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	1.71	31,946.30	54,628
		Deformed bars (Grade-00)	TUOKg	1./1	31,940.30	54,028
		Sand Filling				
10	7/30	Supplying and filling sand under floor; or plugging in wells.	100 Cft	0.64	2,982.00	1,908
		Brick ballast				
11	6/2	Dry rammed brick or stone ballast, 1 ¹ / ₂ " to 2"(40 mm to 50 mm) gauge.	100 Cft	0.21	9,768.00	2,051

DETAILED COST ESTIMATE

GUARD ROOM

Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)	
	8	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	0.11	38,723.50	4,260	
		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 Chequred Tiles) 300mmx300mm	Per Sft	64.00	225.65	14,442	
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	10.56	310.10	3,275	
15	11/10/b	Slab Plaster Cement plaster 3/8" (10 mm) thick under soffit of R.C.C. roof slabs only, upto 20' height. (Ratio:- 1:3)	100 Sft	0.64	3,963.30	2,537	
		Cement Plaster					
16	11/9	Cement plaster 1:4 upto 20' (6.00 m) height:-					
		3/4" (20 mm) thick	100 Sft	2.80	4,650.85	13,022	
		Pointing					
17	11/18/a	Cement pointing struck joints, on walls, upto 20' (6.00 m) hiehgt:-					
		a) ratio 1:2	100 Sft	4.56	3,776.40	17,220	
18	11/31	Extra cost of labour and material for red oxide pigment in cement pointing to match with the colour of bricks. 49	100 Sft	4.56	822.00	3,748	

DETAILED COST ESTIMATE

GUARD ROOM

	1nd BI-Annual-					
Sr. No.	2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Distempering				
19	11/23	Distempering:-				
		iii) three coats	100 Sft	3.44	1,446.35	4,975
		Steel Door				
20	25/62	P/F Iron door comprising of specified leaves made of 1-1/4"x1- 1/4"x3/16" MS angle iron for leaf frame, diagonal and horizontal braces duly welded with MS. sheet 18-SWG i/c the cost of sliding bolt, tower bolt and painting 3-coats but excluding the cost of Chowkat complete in all respect as approved and directed by the Engineer incharge.				
		(i) Single Leaf	Per Sft	24.50	1,030.85	25,256
21	12/17	Providing and fixing 2" wide MS/ GI Chowkat singel/double rebate made of 16 SWG MS sheet pressed / welded / supported with M.S. flat 1- 1/4"x1/8" i/c 6"long M.S. Flat 1"x1/8"hold fasts (6- Nos) welded/screwed, punching of lock hole covered with MS Box,coating with antirust paint including filling with cement sand mortar (1:8) and embedding hold fast in cement concrete (1:2:4) ,complete in all respect as approved and directed by Engineer Incharge				
		(ii) 10.50 " wide	Sft	15.31	660.45	10,113
		Aluminium Window				
22	25/52	Providing and fitting all types of glazed aluminium windows of anodised/ powder coated partly fixed and partly sliding using delux sections of approved manufacturer having frame size of 100 x 30 mm (4"x1-1/4") and leaf frame sections of 50 x 20 mm (2"x ³ /4"), all of 1.6mm thickness including 5 mm thick imported tinted glass with rubber gasket using approved standard latches, hardware etc., as approved by the Engineer in-				
		charge	Per Sft	32.00	1,336.55	42,770
					, ,	,

DETAILED COST ESTIMATE

GUARD ROOM

	1.101.4					
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Marble				
23	10/47	Providing and laying 3/4" thick full width Prepolished Marble slab for Vanities / Shelves / Treads/Window Cills , having Uniform texture (Spotless) with adhesive bond over 3/4" thick (1:2) cement sand mortor i/c the cost of matching sealer complete in all respects as approved and directed by the Engineer Incharge.				
		i) China Verona	Sft	6.00	496.95	2,982
24	9/5	Roof Insulation 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	0.90	11,779.95	10,602
25	9/45	Providing and Laying Insulation material of Extruded Polystyrene XPS in Rigid Insulation / Foam Board on roof or walls, Density 32-38Kg/M, compressive strength 250-400 kpa, R-value 5 per inch thickness and water obsorption (1% by volume, closed cell type structure) i/c cutting and placing in position. complete in all respect.				
		c) 2" thick	100 Sft	0.90	12,039.60	10,836
26	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	90.00	8.65	779
		Khurras				
27	9/15	Khuras on roof 2'x2'x6" (600 x 600 x 150 mm)	Each	1.00	905.30	905
		Bottom Khuras				
28	9/16	Bottom Khuras of brick masonry in cement mortar 1:6, 4'x2'x4 ¹ / ₂ " (1200x600x113 mm) over 3" (75				
		mm) cement concrete 1:4:8.	Each	1.00	1,900.60	1,901

PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS **SUPERVISION IN 16 CITIES OF PUNJAB** DETAILED COST ESTIMATE **GUARD ROOM CIVIL WORK** 1nd BI-Annual-Unit Rate Sr. Amount 2023 Description Quantity Unit (Jan to June) **(Rs)** (Rs) No. Jhang Carriage of 100 Cft. (2.83 cu.m) of all materials 29 1/1like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (crushed stone aggregate and bajri used in concrete items) (Lead 105 Km) Cft 106.80 75.85 8,100 **Total Amount Rs.** 456,530

CALCULATION OF QUANTITIES

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	35.00	3.00	3.00	315.00	Cft
					Total	315.00	Cft
					Total	0.32	%oCf
	Anti-Termite						
2	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concenterate (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	35.00	3.00		105.00	Sft
	Floor	1	8.00	8.00		64.00	Sft
					Total	169.00	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	35.00	3.00	0.50	52.50	Cft
					Total	52.50	Cft
					Total	0.53	%Cft

CALCULATION OF QUANTITIES CIVIL WORK

Sr. Length Width Height Description No. Oty. Unit No. **Brick work in Foundation** Pacca brick work in foundation and plinth in:-4 Cement, sand mortar:- Ratio 1:5 **Room wall** Step - 1 1 35.00 2.250 0.50 39.38 Cft Step - 2 1 0.50 32.81 35.00 1.875 Cft Step - 3 0.50 35.00 1.500 26.25 Cft 1 Step - 4 1 35.00 1.125 0.50 19.69 Cft Step - 5 1 35.00 0.750 5.00 131.25 Cft Total 249.38 Cft Total 2.49 %Cft **Horizontal D.P.C** Providing and laying damp proof course of cement 5 concrete 1 : 2 : 4 (using cement, sand and shingle), including bitumen coating :-(a) with one coat bitumen and one coat polythene sheet 500gauge i) $1\frac{1}{2}$ " thick (40 mm) Room wall 2 35.00 0.75 52.50 Sft Total 52.50 Sft Total 0.53 %Sft Vertical D.P.C Providing and laying vertical damp proof course 6 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 ³/₄ " thick (20 mm) Room wall 2.00 1 35.00 70.00 Sft Total 70.00 Sft Total 0.70 %Sft

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	35.00	0.75	10.50	275.63	Cft
	Parapet Wall	1	35.00	0.38	1.50	19.69	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	-2	4.00	0.75	4.00	(24.00)	Cft
					Total	258.94	Cft
					Total	2.59	%Cft
	Concrete Work						
8							
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	9.50	9.50	0.50	45.13	Cft
	Doors and window Lintels						
	D-1	1	4.50	0.75	0.75	2.53	Cft
	W-1	2	5.00	0.75	0.75	5.63	Cft
						53 30	<u> </u>
					Total	53.28	Cft

CALCULATION OF QUANTITIES CIVIL WORK

No. Length

Width Height

Qty.

53.28

Unit

Cft

Description

Sr.

No.

9

Steel Work.Image: Constraint of the second con

Detoffied bars (Grade-66)					55.20	Cit
Top Slab & lintel @ 6.75 lbs / Cft		6.75		=	359.65	lbs/cft
			Total	=	359.65	lbs/cft
			Total	=	163.18	Kg.
		Add 5% V	Wastage.	=	8.16	Kg.
			Total	=	171	Kg
				Total	1.71	%kg
Sand Filling						
Supplying and filling sand under floor; or plugging in wells.						
Floor	1	8.00	8.00	1.00	64.00	Cft
				Total	64.00	Cft
				Total	0.64	%Cft
Brick ballast						
Dry rammed brick or stone ballast, 1 ¹ / ₂ " to 2"(40 mm to 50 mm) gauge.						
Floor	1	8.00	8.00	0.33	21.12	Cft
				Total	21.12	Cft
				Total	0.21	%Cft
P.C.C						
Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
Ratio 1: 2: 4						
Floor	1	8.00	8.00	0.17	10.67	Cft
		+		Total	0.11	%Cft
	Top Slab & lintel @ 6.75 lbs / Cft Sand Filling Supplying and filling sand under floor; or plugging in wells. Floor Brick ballast Dry rammed brick or stone ballast, 1½" to 2"(40 mm to 50 mm) gauge. Floor P.C.C Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): Ratio 1: 2: 4	Top Slab & lintel @ 6.75 lbs / Cft	Top Slab & lintel @ 6.75 lbs / Cft 6.75 Add 5% V Add 5% V Add 5% V Add 5% V Sand Filling 1 Supplying and filling sand under floor; or plugging in wells. 1 Floor 1 Brick ballast 1 Dry rammed brick or stone ballast, 1½" to 2"(40 mm to 50 mm) gauge. 1 Floor 1 Floor 1 Brick ballast 1 Dry rammed brick or stone ballast, 1½" to 2"(40 mm to 50 mm) gauge. 1 Floor 1 Rior 1 Record 1 Ratio 1: 2: 4 1	Top Slab & lintel @ 6.75 lbs / Cft 6.75 Image: Constraint of the second seco	Top Slab & lintel @ 6.75 lbs / Cft6.75=TotalTotal=TotalTotal=Add 5% Wastage.=Add 5% Wastage.=TotalImage: Comparison of the second	Top Slab & lintel @ 6.75 lbs / Cft 6.75 = 359.65 Total = 163.18 Add 5% Wastage. = 8.16 Total = 171 Add 5% Wastage. = 8.16 Total = 171 Total = 171 Sand Filling Image: Second Secon

CALCULATION OF QUANTITIES

					· · · · · ·		
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 Chequred Tiles) 300mmx300mm	1	8.00	8.00		64.00	Sft
					Total	64.00	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	32.00		0.33	10.56	Sft
					Total	10.56	Sft
15	Slab Plaster Cement plaster 3/8" (10 mm) thick under soffit of R.C.C. roof slabs only, upto 20' height. (Ratio:- 1:3)						
		1	8.00	8.00		64.00	Sft
					Total	0.64	%Sft
	Cement Plaster						
16	Cement plaster 1:4 upto 20' (6.00 m) height:-						
	3/4" (20 mm) thick						
	Guard Room	-	0.00		10.50	1 40 00	
		2	8.00		10.50	168.00	Sft
	D/d Deers and Window	2	8.00		10.50	168.00	Sft
	D/d Doors and Window	1	2 50		7.00	(24.50)	65
	D-1 W-1	-1 -2	3.50 4.00		4.00	(24.50) (32.00)	Sft Sft
	vv - 1	-2	4.00		4.00	(32.00)	511
					Total	279.50	Sft
					Total	2.80	%Sft

CALCULATION OF QUANTITIES CIVIL WORK

Sr.	Description	No.	Length	Width	Height	Qty.	Unit
No.	Pointing		0		U	~~	
17	Cement pointing struck joints, on walls, upto 20'						
17	(6.00 m) hiehgt:-						
	a) ratio 1:2						
	Outer Walls	1	38.00		12.00	456.00	Sft
		-	20.00		12.00		bit
					Total	456.00	Sft
					Total	4.56	%Sf
18	Extra cost of labour and material for red oxide						
	pigment in cement pointing to match with the						
	colour of bricks.				Total	4.56	%Sf
	Distempering						
19	Distempering:-						
	iii) three coats						
	Guard Room						
		2	8.00		10.50	168.00	Sft
		2	8.00		10.50	168.00	Sft
	Ceiling	1	8.00	8.00		64.00	Sft
	D/d Doors and Window						
	D-1	-1	3.50		7.00	(24.50)	Sft
	W-1	-2	4.00		4.00	(32.00)	Sft
					Total	343.50	Sft
					Total	3.44	%Sf
	Weeder Deer						
20	Wooden Door						
20	P/F Iron door comprising of specified leaves made of 1-1/4"x1- 1/4"x3/16" MS angle iron for leaf						
	frame, diagonal and horizontal braces duly welded						
	with MS. sheet 18-SWG i/c the cost of sliding bolt,						
	tower bolt and painting 3-coats but excluding the						
	cost of Chowkat complete in all respect as						
	approved and directed by the Engineer incharge.						
	D-1	1	3.50		7.00	24.50	Sft
					Total	24.50	Sft

GUARD ROOM CALCULATION OF QUANTITIES

Sr.	Description	No.	Length	Width	Height	Qty.	Unit
No.	-		8		8	C 7	
21	Providing and fixing 2" wide MS/ GI Chowkat singel/double rebate made of 16 SWG MS sheet pressed / welded / supported with M.S. flat 1- 1/4"x1/8" i/c 6"long M.S. Flat 1"x1/8"hold fasts (6- Nos) welded/screwed, punching of lock hole covered with MS Box,coating with antirust paint including filling with cement sand mortar (1:8) and embedding hold fast in cement concrete (1:2:4) ,complete in all respect as approved and directed by Engineer Incharge						
	(ii) 10.50 " wide	1	17.50	0.875		15.31	Sft
					Total	15.31	Sft
	Aluminium Window						
22	Providing and fitting all types of glazed aluminium windows of anodised/ powder coated partly fixed and partly sliding using delux sections of approved manufacturer having frame size of 100 x 30 mm (4"x1-1/4") and leaf frame sections of 50 x 20 mm (2"x¾"), all of 1.6mm thickness including 5 mm thick imported tinted glass with rubber gasket using approved standard latches, hardware etc., as approved by the Engineer in-charge						
	W-1	2	4.00		4.00	32.00	Sft
					Total	32.00	Sft
23	Marble Providing and laying 3/4" thick full width Prepolished Marble slab for Vanities / Shelves / Treads/Window Cills , having Uniform texture (Spotless) with adhesive bond over 3/4" thick (1:2) cement sand mortor i/c the cost of matching sealer complete in all respects as approved and directed by the Engineer Incharge.						
	i) China Verona	2	4.00	0.75		6.00	Sft

PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB GUARD ROOM CALCULATION OF QUANTITIES CIVIL WORK										
Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit			
24	Roof Insulation 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	9.50	9.50	Total	90.25 90.25	Sft Sft			
					Total	0.90	%Sft			

	PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB GUARD ROOM 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	90.00	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'x4 ¹ / ₂ " (1200x600x113 mm) over 3" (75										
	mm) cement concrete 1:4:8.	1				1.00	Each				

	PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB DETAILED COST ESTIMATE GUARD ROOM PLUMBING WORKS								
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)			
1	19-47	uPVC Pipe 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	218.00	6,540			
		Cost of 1 No.				6,540.00			

	PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB									
	DETAILED COST ESTIMATE GUARD ROOM ELECTRICAL WORKS									
Sr. No.	2nd Bi-Annual- 2022 (July to Dec) Jhang	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)				
		Scheduled Items (A)								
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	86.40	12,960				
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.	50.00	101.60	5,080				
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.	150.00	27.85	4,178				
4	C-24/10a.ii	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).		50.00	22.70	1.102				
		(7.029)	Rft.	50.00	23.70	1,185				
	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). (7.036)		100.00	44.05	4,405				
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	1.00	296.00	296				
6	C-24/32-ii	Supply and erection of switches 10/15 Amp. (Recessed Type)	Each	1.00	96.95	97				
7	C-24/36-ii	Supply and erection of 3 pin switch and Plug combined recessed type (10/15Amps)	Each	5.00	167.75	839				
8	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	1,444.20	2,888				
		Sub Total (A)				31,928				
9	N.S	Supply, Installation, testing and commissioning of following size 56" ceiling fan, 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)				7,000				
		Cult Total (A . D)				38,928				
		Sub Total (A+B)				30,928				

DETAILED COST ESTIMATE

WORK SHOP

	1nd BI-Annual-					
Sr. No.	2023 (Jan to June) Jhang	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	0.49	11,658.25	5,713
		Anti-Termite				
2	26/43	Spraying termite proofing by using liquid				
		FMC/Biflex/Terminex Exin/Ms Hextar or				
		equivalent @ specified suspension concenterate				
		(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.	96		0.00	< 0.0 7
			Sft	606.75	9.90	6,007
		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	0.81	29,723.50	24,076
		(1) Kallo 1. 4. 8	100 CII	0.81	29,725.50	24,070
		Brick work in Foundation				
4	7/4/i	Pacca brick work in foundation and plinth in:-	100 06	2.00	20.029.00	116 700
		Cement, sand mortar:- Ratio 1:5	100 Cft	3.90	29,928.60	116,722
		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) 1 ¹ / ₂ " thick (40 mm)	100 Sft	0.77	9,240.05	7,115
		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:	100 55			_ · -
		ii) Ratio 1:3 ³ / ₄ " thick (20 mm)	100 Sft	1.03	6,900.05	7,107
	1	64				

DETAILED COST ESTIMATE

WORK SHOP

No. (Jan to June) Jhang Brick work in Super Structure 7 7/5 Pacca brick work in ground floor:- i) Cement, sand mortar:- Ratio 1:5 100 Cft	antity 4.71	Unit Rate (Rs) 32,331.00	Amount (Rs)
7 7/5 Pacca brick work in ground floor:- i) Cement, sand mortar:- Ratio 1:5 100 Cft	4.71	32 331 00	
i) Cement, sand mortar:- Ratio 1:5 100 Cft	4.71	32 331 00	
	4.71	32 331 00	
		52,551.00	152,279
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	80.58	583.25	46,997
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	2.30	31,946.30	73,476
Sand Filling			
10 7/30 Supplying and filling sand under floor; or plugging			_
in wells. 100 Cft	1.10	2,982.00	3,280
Brick ballast			
116/2Dry rammed brick or stone ballast, 1½" to 2"(40 mm to 50 mm) gauge.100 Cft	0.36	9,768.00	3,516
	0.30	7,700.00	3,310
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 65 100 Cft	0.18	38,723.50	6,970

DETAILED COST ESTIMATE

WORK SHOP

Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)			
		Porcelain Tile							
13	10/42/c	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.							
		c) (Non-Skid Chequred Tiles) 300mmx300mm	Per Sft	110.44	225.65	24,921			
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	14.52	310.10	4,503			
15	10/24	Ceramic Tile 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	17.00	255.50	4,344			
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	70.00	310.10	21,707			

DETAILED COST ESTIMATE

WORK SHOP

		CIVIL WORK				
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	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	1.10	3,963.30	4,360
		Cement Plaster				
18	11/9	Cement plaster 1:4 upto 20' (6.00 m) height:-				
10	11/9	3/4" (20 mm) thick	100 Sft	6.45	4,650.85	29,998
			100 51	0.45	4,050.05	27,770
		Pointing				
19	11/18/a	Cement pointing struck joints, on walls, upto 20' (6.00 m) hiehgt:-				
		a) ratio 1:2	100 Sft	5.64	3,776.40	21,299
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	5.64	822.00	4,636
		Distempering				
21	11/23	Distempering:-				
		iii) three coats	100 Sft	12.72	1,446.35	18,398
22	12/52	Wooden Door P/F 1-1/2" thick solid flush door comprising of 2.5 mm thick Deodar/Ash/Oak ply with grooves , compressed over 2.5 mm thick commercial ply over 1" thick packing wood in style and rails under proper pressure i/c the cost of nails, tower bolt , handles, glue, sawing charges and lacquar polishing to show the grains of ply properly, sand papering and 3/8" thick matching wooden lipping as approved and directed by the Engineer Incharge.	Per Sft	42.00	795.70	33,419
		Formica Sheet				
23	Rate Analysis	Providing and fixing Formica sheet on bathroom door as per drawing and design complete in all respect.	Sft	17.50	75.11	1,314
			SIL	1/.30	/ J.11	1,314

DETAILED COST ESTIMATE

WORK SHOP

Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
24	12/17	Providing and fixing 2" wide MS/ GI Chowkat singel/double rebate made of 16 SWG MS sheet pressed/welded / supported with M.S. flat 1- 1/4"x1/8" i/c 6"long M.S. Flat 1"x1/8"hold fasts (6- Nos) welded/screwed, punching of lock hole covered with MS Box,coating with antirust paint including filling with cement sand mortar (1:8) and embedding hold fast in cement concrete (1:2:4) ,complete in all respect as approved and directed by Engineer Incharge				
		(ii) 10.50 " wide	Sft	15.31	660.45	10,113
25	12/28	Providing and fixing 3"x4-1/2" chowkat for doors, windows and C. windows, including holdfast, etc.				
		b) Deodar wood	Sft	7.56	844.45	6,386
26	12/53	Providing and laying 24 SWG aluminum kick plate 4" (100 mm) high, fixed with screws 4" (100 mm) centre to centre, on bottom rail of flush doors only of commercial ply.	Rft	5.00	79.75	399
27	12/58	Providing and fixing ornamental wooden architrave 3" x (1 ¹ / ₂ " tapered to ¹ / ₄ ") all along the door frame complete in all respect.				
		b) Deodar wood architrave	Sft	4.38	100.50	440
		Lock				
28	12/22	Providing and fixing, approved quality mortice lock.	Each	2.00	774.00	1,548
	10/5/	Paint				
29	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	1,460.05	1,226
		ii)Two coat	100 Sft	0.84	841.65	707

DETAILED COST ESTIMATE

WORK SHOP

	1nd DI Annual					
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Aluminium Window				
30	25/52	Providing and fitting all types of glazed aluminium windows of anodised/ powder coated partly fixed and partly sliding using delux sections of approved manufacturer having frame size of 100 x 30 mm (4"x1-1/4") and leaf frame sections of 50 x 20 mm (2"x ³ /4"), all of 1.6mm thickness including 5 mm thick imported tinted glass with rubber gasket using approved standard latches, hardware etc., as approved by the Engineer in-charge	Per Sft	20.00	1,336.55	26,731
		Roof Insulation				
31	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	1.46	11,779.95	17,199
32	9/45	Providing and Laying Insulation material of Extruded Polystyrene XPS in Rigid Insulation / Foam Board on roof or walls, Density 32-38Kg/M, compressive strength 250-400 kpa, R-value 5 per inch thickness and water obsorption (1% by volume, closed cell type structure) i/c cutting and placing in position. complete in all respect.				
		c) 2" thick	100 Sft	1.46	12,039.60	17,578
33	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	292.00	8.65	2,526
	e 11 -	Khurras	F (-		
34	9/15	Khuras on roof 2'x2'x6" (600 x 600 x 150 mm)	Each	2.00	905.23	1,810
		Bottom Khuras				
35	9/16	Bottom Khuras of brick masonry in cement mortar 1:6, 4'x2'x4 ¹ / ₂ " (1200x600x113 mm) over 3" (75 mm) cement concrete 1:4:8.	Each	2.00	1,900.60	3,801

DETAILED COST ESTIMATE

WORK SHOP

	1nd BI-Annual-					
Sr. No.	2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Shed				
		Excavation				
36	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	1.86	11,658.25	21,684
		Anti-Termite				
37	26/43	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concenterate (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.		818.00	9.90	8,098
		Plain Cement Concrete				
38	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	1.16	29,723.50	34,479
		Concrete Work				
39	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 C (nominal mix 1: 2: 4) 70	P.Cft	540.98	473.85	256,341
		$(2) \text{ippo C (nonlined link 1, 2, 4)} \qquad (0)$	1.011	5-0.90	т/3.03	250,541

DETAILED COST ESTIMATE

WORK SHOP

	1nd BI-Annual-								
Sr. No.	2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)			
		Steel Work.							
40	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	30.93	31,946.30	988,099			
		Brick work in Foundation							
41	7/4/i	Pacca brick work in foundation and plinth in:-							
		Cement, sand mortar:- Ratio 1:5	100 Cft	4.80	29,928.60	143,657			
		Cement Plaster							
42	11/9	Cement plaster 1:4 upto 20' (6.00 m) height:-	100.00		4 670 07	0.444			
		3/4" (20 mm) thick	100 Sft	2.03	4,650.85	9,441			
		Sand Filling							
43	7/30	Supplying and filling sand under floor; or plugging							
		in wells.	100 Cft	4.80	2,982.00	14,314			
		Sub Base Course							
44	18/3/a/ (ii) + 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 querry to site, actual compacted depth shall be considered for payment)							
			100Cft	1.58	16,138.95	25,500			
						· ·			

DETAILED COST ESTIMATE

WORK SHOP

		CIVIL WORK				
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Water Bound Macadam				
45	18/4/a + 1/1	Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from sargodha querry to site, actual compacted depth shall be considered for payment)	100Cft	1.58	21,253.90	33,581
			Toolen	1.00	21,200.00	20,001
46	10/41	Tuff Paver Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope. complete in all respect. (50% Grey / 50% Coloured)				
		c) 80-mm thick	Per Sft	480.00	197.4	94,752
47	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (crushed stone aggregate and bajri used in concrete items) (Lead 105 Km)	Cft	749.50	60.20	45,118
		Parking Shed				
48	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.	56	100.00	2 270 00	1.000 - 200
			Sft	480.00	2,270.00	1,089,600
		72 Total Rs.				3,477,285

CALCULATION OF QUANTITIES

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 9" Thick Wall	1	47.00	3.00	3.00	423.00	Cft
	Center wall 4-1/2" Thick Wall	1	8.63	2.50	3.00	64.69	Cft
					Total	487.69	Cft
					Total	0.49	%oCf
	Anti-Termite						
2	Spraying termite proofing by using liquid						
-	FMC/Biflex/Terminex Exin/Ms Hextar or						
	equivalent @ specified suspension concenterate						
	(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 9" Thick Wall	1	47.00	9.00		423.00	Sft
	Center wall 4-1/2" Thick Wall	1	8.63	8.50		73.31	Sft
	Floor	1	7.75	14.25		110.44	Sft
							~~~
					Total	606.75	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 9" Thick Wall	1	47.00	3.00	0.50	70.50	Cft
	Center wall 4-1/2" Thick Wall	1	8.63	2.50	0.50	10.78	Cft
					Total	81.28	Cft
					Total	0.81	%Cft
	Brick work in Foundation						
4	Pacca brick work in foundation and plinth in:-						
	Cement, sand mortar:- Ratio 1:5						

## CALCULATION OF QUANTITIES CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
110	Office wall 9'' Thick Wall						
	Step - 1	1	47.00	2.250	0.50	52.88	Cft
	Step - 2	1	47.00	1.875	0.50	44.06	Cft
	Step - 3	1	47.00	1.500	0.50	35.25	Cft
	Step - 4	1	47.00	1.125	0.50	26.44	Cft
	Step - 5	1	47.00	0.750	5.00	176.25	Cft
	Center wall 4-1/2" Thick Wall						
	Step - 1	1	8.63	1.875	0.50	8.09	Cft
	Step - 2	1	8.63	1.500	0.50	6.47	Cft
	Step - 3	1	8.63	1.125	0.50	4.85	Cft
	Step - 4	1	8.63	0.750	5.50	35.58	Cft
					Total	389.86	Cft
					Total	3.90	%Cft
	Horizontal D.P.C						
5	Providing and laying damp proof course of cement						
5	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 9" Thick Wall	2	47.00	0.75		70.50	Sft
	Center wall 4-1/2" Thick Wall	1	8.63	0.75		6.47	Sft
		1	0.05	0.75	Total	76.97	Sft
					Total	70.97	SIL
					Total	0.77	%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 ³ / ₄ " thick (20 mm)						
	Office wall 9" Thick Wall	1	47.00		2.00	94.00	Sft
	Center wall 4-1/2" Thick Wall	1	8.63		1.00	8.63	Sft
					Total	102.63	Sft
					Total	1.03	%Sft
	Brick work in Super Structure						
7	Pacca brick work in ground floor:-						
_	i) Cement, sand mortar:- Ratio 1:5						
	Office wall 9" Thick Wall	1	47.00	0.75	11.00	387.75	Cft
	Center wall 4-1/2" Thick Wall 74	1	8.63	0.75	11.00	71.16	Cft

### WORK SHOP CALCULATION OF QUANTITIES

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Parapet Wall	1	47.00	0.38	2.50	44.06	Cft
	Entrance step	2	10.00	1.00	0.75	15.00	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	-1	4.00	0.75	4.00	(12.00)	Cft
	V-1	-1	2.00	0.75	2.00	(3.00)	Cft
					Total	471.47	Cft
					Total	4.71	%Cft
8	<b>Concrete Work</b> 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	9.25	15.75	0.50	72.84	Cft
	Doors and window Lintels	-					
	D-1	1	4.50	0.38	0.75	1.27	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	3.00	0.75	0.75	1.69	Cft
					Total	80.58	Cft
					IULAI	00.30	CII

### WORK SHOP CALCULATION OF QUANTITIES

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)					80.58	Cft
	Top Slab & lintel @ 6 lbs / Cft		6.00		=	483.47	lbs/cft
	*			Total	=	483.47	lbs/cft
				Total	=	219.36	Kg.
			Add 5% V	Wastage.	=	10.97	Kg.
				Total	=	230	Kg
					Total	2.30	%kg
	Sand Filling						
10	Supplying and filling sand under floor; or plugging in wells.						
	Floor	1	7.75	14.25	1.00	110.44	Cft
					Total	110.44	Cft
					Total	1.10	%Cft
	Brick ballast						
11	Dry rammed brick or stone ballast, $1\frac{1}{2}$ " to 2"(40 mm to 50 mm) gauge.						
	Floor	1	7.75	14.25	0.33	36.44	Cft
					Total	36.44	Cft
					Total	0.36	%Cft
	P.C.C				Total	0.50	70010
12	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	Ratio 1: 2: 4						
	Floor	1	7.75	14.25	0.17	18.41	Cft
					1		

# CALCULATION OF QUANTITIES

S-							
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.						
	c) (Non-Skid Chequred Tiles) 300mmx300mm	1	7.75	14.25		110.44	Sft
					Total	110.44	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					11.50	
	(i) 400 mm x 400 mm	1	44.00	1.00	0.33	14.52	Sft
					Total	14.52	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	4.25	4.00		17.00	Sft
					Total	17.00	Sft
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 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" ⁷⁷						

## WORK SHOP

# CALCULATION OF QUANTITIES

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Washroom	1	14.00		5.00	70.00	Sft
					Total	70.00	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	7.75	14.25		110.44	Sft
	Cement Plaster				Total	1.10	%Sf
18	Cement plaster 1:4 upto 20' (6.00 m) height:-						
	3/4" (20 mm) thick						
	Office wall 9" Thick Wall	1	47.00		11.00	517.00	Sft
	Center wall 4-1/2" Thick Wall	2	8.63		11.00	189.75	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	2.00		2.00	(4.00)	Sft
					Total	644.75	Sft
					Total	6.45	%Sf
	Pointing						
19	Cement pointing struck joints, on walls, upto 20' (6.00 m) hiehgt:-						
	a) ratio 1:2						
	Outer Walls	1	47.00		12.00	564.00	Sft
					Total	5.64	%Sf
20	Extra cost of labour and material for red oxide pigment in cement pointing to match with the colour of bricks.				Total	5.64	%Sf
					Total	2.04	7001
	Distempering						
	Distempering:-						
21				1			
21	iii) three coats	-				4	
21	iii) three coats Office wall 9" Thick Wall	2	47.00		11.00	1,034.00	
21	iii) three coats Office wall 9" Thick Wall Center wall 4-1/2" Thick Wall	2	8.63	14.25	11.00 11.00	189.75	Sft Sft
21	iii) three coats Office wall 9" Thick Wall Center wall 4-1/2" Thick Wall Slab			14.25			
21	iii) three coats Office wall 9" Thick Wall Center wall 4-1/2" Thick Wall	2	8.63			189.75	Sft

### WORK SHOP CALCULATION OF QUANTITIES

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	W-1	-1	4.00		4.00	(16.00)	Sft
	V-1	-1	2.00		2.00	(4.00)	Sft
					Total	1,272.19	Sft
					Total	12.72	%Sft
	Wooden Door						
22	P/F 1-1/2" thick solid flush door comprising of 2.5 mm thick Deodar/Ash/Oak ply with grooves , compressed over 2.5 mm thick commercial ply over 1" thick packing wood in style and rails under proper pressure i/c the cost of nails, tower bolt , handles, glue, sawing charges and lacquar polishing to show the grains of ply properly, sand papering and 3/8" thick matching wooden lipping as approved and directed by the Engineer Incharge.						
	D-1	1	3.50		7.00	24.50	Sft
	D-2	1	2.50		7.00	17.50	Sft
					Total	42.00	Sft

#### WORK SHOP CALCULATION OF QUANTITIES

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Formica Sheet						
23	Providing and fixing Formica sheet on bathroom door as per drawing and design complete in all respect.						
	D-2	1	2.50		7.00	17.50	Sft
24	Providing and fixing 2" wide MS/ GI Chowkat singel/double rebate made of 16 SWG MS sheet pressed/welded / supported with M.S. flat 1- 1/4"x1/8" i/c 6"long M.S. Flat 1"x1/8"hold fasts (6- Nos) welded/screwed, punching of lock hole covered with MS Box,coating with antirust paint including filling with cement sand mortar (1:8) and embedding hold fast in cement concrete (1:2:4) ,complete in all respect as approved and directed by Engineer Incharge						
	(ii) 10.50 " wide						
	D-1	1	17.50	0.875		15.31	Sft
					Total	15.31	Sft
25	Providing and fixing 3"x4-1/2" chowkat for doors, windows and C. windows, including holdfast, etc.						
	b) Deodar wood						
	D-2	1	16.50	0.46		7.56	Sft
					Total	7.56	Sft
26	Providing and laying 24 SWG aluminum kick plate 4" (100 mm) high, fixed with screws 4" (100 mm) centre to centre, on bottom rail of flush doors only of commercial ply.	2	2.50			5.00	Rft
27	Providing and fixing ornamental wooden architrave 3" x (1 ¹ / ₂ " tapered to ¹ / ₄ ") all along the door frame complete in all respect.						
	b) Deodar wood architrave						
	D-1	1	17.50	0.25		4.38	Sft
					Total	4.38	Sft

# CALCULATION OF QUANTITIES

Sr.	Description	No.	Length	Width	Height	Qty.	Unit
No.	Lock		0		6	~ ~	
28	<b>LOCK</b> Providing and fixing, approved quality mortice						
20	lock.	2				2.00	Each
	Paint						
29	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
	Aluminium Window						
30	Providing and fitting all types of glazed aluminium						
	windows of anodised/ powder coated partly fixed						
	and partly sliding using delux sections of approved						
	manufacturer having frame size of $100 \times 30$ mm $(4!=1,1/4!!)$ and have frame size of $50 = 20$ mm						
	$(4"x1-1/4")$ and leaf frame sections of 50 x 20 mm $(2"x^{3}4")$ , all of 1.6mm thickness including 5 mm						
	thick imported tinted glass with rubber gasket						
	using approved standard latches, hardware etc., as						
	approved by the Engineer in-charge						
	upproved by the Engliseer in charge						
	W-1	1	4.00		4.00	16.00	Sft
	V-1	1	2.00		2.00	4.00	Sft
					Total	20.00	Sft
	Roof Insulation						
31	Single layer of tiles 9"x41/2"x11/2" (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	9.25	15.75		145.69	Sft
		1	7.23	13.13	Total	145.69	Sft
					10101	1 10.09	511
					Total	1.46	%Sft
32	Supplying and laying polythene sheet over D.P.C.						
	under floors and on roofs, etc.					<b>A</b> DA AA	~
	ii) 500 gauge (.005" thick)				Total	292.00	Sft
	Khurras						

#### WORK SHOP CALCULATION OF QUANTITIES

No.							
	Bottom Khuras						
34	Bottom Khuras of brick masonry in cement mortar						
	1:6, 4'x2'x4 ¹ / ₂ " (1200x600x113 mm) over 3" (75						
	mm) cement concrete 1:4:8.	2				2.00	Eac
	Excavation						
35	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	2	13.00	13.00	4.00	1,352.00	Cft
	Workshop Pit	1	20.00	4.75	5.33	506.35	Cft
					Total	1,858.35	Cft
					Total	1.86	%oC
	Anti-Termite						
36	Spraying termite proofing by using liquid						
	FMC/Biflex/Terminex Exin/Ms Hextar or						
	equivalent @ specified suspension concenterate						
	(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.						
	approved by the Engineer incharge.						
	Floor	1	15.00	32.00		480.00	Sft
	Columns	2	13.00	13.00		338.00	Sft
					Total	818.00	Sft
37	Plain Cement Concrete Cement concrete plain including placing,						
51	compacting, finishing and curing complete						
	(including screening and washing of stone						
	aggregate):						
	(i) Ratio 1: 4: 8						
	Columns	2	13.00	13.00	0.25	84.50	Cft
	Workshop Pit	1	20.00	4.75	0.33	31.35	Cft
	() officially 110					1	
					Total	115.85	Cft

# CALCULATION OF QUANTITIES

a	1						
Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Concrete Work						
38	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.):-						
	radification 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 $(i) = 0$ (i) the second s						
	6(a) (i)&(ii) above not requiring form work (i.e.						
	horizontal shuttering) complete in all respects:-		10.00	10.00	1.50	122.00	
	Columns Footing	2	12.00	12.00	1.50	432.00	Cft
	Workshop Pit	1	20.00	4.75	0.33	31.35 60.75	Cft
	Columns Plinth beam	2	3.00	1.50 0.75	6.75 1.50	16.88	Cft Cft
		1	15.00	0.75			
					Total	540.98	Cft
	Steel Work.						
39	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)					540.98	Cft
	Columns @ 12 lbs / Cft		12.00		=	6,492	lbs/cf
				Total	=	6,492	lbs/cf
				Total	=	2,945	Kg.
			Add 5% V	Wastage.	=	147	Kg.
				Total	=	3,093	Kg
					Total	30.93	%kg
	Brick work in Foundation						
40	Pacca brick work in foundation and plinth in:-						
	Cement, sand mortar:- Ratio 1:5						
		1	45.00	1.125	4.50	227.81	Cft

## CALCULATION OF QUANTITIES CIVIL WORK

Sr.	Description	No.	Length	Width	Height	Qty.	Unit
No.		1101	Longon	·· · · ·	might	2.5.	
	Cement Plaster						
41	Cement plaster 1:4 upto 20' (6.00 m) height:-						
	3/4" (20 mm) thick	1	45.00		4.50	202.50	Sft
					Total	2.03	%Sft
	Sand Filling						
42	Supplying and filling sand under floor; or plugging in wells.						
	Shed	1	15.00	32.00	1.00	480.00	Cft
					Total	480.00	Cft
					Total	4.80	%Cft
	Sub Base Course						
43	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 querry to site, actual compacted depth shall be considered for payment)						
	Shed	1	15.00	32.00	0.33	158.40	Cft
					Total	1.58	%Cft

#### WORK SHOP CALCULATION OF QUANTITIES

Sr.	Description	No.	Length	Width	Height	Qty.	Unit
No.	-	1.00	20080		8	۷.,۰	
44	Water Bound Macadam Providing and laying base course of crushed stone						
	(Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as						
	directed by the engineer incharge. (Crushed stone aggregate from sargodha querry to site, actual compacted depth shall be considered for payment)						
45 Providin	Shed	1	15.00	32.00	0.33	158.40	Cft
					Total	1.58	%Cf
45	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	15.00	32.00		480	Sft
	Parking Shed						
46	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	15.00	32.00		480	Sft

#### DETAILED COST ESTIMATE

## WORK SHOP

Sr.		Description         Schedule Item         Indian W.C         Providing and fitting glazed earthen ware water closet, squatter type (Orisa pattern), combined with foot rest.         i) white         Providing and fitting plastic made low down flushing cistern 13.63 litre (3 gallons) capacity, including bracket set, copper connection, etc. complete.         i) white         Providing and fitting glazed earthen ware wash hand	Each	Qty. 1.00	Unit Rate (Rs)	Amount (Rs)
2	19-13-i	Indian W.C Providing and fitting glazed earthen ware water closet, squatter type (Orisa pattern), combined with foot rest. i) white Providing and fitting plastic made low down flushing cistern 13.63 litre (3 gallons) capacity, including bracket set, copper connection, etc. complete. i) white Providing and fitting glazed earthen ware wash hand	Each			
2	19-13-i	Providing and fitting glazed earthen ware water closet, squatter type (Orisa pattern), combined with foot rest. i) white Providing and fitting plastic made low down flushing cistern 13.63 litre (3 gallons) capacity, including bracket set, copper connection, etc. complete. i) white Providing and fitting glazed earthen ware wash hand	Each			
2	19-13-i	squatter type (Orisa pattern), combined with foot rest. i) white Providing and fitting plastic made low down flushing cistern 13.63 litre (3 gallons) capacity, including bracket set, copper connection, etc. complete. i) white Providing and fitting glazed earthen ware wash hand	Each			
		Providing and fitting plastic made low down flushing cistern 13.63 litre (3 gallons) capacity, including bracket set, copper connection, etc. complete. i) white Providing and fitting glazed earthen ware wash hand	Each			
		cistern 13.63 litre (3 gallons) capacity, including bracket set, copper connection, etc. complete. i) white Providing and fitting glazed earthen ware wash hand	Each	1.00	3 061 65	2.0/2
3	19-7-i	Providing and fitting glazed earthen ware wash hand		1.00	3 061 65	2.072
3	19-7-i	6 6 6			5,001.05	3,062
		basin 56x40 cm (22"x16") including bracket set, waste pipe and waste coupling, etc.				
		i) white, with pedestal	Each	1.00	6,160.50	6,161
	10.00					
4	19-30	Providing and fixing, chromium plated mixing valve, for wash hand basin, sink or shower.	Each	1.00	2,477.00	2,477
5	19-16	Providing and fixing, chromium plated soap dish.	Each	1.00	538.60	539
6	19-20	Providing and fixing looking glass 55x40 cm (22"x16") size	Each	1.00	800.30	800
7	19-27	Providing and fixing chromium plated bib cock:-				
		i) 2 cm (¾")	Each	1.00	1,081.60	1,082
8	19-28	Providing and fixing chromium plated tee stop cock 15mm ( ¹ / ₂ ").	Each	3.00	1,081.60	3,245
9	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	670.20	670
10	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").		1.00	1,178.75	1,179
		· · · · · · · · · · · · · · · · · · ·	Lucii	1.00	1,170.75	1,177
11	19-35-ii	Providing and fitting "P" trap:-				
		ii) 10 cm (4") glazed.	Each	2.00	323.25	647

#### DETAILED COST ESTIMATE

## WORK SHOP

	1	PLUMBING WORKS	1			
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Qty.	Unit Rate (Rs)	Amount (Rs)
		PPRC Pipe				
12	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	Df4	40.00	10 75	1.050
		(i) (1/2") 20 mm (ii) (3/4") 25 mm	Rft Rft	40.00	48.75 67.15	1,950 1,679
			KIL	23.00	07.15	1,079
13	23/46	Valve Providing and fixing CP heavy duty brass Ball valve				
15	23/40	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	2.00	1,545.60	3,091
		uPVC Pipe				
14	19-47	Providing, fixing, testing and commissioning of $\mu$ -PVC (Unplasticized polyvinyl Chloride)Nikasi /waste pipe make of dadex/Popular/Beta/BBJ plain/ socket ended conforming to code EN-1401 of specified SDR (Standard Dimension Ratio)including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge				
		Type (SDR 41/SN-4)				
		(iii) 2"(60 mm)	Rft	10.00	89.25	893
		(v) 4"(110 mm)	Rft	30.00	218.00	6,540
		Total Rs. (A)				36,474
15	N.S	Non-Schedule Item 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.		1.00	18,800.57	18,801
		Total Rs. (B)				18,801
		Total An&Junt Rs. (A + B)				55,275

## DETAILED COST ESTIMATE

#### WORK SHOP

## ELECTDICAL WODES

		ELECTRICAL WOR	KS			
Sr. No.	2nd Bi-Annual- 2022 (July to Dec) Jhang	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
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)		400.00	86.40	34,560
						0 1,0 00
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)		250.00	101.60	25,400
		, 				
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.	190.00	27.85	5,292
4	C-24/10a.ii	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.	350.00	23.70	8,295
		where the teneness (rate for eaches only). (7.625)		220.00	20170	0,275
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). (7.036)	Rft.	325.00	44.05	14,316
6	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")		2.00	296.00	592
7	C-24/32-ii	Supply and erection of switches 10/15 Amp. (Recessed Type)	Each	2.00	96.95	194
8	C-24/36-ii	Supply and erection of 3 pin switch and Plug combined recessed type (10/15Amps) 88	Each	7.00	167.75	1,174

### DETAILED COST ESTIMATE

#### WORK SHOP

## ELECTRICAL WORKS

	[	ELECTRICAL WOR	KS			
Sr. No.	2nd Bi-Annual- 2022 (July to Dec) Jhang	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
9	C-24/43-ii	Single rod (40 watts) with one choke and one starter.	Each	3	1,444.20	4,333
10	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.		1.00	2 290 95	2 291
		(a) Plastic body (ii) 12 " dia	Each	1.00	3,380.85	3,381
		Sub Total (A)				97,536
11	N.S	Supply, Installation, testing and commissioning of following size 56" ceiling fan, complete with capacitor, hanging rod, canopy, blades, dimmers nuts and bolts complete in all respect.		1.00	7,000.00	7,000
11	N.S	Supply, installation and commissioning FLOOD LIGHT BVP151 LED50NW 220240V 50Wwith all accessories complete in all respects		3.00	10,900.00	32,700
		Sub Total (B)				39,700
		Sub Total (A+B)				137,236

### DETAILED COST ESTIMATE

## PARKING SHED (SIZE 105' x 32')

		CIVIL WORK				
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	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	3.38	11,658.25	39,405
		Anti-Termite				
2	26/43	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concenterate (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.		4,205.00	9.90	41,630
		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	2.11	29,723.50	62,717
		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 C (nominal mix 1: 2: 4) 90	P.Cft	1,350.00	473.85	639,698
		(2) 1 ypc C (nonlinar linx 1. 2. 4) 90	1.011	1,550.00	+13.03	059,090

## DETAILED COST ESTIMATE

## PARKING SHED (SIZE 105' x 32')

	1nd BI-Annual-					
Sr. No.	2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
5	6/12/c	<b>Steel Work.</b> Fabrication of mild steel reinforcement for cement				
5	0,12,0	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	77.18	31,946.30	2,465,615
		Sand Filling				
6	7/30	Supplying and filling sand under floor; or plugging in wells.	100 Cft	33.60	2,982.00	100,195
		Sub Base Course				
7	18/3/a/ (ii)	Providing and laying sub-base course of stone product of approved quality and grade including,				
	+ 1/1	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 querry to site, actual compacted depth shall be considered for payment)				
			100Cft	11.09	16,138.95	178,981
		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 querry to site, actual compacted depth shall be considered for payment)				
			100Cft	11.09	21,253.90	235,706

## DETAILED COST ESTIMATE

## PARKING SHED (SIZE 105' x 32')

Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		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	3,360.00	197.40	663,264
10	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (crushed stone aggregate and bajri used in concrete items) (Lead 105 Km)	Cft	1,387.96	60.20	83,552
		Parking Shed				
11	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	3,360.00	2,270.00	7,627,200
			511	5,500.00	2,270.00	
		Total Rs.				12,137,962
		Cost Of 1 Unit;				12,137,962
		Cost Of 2 Units;				24,275,924

#### PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB PARKING SHED (SIZE 105' x 32')

# CALCULATION OF QUANTITIES

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit	
	Excavation							
1	Excavation 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	5	13.00	13.00	4.00 Total	3,380.00 3,380.00	Cft Cft	
Anti-Termite 2 Spraying termite proof					Total	3.38	%oCft	
	Anti-Termite							
2	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concenterate (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	105.00	32.00		3,360.00	Sft	
	Columns	5	13.00	13.00		845.00	Sft	
					Total	4,205.00	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	5	13.00	13.00	0.25 Total	211.25 211.25	Cft Cft	
					Total	2.11	%Cft	

#### PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB PARKING SHED (SIZE 105' x 32')

# CALCULATION OF QUANTITIES

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 footing	5	12.00	12.00	1.50	1,080.00	Cft
	Columns	5	3.00	1.50	6.75	151.88	Cft
	Plinth beam	1	105.00	0.75	1.50	118.13	Cft
					Total	1,350.00	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)					151.88 118.13 1,350.00 1,350.00 16,200 16,200 7,350 368 7,718 77.18	Cft
	Columns @ 12 lbs / Cft		12.00		=		lbs/cft
				Total	=		lbs/cft
				Total	=		Kg.
			Add 5% V	Wastage.	=	368	Kg.
				Total	=	7,718	Kg
					Total	77.18	%kg
	Sand Filling						
6	Supplying and filling sand under floor; or plugging in wells.						
	Shed	1	105.00	32.00	1.00	3,360.00	Cft
					Total		Cft
					Total	33.60	%Cft

#### PARKING SHED (SIZE 105' x 32') CALCULATION OF QUANTITIES

Description Sub Base Course	No.	Length	Width	Height	Otv.	Unit
Sub Base Course				U	<b>2</b> -5 ₁ -	emi
Sub Dase Course						
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 querry to site, actual compacted depth shall be considered for payment)	nurse       1       10       11         nd laying sub-base course of stone       pproved quality and grade including,       ing, spreading and compaction of sub       indicate and grade         10       required depth, camber and grade       8% maximum dry density determined       AASHTO T-180 method-D, including       indicate and as directed by         incharge. (Pit run or bed run gravel       indicate and as directed by       incharge. (Pit run or bed run gravel       indicate and as directed by         incharge. (Pit run or bed run gravel       1       105.00       32.00       0.33       1,108.80       Cft         ind Macadam       1       105.00       32.00       0.33       1,108.80       Cft         id Macadam       1       105.00       32.00       0.33       1,108.80       Cft         id laying base course of crushed stone       1       105.00       32.00       0.33       1,108.80       Cft         id laying base course material to required       1       105.00       32.00       0.33       1,108.80       Cft         id laying spacing, mixing, spreading and       1       105.00       32.00       0.33       1,108.80       Cft         id larespect as per specifications and as the engineer incharge. (Crushed stone orm sargodha querry to site, actual epth shall be considered for payment) <td></td>					
Shed						
				Total	11.09	%Cft
Water Bound Macadam						
(Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from sargodha querry to site, actual compacted depth shall be considered for payment)						
Shed	1	105.00	32.00	0.33	1,108.80	Cft
				Total	11 00	0/ በዋ
				Total	11.09	70UI
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	105.00	32.00		3,360	Sft
	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 querry to site, actual compacted depth shall be considered for payment) Shed Water Bound Macadam Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from sargodha querry to site, actual compacted depth shall be considered for payment) Shed	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 querry to site, actual compacted depth shall be considered for payment) Shed 1 Water Bound Macadam Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from sargodha querry to site, actual compacted depth shall be considered for payment) Shed 1 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	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 querry to site, actual compacted depth shall be considered for payment) Shed 1 105.00 Water Bound Macadam Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from sargodha querry to site, actual compacted depth shall be considered for payment) Shed 1 105.00 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	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 querry to site, actual compacted depth shall be considered for payment) Shed 1 105.00 32.00 Water Bound Macadam Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from sargodha querry to site, actual compacted depth shall be considered for payment) Shed 1 105.00 32.00	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 querry to site, actual compacted depth shall be considered for payment) Shed 1 105.00 32.00 0.33 Water Bound Macadam Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from sargodha querry to site, actual compacted depth shall be considered for payment) Shed 1 105.00 32.00 0.33 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	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 querry to site, actual compacted depth shall be considered for payment) Shed 1 105.00 32.00 0.33 1,108.80 Providing and laying base course of crushed stone (Water Bound Macadam Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from sargodha querry to site, actual compacted depth shall be considered for payment) Shed 1 105.00 32.00 0.33 1,108.80 Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion <i>i/c</i> grouting with sand in joints i/c finishing to require slope, complete in all

#### PARKING SHED (SIZE 105' x 32') CALCULATION OF QUANTITIES

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	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	105.00	32.00		3,360	Sft

	DE	PUNJAB CITIES PROGRAM TAILED DESIGN OF INFRASTRUCTURE SUB-J SUPERVISION IN 16 CITIES OI	PROJE	CTS AND	RESIDENT:
		DETAILED COST ESTIM			
-		PARKING SHED (SIZE 105	x 32')		
	1	ELECTRICAL WORK	S		
Sr. No.	2nd Bi-Annual- 2022 (July to Dec) Jhang	Description	Unit.	Quantity	Rate (Rs.)
		Schodulod Home (A)			
1	C-24/3-iii	<u>Scheduled Items (A)</u> 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.	560.00	101.60
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.	20.00	27.85
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). (7.036)	Rft.	560.00	44.05
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	296.00
5	C-24/32-ii	Supply and erection of switches 10/15 Amp. (Recessed Type)	Each	2.00	96.95
		Sub Total (A)			
6	N.S	Supply, installation and commissioning FLOOD LIGHT BVP151 LED50NW 220240V 50Wwith all accessories complete in all respects	Each	9.00	10,900.00
		Sub Total (B)			
		Sub Total (A+B)			
		Cost Of 1 Unit;			
		Cost Of 2 Units;			
		97			

5	
Amount (Rs.)	
56,896	
557	
551	
24,668	
592	
194	
00.007	
82,907	
00.100	
98,100	
98,100	
181,007	
181,007	
362,014	
98	

#### DETAILED COST ESTIMATE

## PARKING SHED (SIZE 60' x 32')

,	1J.DT.4	r				
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	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	2.03	11,658.25	23,666
		Anti-Termite				
2	26/43	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concenterate (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.		2,427.00	9.90	24,027
		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	1.27	29,723.50	37,749
		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				
		<ul> <li>(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)&amp;(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-</li> </ul>				
		(2) Type C (nominal mix 1: 2: 4)	P.Cft	806.63	473.85	382,219
		99				

### DETAILED COST ESTIMATE

### PARKING SHED (SIZE 60' x 32')

Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
5	6/12/c	<b>Steel Work.</b> Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-				
		Deformed bars (Grade-60)	100kg	46.11	31,946.30	1,473,044
6	7/30	<b>Sand Filling</b> Supplying and filling sand under floor; or plugging in wells.	100 Cft	19.20	2,982.00	57,254
		Sub Base Course				
7	18/3/a/ (ii) + 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 querry to site, actual compacted depth shall be considered for payment)	100Cft	6.34	16,138.95	102,321
			100011	0.54	10,130.95	102,321
8	18/4/a + 1/1	Water Bound Macadam Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from sargodha querry to site, actual compacted depth shall be considered for payment)				
			100Cft	6.34	21,253.90	134,750

#### DETAILED COST ESTIMATE

### PARKING SHED (SIZE 60' x 32')

<u> </u>								
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)		
		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	1,920.00	197.40	379,008		
10	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (crushed stone aggregate and bajri used in concrete items) (Lead 105 Km)	Cft	830.19	60.20	49,975		
11	N.S	Parking Shed 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	1,920.00	2,270.00	4,358,400		
		Total Rs.				7,022,414		

#### PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB PARKING SHED (SIZE 60' 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	3	13.00	13.00	4.00 Total	2,028.00 2,028.00	Cft Cft			
					Total	2.03	%oCft			
	Anti-Termite									
2	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concenterate (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	60.00	32.00		1,920.00	Sft			
	Columns	3	13.00	13.00		507.00	Sft			
					Total	2,427.00	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	3	13.00	13.00	0.25 Total	126.75 126.75	Cft Cft			
					Total	1.27	%Cft			
						<b></b> <i>i</i>	,			

#### PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB PARKING SHED (SIZE 60' x 32')

# CALCULATION OF QUANTITIES

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.):-								
	rabileation 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 footing	3	12.00	12.00	1.50	648.00	Cft		
	Columns	3	3.00	1.50	6.75	91.13	Cft		
	Plinth beam	1	60.00	0.75	1.50	67.50	Cft		
					Total	806.63	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)					806.63	Cft		
	Columns @ 12 lbs / Cft		12.00		=	9,680	lbs/cft		
				Total	=	9,680	lbs/cft		
				Total	=	4,392	Kg.		
			Add 5% V	_	=	220	Kg.		
				Total	=	4,611	Kg		
					Total	46.11	%kg		
	Sand Filling								
6	Supplying and filling sand under floor; or plugging in wells.								
	Shed	1	60.00	32.00	1.00	1,920.00	Cft		
					Total	1,920.00	Cft		

#### PARKING SHED (SIZE 60' x 32') CALCULATION OF QUANTITIES

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit			
	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 querry to site, actual compacted									
	depth shall be considered for payment)									
	Shed	1	60.00	32.00	0.33	633.60	Cft			
					Total	6.34	%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 querry to site, actual									
	compacted depth shall be considered for payment)									
	Shed	1	60.00	32.00	0.33	633.60	Cft			
					Total	6.34	%Cft			
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	60.00	32.00		1,920	Sft			
	Parking Shed									

	PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB PARKING SHED (SIZE 60' x 32') CALCULATION OF QUANTITIES CIVIL WORK									
Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit			
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.					1.000				
		1	60.00	32.00		1,920	Sft			
						-				

## DETAILED COST ESTIMATE

## PARKING SHED (SIZE 60' x 32')

## ELECTRICAL WORKS

Sr. No.	2nd Bi-Annual- 2022 (July to Dec) Jhang	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
		Scheduled Items (A)				
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.	360.00	101.60	36,576
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)		20.00	27.85	557
	C 24/10 - :::					
3	C-24/10a.m	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.	360.00	44.05	15,858
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	296.00	592
_						
5	C-24/32-ii	Supply and erection of switches 10/15 Amp. (Recessed Type)	Each	2.00	96.95	194
		Sub Total (A)				53,777
6	N.S	Supply, installation and commissioning FLOOD				
~		LIGHT BVP151 LED50NW 220,240V 50W with all accessories complete in all respects	Each	4.00	10,900	43,600
		Sub Total (B)				43,600
		Sub Total (A+B)				97,377

DETAILED COST ESTIMATE

## PARKING SHED (SIZE 108' x 16')

	CIVIL WORK								
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)			
		Schedule Item							
1	3/21/a/ii	<b>Excavation</b> 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	1.18	11,658.25	13,757			
		Anti-Termite							
2	26/43	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concenterate (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	2,022.00	9.90	20,018			
		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	0.74	29,723.50	21,995			
		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)	P.Cft	432.38	473.85	204,881			
		107							

#### DETAILED COST ESTIMATE

#### PARKING SHED (SIZE 108' x 16')

		CIVIL WORK				
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
	Jnang	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	24.72	31,946.30	789,713
6	7/30	Sand Filling Supplying and filling sand under floor; or plugging in wells.	100 Cft	17.28	2,982.00	51,529
		Sub Base Course				
7	18/3/a/ (ii) + 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 querry to site, actual compacted depth shall be considered for payment)	100Cft	5 70	16 129 05	01.002
			100CII	5.70	16,138.95	91,992
8	18/4/a + 1/1	Water Bound Macadam Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from sargodha querry to site, actual compacted depth shall be considered for payment)		5 70	21 253 00	121 147
			100Cft	5.70	21,253.90	121,147

#### DETAILED COST ESTIMATE

#### PARKING SHED (SIZE 108' x 16')

Sr. No.     Ind BL-Annual (213) (Jan to June) Jhang     Description     Unit     Quantity     Unit Rate (Rs)       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)     Per Sft     1.728.00     197.40       10     1/1     Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (crushed stone aggregate and bajri used in concrete items) (Lead 105 Km)     Cft     450.62     60.20       11     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     1,728.00     2,270.00       10     Cost Of 1 Unit;     1     Cost Of 1 Unit;     1     1							
Parking Shed       Cft       450.62       60.20         11       N.S       Providing and fixing in position shed as per drawings, manufacturer's specifications and as directed by Engineer Instand to So \$300 mm diameter fitted with J-Type bolt having length 450 to 500 mm diameter fitted with J-Type bolt having length 450 to 500 mm diameter fitted with J-Type bolt having length 450 to 500 mm diameter fitted with J-Type bolt having length 450 to 500 mm diameter fitted with J-Type bolt having length 450 to 500 mm diameter fitted with J-Type bolt having length 450 to 500 mm diameter fitted with J-Type bolt having length 450 to 500 mm anufacturer must be sought prior to placing order.       Sft       1,728.00       2,270.00         10       I.T. 728.00       2,270.00       Sft       1,728.00       2,270.00       2,270.00	(Ja	2023 Jan to June)	Description	Unit	Quantity		Amount (Rs)
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         10       1/1         Carriage of 100 Cft. (2.83 cu.m) of all materials         like stone aggregate, spawl, kankar line (unslaked),         surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by         truck or by any other means owned by the         contractor. (crushed stone aggregate and bajri used         in concrete items) (Lead 105 Km)         Cft       450.62         60.20         Parking Shed         11       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.			Tuff Paver				
10       1/1       Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (crushed stone aggregate and bajri used in concrete items) (Lead 105 Km)       Cft       450.62       60.20         Parking Shed         11       N.S       Providing, laying and fixing in position shed as per drawings, manufacturer's specifications and as directed by Engineer Incharge. This item includes Aluzine 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       1,728.00       2,270.00         Total Amonut Rs.			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				
like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (crushed stone aggregate and bajri used in concrete items) (Lead 105 Km)       Cft       450.62       60.20         Parking Shed       Image: Cft       450.62       60.20         Image: Cft       Eft       Cft       Image: Cft       450.62       60.20         I			c) 80-mm thick	Per Sft	1,728.00	197.40	341,107
11       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       1,728.00       2,270.00         Total Amonut Rs.         Cost Of 1 Unit;			like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (crushed stone aggregate and bajri used		450.62	60.20	27,126
11       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       1,728.00       2,270.00         Total Amonut Rs.         Cost Of 1 Unit;			Parking Shed				
Cost Of 1 Unit;		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		1,728.00	2,270.00	3,922,560
Cost Of 1 Unit;							
							5,605,825
Cost Of 2 Units;			Cost Of 1 Unit;				5,605,825
			Cost Of 2 Units;				11,211,650

### SHED 108' x 16'

## CALCULATION OF QUANTITIES

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	7.00	7.00	4.00 Total	1,176.00 1,176.00	Cft Cft
					Total	1.18	%oCf
	Anti-Termite						
2	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concenterate (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	108.00	16.00		1,728.00	Sft
	Columns	6	7.00	7.00		294.00	Sft
					Total	2,022.00	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	7.00	7.00	0.25	73.50	Cft
					Total	73.50	Cft
					Total	0.74	%Cft
		<u>.</u>					

# SHED 108' x 16'

# CALCULATION OF QUANTITIES

Sr.							
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 footing	6	6.50	6.50	1.00	253.50	Cft
	Columns	6	1.50	1.50	7.25	97.88	Cft
	Plinth Beam	1	108.00	0.75	1.00	81.00	Cft
					Total	432.38	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)		10.00			432.38	Cft lbs/cft
	Columns @ 12 lbs / Cft		12.00	T - 4 - 1	=	5,189	lbs/cft
				Total Total	=	5,189 2,354	Kg.
			Add 5% V			2,534	Kg.
			Auu 370	Total	=	2,472	Kg.
					Total	24.72	%kg
	Sond Filling						8
6	Sand Filling Supplying and filling sand under floor; or plugging						
U	in wells.						
	Shed	1	108.00	16.00	1.00	1,728.00	Cft
					Total	1,728.00	Cft
					Total	17.28	%Cft
	111						

### SHED 108' x 16'

# CALCULATION OF QUANTITIES

<b>C</b>							
Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	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 querry to site, actual compacted						
	depth shall be considered for payment)						
	Shed	1	108.00	16.00	0.33	570.24	Cft
					Total	5.70	%Cft
	W-4D						
0	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 querry to site, actual						
	compacted depth shall be considered for payment)						
	Shed	1	108.00	16.00	0.33	570.24	Cft
					Total	5.70	%Cft
					10141	5.70	/0011
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	108.00	16.00		1,728	Sft
						, -	

# CALCULATION OF QUANTITIES

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	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	108.00	16.00		1,728	Sft

#### DETAILED COST ESTIMATE

#### PARKING SHED (SIZE 108' x 16')

ELECTRICAL	WORKS	

		ELECTRICAL WORK	-			
Sr. No.	2nd Bi-Annual- 2022 (July to Dec) Jhang	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
1	C 24/2 :::	Scheduled Items (A)				
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.	510.00	101.60	51,816
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.	20.00	27.85	557
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).	DA	510.00	44.05	22.466
		(7.029)	Rft.	510.00	44.05	22,466
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	296.00	592
5	C-24/32-ii	Supply and erection of switches 10/15 Amp.				
5	C-24/32-II	(Recessed Type)	Each	2.00	96.95	194
		Sub Total (A)				75,624
6	N.S	Supply, installation and commissioning FLOOD LIGHT BVP151 LED50NW 220,240V 50W with all accessories complete in all respects	Each	4.00	10,900	43,600
		Sub Total (B)				43,600
		Sub Total (A+B)				119,224
		Cost Of 1 Unit;				119,224
		Cost Of 2 Units;				238,449

#### DETAILED COST ESTIMATE

# WASHING PIT

	1.101.4					
Sr.	1nd BI-Annual- 2023	Description	Unit	Quantity	Unit Rate	Amount
No.	(Jan to June) Jhang	Description	Unit	Quantity	(Rs)	(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	0.94	11,658.25	10,959
		Sand Filling				
2	7/30	Supplying and filling sand under floor; or				
		plugging in wells.	100Cft	1.26	2,982.00	3,757
		Plain Cement Concrete				
3	6/5	Cement concrete plain including placing,				
5	0/5	compacting, finishing and curing complete				
		(including screening and washing of stone				
		aggregate):				
		(f) Ratio 1: 2: 4	100 Cft	1.25	38,723.50	48,404
		(i) Ratio 1: 4: 8	100 Cft	3.21	29,723.50	95,412
		Brick work in Foundation				
4	7/4/i	Pacca brick work in foundation and plinth in:-				
		Cement, sand mortar:- Ratio 1:4	100 Cft	8.02	29,928.60	240,027
		Concrete Work				
5	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:-				
			D G		·	
		(2) Type C (nominal mix 1: 2: 4)	P.Cft	541.04	473.85	256,370

#### DETAILED COST ESTIMATE

### WASHING PIT

Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	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:-				
		(3) Type C (nominal mix 1: 2: 4)	P.Cft	281.70	583.25	164,302
		Steel Work.				
6	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	24.68	31,946.30	788,502
			U		,	
		Plaster				
7	11/8/b	Cement plaster 1:3 upto 20' (6.00 m) height:-				
		b) ¹ /2" (13 mm) thick	100 Sft	2.83	3,639.10	10,299
		Mosaic flooring				
8	10/22/a	1 ¹ / ₂ "(40 mm) thick mosaic flooring, consisting of ¹ / ₂ "(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	1.05	21,681.35	22,765
					,	

#### DETAILED COST ESTIMATE

# WASHING PIT

					-	
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Mosaic dado or skirting				
9	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 $\frac{1}{2}''(13 \text{ mm})$ thick cement plaster 1:3, including rubbing and polishing, complete with finishing:				
		(a) using grey cement:				
		ii) ¹ / ₂ "(13 mm) thick	100 Sft	2.83	23,268.60	65,850
		M.S Grating				
10	18/23	Providing and fixing M.S Grating comprising of Angle Iron frame size 1.50" x 1.50" x 3/16" and 1/2" square bars duly welded @ 4" c/c, including painting charges etc complete in all respect.		60.00	1,722.20	103,332
11	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (crushed stone aggregate and bajri used in concrete items) (Lead 105 Km)		1,138.22	60.20	68 519
			Сп	1,138.22	60.20	68,518
		Total Amount Rs.				1,878,498

# CALCULATION OF QUANTITIES

Sr.	Description	No.	Longth	Width	Hojaht	Otr	Unit
No.	Description	110.	Length	wiath	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	37.50	10.17	2.00	762.75	Cft
	Drain	1	60.00	2.00	1.50	180.00	Cft
					Tatal	0.94	0/ - 66
					Total	0.94	%oCf
2	Supplying and filling sand under floor; or plugging						
	in wells.	1	37.50	10.17	0.33	125.85	Cft
					Total	1.26	%Cft
					10141	1.20	70011
	Plain Cement Concrete						
3	Cement concrete plain including placing,						
	compacting, finishing and curing complete						
	(including screening and washing of stone						
	aggregate):						
	(f) Ratio 1: 2: 4						
	For Plinth	1	100.00	5.00	0.25	125.00	Cft
					Total	1.25	%Cft
	(i) Ratio 1: 4: 8						
	Washing Pit	1	37.50	10.17	0.33	125.85	Cft
	For Plinth	1	100.00	5.00	0.33	165.00	Cft
	Drain	1	60.00	2.00	0.25	30.00	Cft
					Total	3.21	%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	13.00	1.875	0.50	12.19	Cft
	Step - 2	1	13.00	1.500	0.50	9.75	Cft
	Step - 3	1	13.00	1.125	5.50	80.44	Cft
	Side walls	2	20.00	3.500	3.50	490.00	Cft
		2	15.00	3.500	2.00	210.00	Cft
					Total	802.38	Cft
					Total	8.02	%Cft
		1			Lotal	× 117	⊨ %(`ff

## CALCULATION OF QUANTITIES

Sr.	Description	Na	Longth	Width	Hojaht	Otri	Unit
No.	Description	No.	Length	width	Height	Qty.	Uni
	Concrete Work						
5	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 C (nominal mix 1: 2: 4)						
	Washing Pit RCC Slab	1	36.00	9.50	1.50	513.00	Cft
	Drain	1	60.00	1.42	0.33	28.04	Cft
					<b>T</b> ( )	541.04	<u> </u>
					Total	541.04	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:-						
	(3) Type C (nominal mix 1: 2: 4)						
	Washing Pit on Walls	2	36.00	3.50	1.00	252.00	Cft
	Drain	2	60.00	0.33	0.75	29.70	Cft
					Total	281.70	Cft
	Steel Work						
6	Steel Work.						
U	Fabrication of mild steel reinforcement for cement						
	concrete, including cutting, bending, laying in						
	position, making joints and fastenings, including cost						
	of binding wire and labour charges for binding of						
	steel reinforcement (also includes removal of rust						
	from bars):-				<b>T</b> 1	0.00	~~
	Deformed bars (Grade-60)		2		Total	823	Cft
	Total Concrete 3kg/cft		3			2,468	Kg
					Total	24.68	%K

#### CALCULATION OF QUANTITIES CIVIL WORK

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Plaster						
7	Cement plaster 1:3 upto 20' (6.00 m) height:-						
	b) ¹ / ₂ " (13 mm) thick						
	Wall	1	15.00		5.50	82.50	Sft
	Side Wall	2	20.00		3.50	140.00	Sft
		2	15.00		2.00	60.00	Sft
					Total	282.50	Sft
					Total	2.83	%Sft
	Mosaic flooring						
8	1 ¹ / ₂ "(40 mm) thick mosaic flooring, consisting of ¹ / ₂ "(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	3.00		105.00	Sft
					Total	1.05	%Sft
	Mosaic dado or skirting						
9	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 ¹ / ₂ "(13 mm) thick cement plaster 1:3, including rubbing and polishing, complete with finishing:						
		1	15.00		5.50	82.50	Sft
		2	20.00		3.50	140.00	Sft
		2	15.00		2.00	60.00	Sft
					Total	282.50	Sft
					Total	2.83	%Sft

#### DETAILED COST ESTIMATE

### EXTERNAL WORK

Sr. No.	1nd BI-Annual- 2023 (Jan to June)	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
	Jhang				. ,	~ /
		BOUNDARY WALL				
		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	11.30	11,658.25	131,738
			10000011	11.50	11,050.25	151,750
		Anti-Termite				
2	26/43	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concenterate (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	12,118.00	9.90	119,968
		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	18.63	2,982.00	55,555
		Brick work in Foundation				
4	7/4/i	Pacca brick work in foundation and plinth in:-				
		Cement, sand mortar:- Ratio 1:5	100 Cft	86.71	29,928.60	2,595,109
		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) 1 ¹ / ₂ " thick (40 mm)	100 Sft	8.76	9,240.05	80,943
_	C 127	Vertical D.P.C				
6	6/37	Providing and laying vertical damp proof course with cement sand plaster and bitumen coating:-				

#### DETAILED COST ESTIMATE

# EXTERNAL WORK

<b>C</b>	1nd BI-Annual-				U	A
Sr. No.	2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		(a) with one coat of bitumen and one coat of				
		polythene sheet 500 gauge:				
		ii) Ratio 1:3 ³ / ₄ " thick (20 mm)	100 Sft	14.42	6,900.05	99,499
		Brick work in Super Structure				
7	7/5	Pacca brick work in ground floor:-				
		i) Cement, sand mortar:- Ratio 1:5	100 Cft	53.20	32,331.00	1,720,009
		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) Above foundation	P.Cft	50.63	473.85	23,989
		(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:-				
			P.Cft	112.00	556.50	62,328
		Type C (nominal mix 1: 2: 4)	P.CII	112.00	550.50	02,320
			P.CIt	112.00	550.50	02,32
9	6/12/c	Type C (nominal mix 1: 2: 4) <b>Steel Work.</b> Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-				02,02

#### DETAILED COST ESTIMATE

# EXTERNAL WORK

Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Cement Plaster				
10	11/9	Cement plaster 1:4 upto 20' (6.00 m) height:-				
		3/4" (20 mm) thick	100 Sft	67.31	4,650.85	313,049
11	11/18/a	Pointing Cement pointing struck joints, on walls, upto 20' (6.00 m) hiehgt:-				
		a) ratio 1:2	100 Sft	67.31	3,776.40	254,189
12	11/31	Extra cost of labour and material for red oxide pigment in cement pointing to match with the colour of bricks.	100 Sft	67.31	822.00	55,329
		Distempering				
13	11/23	Distempering:-				
15	11/23	iii) three coats	100 Sft	60.06	1,446.35	86,868
			100 510	00.00	1,440.55	00,000
		Main Gate				
14	25/30	Making and fixing steel grated doors, complete with locking arrangement, angle iron frame 2"x2"x3/8" (50x50x10 mm) and ³ / ₄ " (20 mm)				
		square bars 4" (100 mm) centre to centre.	Sft	112.00	1,998.95	223,882
		Painting new surface:-				
15	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	927.05	2,892
		ii) each subsequent coat of paint.	100 Sft	3.12	572.30	1,786
16	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (crushed stone aggregate and bajri used in concrete items) (Lead 105 Km)				
			Cft	1,908.68	60.20	114,897
		Total Rs. "A"				6,239,131

#### DETAILED COST ESTIMATE

# EXTERNAL WORK

Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Tuff Paver				
		Borrow Earth				
17	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	165.50	17,627.60	2,917,368
		Sub Base Course				
18	18/3/a/ (ii) + 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 querry to site, actual compacted depth shall be considered for payment)				
			100Cft	81.06	16,138.95	1,308,223

#### DETAILED COST ESTIMATE

## EXTERNAL WORK

	1nd BI-Annual-		1		<b>I</b>	
Sr. No.	Ind BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
	Uning	Water Bound Macadam				
19	18/4/a	Providing and laying base course of crushed stone				
	+	(Water Bound Macadam) of approved quality				
	1/1	and grade including, placing, mixing, spreading				
		and compaction of base course material to				
		required depth, camber and grade to achieve 100%				
		maximum modified AASHTO dry density,				
		including carriage of all material to site of work				
		complete in all respect as per specifications and as				
		directed by the engineer incharge. (Crushed stone				
		aggregate from sargodha querry to site, actual				
		compacted depth shall be considered for payment)				
			100Cft	81.06	21,253.90	1,722,841
		Tuff Paver				
20	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	24,565.00	197.6	4,854,044
		Kerb Stone				
21	6/52	Providing and fixing precast Edge Kerb Stone				
		(4"to 6" thick), of 3500 PSI Compressive Strength,				
		embeded in PCC 1:2:4 over lean concrete 1:4:8				
		etc complete in all respect.				
		b) With Painting				
		(i) 14" high	Rft	600.00	535.05	321,030
22	2/20	Turfing clones of honlys or lower with some state				
22	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				
		(Turi got from within a distance of 5 miles (8 Km.) and maintenance for 15 days).		111.00	1 9 4 9 00	205 129
		Kin.) and maintenance for 15 days).	100Sft	111.00	1,848.00	205,128
		Total Rs. "B"				11,328,634
		Total Rs. "A+B"				17,567,764

# EXTERNAL WORK CALCULATION OF QUANTITIES

Sr.		_					
No.	Description	No.	Length	Width	Height	Qty.	Unit
	BOUNDARY WALL						
	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.	1	070	2.00	2.00	7 7 2 2 0 0	
	Boundary wall	1	858	3.00	3.00	7,722.00	Cft
	Boundary wall Columns	92	3.50	3.50	3.00	3,381.00	Cft
	Columns	2	5.00	5.00	4.00	200.00	Cft
					Total	11,303.00	Cft
					Total	11.30	%oCf
	Anti-Termite						
2	Spraying termite proofing by using liquid FMC/Biflex/Terminex Exin/Ms Hextar or equivalent @ specified suspension concenterate (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.						
	Boundary wall	1	858.00	9.00		7,722.00	Sft
	Boundary wall Columns	92	3.50	9.50		3,059.00	Sft
		92	3.50	3.50		1,127.00	
	Columns	2	20.00	4.00		160.00	Sft
		2	5.00	5.00		50.00	Sft
					Total	12,118.00	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						
	Boundary wall	1	858.00	3.00	0.50	1,287.00	Cft
	Boundary wall Columns	92	3.50	3.50	0.50	563.50	Cft
	Columns	2	5.00	5.00	0.25	12.50	Cft
					Total	1,863.00	Cft

#### EXTERNAL WORK CALCULATION OF QUANTITIES

Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
	Brick work in Foundation						
4	Pacca brick work in foundation and plinth in:-						
4	Cement, sand mortar:- Ratio 1:5						
	Boundary wall						
	Step - 1	1	858.00	2.625	0.50	1,126.13	Cft
	Step - 2	1	858.00	2.025	0.50	965.25	Cft
	Step - 3	1	858.00	1.875	0.50	804.38	Cft
	Step - 4	1	858.00	1.500	0.50	643.50	Cft
	Step - 5	1	858.00	1.125	0.50	482.63	Cft
	Step - 6	1	858.00	0.750	4.50	2,895.75	Cft
	Boundary wall Columns	1	050.00	0.750	4.50	2,075.15	Cit
	Step - 1	92	3.00	3.00	0.50	414.00	Cft
	Step - 2	92	2.63	2.63	0.50	316.97	Cft
	Step - 3	92	2.03	2.05	0.50	232.88	Cft
	Step - 4	92	1.88	1.88	0.50	161.72	Cft
	Step - 5	92	1.50	1.50	0.50	101.72	Cft
	Step - 6	92	1.13	1.13	4.50	523.97	Cft
		12	1.13	1.15	Total	8,670.66	Cft
					Total	86.71	%C
					Total	00.71	7001
	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) 1 ¹ / ₂ " thick (40 mm)						
	Boundary wall	1	858.00	0.75		643.50	Sft
	Boundary wall Columns	184	1.13	1.13		232.88	Sft
	Boundary wan corunnis				T ( 1		Sft
					Total	876.38	511
					Total Total	876.38 <b>8.76</b>	
							%Sf
6	Vertical D.P.C Providing and laying vertical damp proof course						
6	Vertical D.P.C						
6	Vertical D.P.C Providing and laying vertical damp proof course with cement sand plaster and bitumen coating:- (a) with one coat of bitumen and one coat of						
6	<b>Vertical D.P.C</b> Providing and laying vertical damp proof course with cement sand plaster and bitumen coating:-						
6	Vertical D.P.C Providing and laying vertical damp proof course with cement sand plaster and bitumen coating:- (a) with one coat of bitumen and one coat of						
6	Vertical D.P.C 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:		858.00				
6	Vertical D.P.C 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 ³ / ₄ " thick (20 mm)		858.00		Total	8.76	%SI
6	Vertical D.P.C 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 ³ / ₄ " thick (20 mm) Boundary wall	1			<b>Total</b>	<b>8.76</b> 1,287.00	%SI

#### EXTERNAL WORK CALCULATION OF QUANTITIES

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						
	Boundary wall	1	858.00	0.75	7.00	4,504.50	Cft
	Boundary wall Columns	92	1.13	1.13	7.00	815.06	Cft
					Total	5,319.56	Cft
					Total	53.20	% <b>C</b> i
	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:-						
	Gate Columns	2	4.50	4.50	1.25	50.63	Cft
					Total	50.63	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)						
	Gate Columns	2	2.00	2.00	14.00	112.00	Cft
					Total	112.00	Cf
					10141	112.00	U

#### EXTERNAL WORK CALCULATION OF QUANTITIES

			1				
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)					162.63	Cft
	Columns @ 12 lbs / Cft		12.00		=	1,951.50	lbs/cf
				Total	=	1,951.50	lbs/cf
				Total	=	885.44	Kg.
			Add 5%	Wastage.	=	44.27	Kg.
				Total	=	930	Kg
					Total	9.30	%kg
					TUtal	9.30	70Kg
	Cement Plaster						
10	Cement plaster 1:4 upto 20' (6.00 m) height:-						
	3/4" (20 mm) thick						
	Boundary wall	1	858.00		7.00	6,006.00	Sft
	Boundary wall Columns	92	1.13		7.00	724.50	Sft
					Total	6,730.50	Sft
					Total	67.31	%Sft
	Pointing						
11	Cement pointing struck joints, on walls, upto 20'						
11	(6.00 m) hiehgt:-						
	a) ratio 1:2						
	Outer Walls	1	858.00		7.00	6,006.00	Sft
	Boundary wall Columns	92	1.13		7.00	724.50	Sft
		12	1.15		Total	6,730.50	Sft
					Total	67.31	%Sft
12	Extra cost of labour and material for red oxide						
14	pigment in cement pointing to match with the colour						
	of bricks.				Total	67.31	%Sft
	Distempering						
13	Distempering:-						
	iii) three coats						
	Boundary wall	1	858.00		7.00	6,006.00	Sft
					Total	6,006.00	Sft

# CALCULATION OF QUANTITIES

~					· · ·		
Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit
1101							
	Main Gate						
14	Making and fixing steel grated doors, complete with						
	locking arrangement, angle iron frame 2"x2"x3/8"						
	$(50x50x10 \text{ mm})$ and $\frac{3}{4}$ " (20 mm) square bars 4" (100						
	mm) centre to centre.	1	16.00		7.00	112.00	Sft
1.7	Painting new surface:-						
15	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
	Tuff Paver						
	Borrow Earth						
16	Earthwork in ordinary soil for embankment						
10	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.		Area				
	Total Area	1	55,165	1.00	3.00	165,495	Cft
					Total	165,495	Cft
					Total	165.50	%oCft
	Sub Base Course						
17	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 querry to site, actual compacted depth shall						
	be considered for payment)						
		1	24,565	1.00	0.33	8,106.45	Cft
	130				Total	Q1 04	0/ 64
	130				Total	81.06	%Cft

# CALCULATION OF QUANTITIES

n			Sr. Description No Longth Width Height Oty Heit											
Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit							
	Water Bound Macadam													
18	Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from sargodha querry to site, actual compacted depth shall be considered for payment)													
		1	24,565	1.00	0.33	8,106.45	Cft							
					Total	81.06	%Cft							
	Tuff Paver													
19	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	24,565	1.00		24,565	Sft							
20	Providing and fixing precast Edge Kerb Stone (4"to 6" thick), of 3500 PSI Compressive Strength, embeded in PCC 1:2:4 over lean concrete 1:4:8 etc complete in all respect.													
	b) With Painting													
	(i) 14" high	1	600			600	Rft							
21	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	11,100	1.00		11,100	Sft							
		1	11,100	1.00		11,100	SIL							

#### DETAILED COST ESTIMATE

#### **EJECTOR PUMP**

	1	EJECTOR PUMI	)	[	I	
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Ejector Pump				
1	23/45/ii	P/F Ejector Pump of specified Suction and Delivery heads, coupled with Single Phase Seimen Electric Motor of required rating for water supply i/c the cost of connection charges, necessary wire, PVC pipes etc complete in all respect as approved and directed by the Engineer Incharge.				
		<ul><li>ii) G-IV (2-1/2"x2") with 2.5 HP Electric Motor,</li><li>38-Mtr Suction and 38 M delivery head</li></ul>	Each	1.00	19,360.20	19,360
		Boring				
2	23/1	Boring for tubewell in all types of soil except shingle and rock, from ground level to 100 ft. (30 m) depth, including sinking and withdrawing of casing pipe, complete:-				
		c) 5" (125 mm) i/d	Rft	100.00	646.70	64,670
3	23/2	Boring for tubewell in all types of soil except shingle, gravel & rock, from a depth of 100.1 ft. to 200 ft. (30 to 60 m) below ground level, including sinking and withdrawing of casing pipe, complete:-				
		a) 5" (125 mm) i/d	Rft	100.00	1,083.25	108,325
4	23/16	Providing and installing P.V.C. blind pipe, B.S.S. Class `B', in tubewell bore hole, including sockets and solvents and jointing with strainer, etc. complete.				
		b) 4" i/d (100 mm)	Rft	50.00	451.30	22,565
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.				
		b) 1½" i/d (40 mm)	Rft	200.00	152.95	30,590
		c) 2" i/d (50 mm)	Rft	70.00	221.20	15,484
6	23/11	Providing and installing, P.V.C. strainer B.S.S. Class 'B', in tubewell bore hole, including sockets and solvents, etc. complete:-				
		a) 3" i/d (75 mm)	Rft	30.00	187.95	5,639
		132				

	PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB DETAILED COST ESTIMATE EJECTOR PUMP								
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)			
7	23/14	Providing and installing P.V.C. Bail/End plug, in tubewell bore hole:-							
		a) B.S.S. Class `B'							
		i) 3" i/d (75 mm)	Rft	1.00	92.45	92			
		Total Amount Rs.				266,725			

		EXTERNAL WTER SUF	PPLY			
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	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.		1.75	8,321.30	14,562
2	23-43	HDPE Pipe Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE-100) working presure pipe, Beta/ Dadex/Popular/ IIL or equivalent including the cost of specials, in trenches, as approved & directed by the engineer incharge, complete in all respects				
		c) PN-10 (SDR-17)				
		3) 40 mm	Rft	50.00	53.10	2,655
		4) 50 mm	Rft	200.00	78.65	15,730
		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.				
		v) 1-1/2" dia	Each	2.00	2,289.60	4,579
		vi) 2" dia	Each	1.00	2,709.60	2,710
		Under Ground Water Tank				
		Excavation				
4	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	0.89	11,658.25	10,376

		EXTERNAL WTER SUF	PPLY			
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Plain Cement Concrete				
5	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	0.42	29,723.50	12,484
		Concrete Work				
6	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	85.28	473.85	40,408
		(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:-		270.00		
		Type C (nominal mix 1: 2: 4)	P.Cft	278.09	583.25	162,197
		Steel Work.				
7	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	10.90	31,946.30	348,248
		135				

		EXTERNAL WTER SUP	PPLY			
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		RCC Manhole Cover				
8	21/16	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	1.00	16,069.65	16,070
		Angle Iron Step				
9	21/13	Providing and fixing 1 ¹ /4"x1 ¹ /4"x3/16" (31x31x5 mm) angle iron step, in manhole chambers, including carriage and setting the same in work to correct lines and levels.	Each	6.00	9,324.00	55,944
10	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (crushed stone aggregate and bajri used in concrete items) (Lead 165 Km)	Cft	359.57	60.20	21,645
		Pump				
11	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
			Lauli	1.00	20,000	20,000
		Total Rs				727,608

### DETAILED COST ESTIMATE

#### EXTERNAL WTER SUPPLY

	EXTERNAL W	EXTERNAL WTER SUPPLY										
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	1	250.00	2.00	3.50	1,750.00	Cft					
					Total	1.75	%oCft					
	HDPE Pipe											
2	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE- 100) working presure pipe, Beta/ Dadex/Popular/ IIL or equivalent including the cost of specials, in trenches, as approved & directed by the engineer incharge, complete in all respects											
	c) PN-10 (SDR-17)											
	3) 40 mm	1	50.00			50.00	Rft					
	4) 50 mm	1	200.00			200.00	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. v) 1-1/2" dia	2				2.00	Nos.					
	vi) 2" dia	1				1.00	Nos.					
	Under Ground Water Tank											
4	<b>Excavation</b> 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.	1	12.33	10.33	7.00	890.95	Cft					
					Total	0.89	%oCft					
	Plain Cement Concrete											
5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):											
	(i) Ratio 1: 4: 8	1	12.33	10.33	0.33	42.00	Cft					
	137				Total	0.42	%Cft					
	101				IUIAI	0.44	70011					

# DETAILED COST ESTIMATE

#### EXTERNAL WTER SUPPLY

Sr. No.	Description	No	Length	Width	Height	Qty.	Unit
	Concrete Work						
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)	1	12.33	10.33	0.67	85.28	Cft
	(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)						
	Walls	1	38.66	0.67	8.00	207.24	Cft
	Top Slab	1	11.33	9.33	0.67	70.85	Cft
					Total	278.09	Cft

#### DETAILED COST ESTIMATE EXTERNAL WTER SUPPLY

	EXTERNAL W						
Sr. No.	Description	No	Length	Width	Height	Qty.	Unit
	Steel Work.						
7	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) (3 kg/cft)				Total	1,090.10	Kg
	RCC Manhole Cover						
8	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.						
		1				1.00	Nos
	Angle Iron Step						
9	Providing and fixing 1 ¹ / ₄ "x1 ¹ / ₄ "x3/16" (31x31x5 mm) angle iron step, in manhole chambers, including carriage and setting the same in work to correct lines and levels.	6				6.00	Nos.

		EXTERNAL SEWERAGE S		I		
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description Excavation	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Excavation				
1	3/42	Earth work excavation in open cutting for sewers and manholes as shown in drawing including shuttering of wooden vertical planks, struts and beams, dressing to correct section and dimension according to templates and levels and removing surface water in all types of soil except shingle, gravel and rock. i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth		3.94	12,836.55	50,544
		Soud Filling				
2	21/24	Sand Filling Providing and laying sand under and around the sewer pipe, including leveling, manual compaction, complete in all respect.	100Cft	11.25	3,906.00	43,943
		uPVC Pipe				
3	19/48	Providing, fixing, testing and commissioning of $\mu$ - PVC (Unplasticized Polyvinyl Chloride ) sewerage pipe make of Dadex /Popular/Beta or equivalent, 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.				
		a) Type (SDR 34/SN-8)				
		i) 6" dia 150mm	Rft	400.00	1,144.35	457,740
		ii) 8" dia 200 mm	Rft	50.00	1,723.60	86,180
4	N.S Rate Analysis	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	8.00	18,800.57	150,405
		Total Rs			<u> </u>	788,811

# DETAILED COST ESTIMATE

#### EXTERNAL SEWERAGE SYSTEM

			SISIEM				
Sr. No.	Description	No	Length	Width	Height	Qty.	Unit
	Excavation						
1	Earth work excavation in open cutting for sewers and manholes as shown in drawing including shuttering of wooden vertical planks, struts and beams, dressing to correct section and dimension according to templates and levels and removing surface water in all types of soil except shingle, gravel and rock. i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth						
	- DVC - i	1	450.00	2.50	2.50	2 027 50	Cft
	uPVC pipe	1	450.00	2.50	3.50	3,937.50	Cft
					Total	3.94	%oCft
	Sand Filling						
2	Providing and laying sand under and around the sewer pipe, including leveling, manual compaction, complete in all respect.						
		1	450.00	2.50	1.00	1,125.00	Cft
					Total	11.25	%Cft
_	uPVC Pipe						
3	Providing, fixing, testing and commissioning of $\mu$ -PVC (Unplasticized Polyvinyl Chloride ) sewerage pipe make of Dadex /Popular/Beta or equivalent, 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.						
	a) Type (SDR 34/SN-8)						
	i) 6" dia 150mm	1	400.00			400.00	Rft
	ii) 8" dia 200 mm	1	50.00			50.00	Rft
4	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.	8				8.00	Nos.

#### DETAILED COST ESTIMATE

# SEPTIC TANK

Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Excavation				
1	3/42	Earth work excavation in open cutting for sewers and manholes as shown in drawing including shuttering of wooden vertical planks, struts and beams, dressing to correct section and dimension according to templates and levels and removing surface water in all types of soil except shingle, gravel and rock.				
		i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth	1000Cft	0.33	12,836.55	4,236
2	6/5	Plain Cement Concrete Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(f) Ratio 1: 2: 4	100 Cft	0.08	38,723.50	3,098
		(i) Ratio 1: 4: 8	100 Cft	0.27	29,723.50	8,025
		Brick work				
3	7/7/i	Pacca brick work other than building upto 10ft. (3 m)				
		Ratio 1:3	100 Cft	2.28	33,467.90	76,307
4	6/6	<b>Concrete Work</b> 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.):-				
		<ul> <li>(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:-</li> <li>Type C (nominal mix 1: 2: 4)</li> </ul>	P.Cft	16.88	583.25	9,842
		1 ype C (nominar mix 1, 2, 4)	1.011	10.00	505.25	2,042

#### DETAILED COST ESTIMATE

# SEPTIC TANK

Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
	Unang	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	0.42	31,946.30	13,477
		Cement Pointing				
6	11/18/a	Cement pointing struck joints, on walls, upto 20' (6.00 m) hiehgt:-				
		a) ratio 1:2	100Sft	2.64	3,776.40	9,970
7	21/16	<b>RCC Manhole Cover</b> 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	16,069.65	32,139
8	21/13	Angle Iron Step 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	610.75	8,551
9	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (crushed stone aggregate and bajri used in concrete items) (Lead 165 Km)	Cft	47.48	60.20	2,858
						, -
		Total Amount Rs.				168,503

## SEPTIC TANK CALCULATION OF QUANTITIES

# CIVIL WORK

	CIVIL WORK								
Sr. No.	Description	No.	Length	Width	Height	Qty.	Unit		
	Excavation								
1	Earth work excavation in open cutting for sewers								
	and manholes as shown in drawing including								
	shuttering of wooden vertical planks, struts and								
	beams, dressing to correct section and dimension								
	according to templates and levels and removing								
	surface water in all types of soil except shingle,								
	gravel and rock. i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth								
			0.70						
	Septic tank	1	8.50	5.50	7.00	327.25	Cft		
					Total	327.25	Cft		
					Total	0.33	%oCft		
	Plain Cement Concrete								
2	Cement concrete plain including placing,								
2	compacting, finishing and curing complete								
	(including screening and washing of stone								
	aggregate):								
	(f) Ratio 1: 2: 4	3	1.75	3.00	0.50	7.88	Cft		
					Total	7.88	Cft		
					Total	0.08	%Cft		
	(i) Ratio 1: 4: 8	2	1 75	2.00	0.22	5.25	<u> </u>		
	Septic tank Outer Wall	3	<u> </u>	3.00	0.33	5.25	Cft Cft		
	Baffle wall	1 2	6.00	1.50	0.33	6.00	Cft		
		2	0.00	1.50	Total	27.25	Cft		
					Total	27.25	en		
					Total	0.27	%Cft		
	Brick work								
3	Pacca brick work other than building upto 10ft. (3								
	m)								
	Ratio 1:3		<b>.</b>		<b>2 - - -</b>				
	Outer wall	1	24.00	1.88	0.50	22.50			
		1	24.00	1.50 1.13	0.50 0.50	18.00 13.50			
		1	24.00	0.75	8.00	13.30			
	Baffle wall	2	3.00	1.13	0.50	3.38			
		2	3.00	0.75	6.00	27.00			
		_			Total	228.38	Cft		

# SEPTIC TANK

# CALCULATION OF QUANTITIES

# CIVIL WORK

Sr.		NT	T (I	<b>XX</b> 7• 141		04	<b>T</b> T •4
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:-			4.50	0.70	1 ( 00	~~~
	Type C (nominal mix 1: 2: 4)	1	7.50	4.50	0.50	16.88	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		42.19	Kg
					Total	0.42	%Kg
	Cement Pointing						
6	Cement pointing struck joints, on walls, upto 20'						
	(6.00 m) hiehgt:-						
	a) ratio 1:2	1	24.00		8.00	192.00	Sft
		4	3.00		6.00	72.00	Sft
					Total	264.00	Sft
					Total	2.64	%Sft
	RCC Manhole Cover						<u> </u>
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.
							- 1

	PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB SEPTIC TANK CALCULATION OF QUANTITIES CIVIL WORK									
Sr. No.	Description INo Length   Width   Height   Otv   Unit									
8	Angle Iron Step Providing and fixing 1 ¹ /4"x1 ¹ /4"x3/16" (31x31x5 mm) angle iron step, in manhole chambers, including carriage and setting the same in work to correct lines and levels.					14.00	Nos.			

# DETAILED COST ESTIMATE

	1	EXTERNAL DARINAGE S	YSTEM			
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		Excavation				
1	3/42	Earth work excavation in open cutting for sewers and manholes as shown in drawing including shuttering of wooden vertical planks, struts and beams, dressing to correct section and dimension according to templates and levels and removing surface water in all types of soil except shingle, gravel and rock. i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth	1000Cft	1.31	12,836.55	16,848
2	21/24	Sand Filling Providing and laying sand under and around the sewer pipe, including leveling, manual compaction, complete in all respect.	100Cft	3.75	3,906.00	14,648
		uPVC Pipe				
3	19/48	Providing, fixing, testing and commissioning of µ- PVC (Unplasticized Polyvinyl Chloride ) sewerage pipe make of Dadex /Popular/Beta or equivalent, 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.				
		a) Type (SDR 34/SN-8)				
		i) 6" dia 150mm ii) 8" dia 200 mm	Rft Rft	75.00 75.00	1,144.35 1,723.60	85,826 129,270
4	Rate Analysis	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	18,800.57	37,601
		Total Rs				284,193

# DETAILED COST ESTIMATE

# EXTERNAL DARINAGE SYSTEM

	EXTERNAL DARINAGE SYSTEM								
Sr. No.	Description	No	Length	Width	Height	Qty.	Unit		
	Excavation								
1	Earth work excavation in open cutting for sewers and manholes as shown in drawing including shuttering of wooden vertical planks, struts and beams, dressing to correct section and dimension according to templates and levels and removing surface water in all types of soil except shingle, gravel and rock. i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth								
	uPVC pipe	1	150.00	2.50	3.50	1,312.50	Cft		
						1.01	0/ CR		
	Sand Filling				Total	1.31	%oCft		
2	Providing and laying sand under and around the sewer pipe, including leveling, manual compaction, complete in all respect.								
		1	150.00	2.50	1.00	375.00	Cft		
					Total	3.75	%Cft		
	uPVC Pipe								
3	Providing, fixing, testing and commissioning of $\mu$ -PVC (Unplasticized Polyvinyl Chloride ) sewerage pipe make of Dadex /Popular/Beta or equivalent, 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.								
	a) Type (SDR 34/SN-8)								
	i) 6" dia 150mm	1	75.00			75.00	Rft		
	ii) 8" dia 200 mm	1	75.00			75.00	Rft		
4	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.		

# DETAILED COST ESTIMATE

		SILT HOLDING TAN	K			
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		SILT HOLDING TANK				
		Excavation				
1	3/42	Earth work excavation in open cutting for sewers and manholes as shown in drawing including shuttering of wooden vertical planks, struts and beams, dressing to correct section and dimension according to templates and levels and removing surface water in all types of soil except shingle, gravel and rock. i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth	1000Cft	0.32	12,836.55	4,108
			Toooch	0.52	12,050.55	4,100
		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	0.05	38,723.50	1,936
		(i) Ratio 1: 4: 8	100 Cft	0.13	29,723.50	3,864
		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.):-				
		(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	127.13	583.25	74,146
		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) 149	100kg	3.81	31,946.30	121,835

# DETAILED COST ESTIMATE

		SILT HOLDING TAN	K	1	1	
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
		C.I Cover				
5	19/40	Supply and fitting of cast iron manhole cover with frame, etc. complete. iii) 60 cm (24") dia	Each	1.00	2,426.30	2,426
		Angle Iron Step				
6	21/13	Providing and fixing 1 ¹ / ₄ "x1 ¹ / ₄ "x3/16" (31x31x5 mm) angle iron step, in manhole chambers, including carriage and setting the same in work to correct lines and levels.	Each	5.00	610.75	3,054
		C.I Vent Pipe				
7	23/21	Providing, laying, cutting, jointing, testing and disinfecting cast iron pipe line (BS-2035) in trenches, with flanged and flanged joints, complete in all respects:-				
		a) 3" (75 mm) i/d	Rft	5.00	1,284.65	6,423
8	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (crushed stone aggregate and bajri used in concrete items) (Lead 170 Km)	Cft	124.19	60.20	7,476
		Total Rs				225,268

### DETAILED COST ESTIMATE

# EXTERNAL WORKS

	EXTERNAL PLUMBING						1
Sr. No.	Description	No	Length	Width	Height	Qty.	Unit
	SILT HOLDING TANK						
	Excavation						
1	Earth work excavation in open cutting for sewers and manholes as shown in drawing including shuttering of wooden vertical planks, struts and beams, dressing to correct section and dimension according to templates and levels and removing surface water in all types of soil except shingle, gravel and rock. i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth						
		1	8.00	5.00	8.00	320.00	Cft
					Total	0.32	%oCft
2	Plain Cement Concrete Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(f) Ratio 1: 2: 4	1	6.00	3.00	0.25	4.50	Cft
					Total	0.05	%Cft
	(i) Ratio 1: 4: 8	1	8.00	5.00	0.33	13.20	Cft
					Total	0.13	%Cft
3	Concrete Work 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)						
	Walls	1	21.00	0.75	7.00	110.25	Cft
	Top Slab	1	7.50	4.50	0.50	16.88	Cft
					Total	127.13	Cft

	PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB DETAILED COST ESTIMATE EXTERNAL WORKS PLUMBING WORKS									
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) (3 kg/cft)				Total	381.38	Kg			
	C.I Cover									
5	Supply and fitting of cast iron manhole cover with frame, etc. complete. iii) 60 cm (24") dia	1				1.00	Nos			
	Angle Iron Step									
6	Providing and fixing 1 ¹ /4"x1 ¹ /4"x3/16" (31x31x5 mm) angle iron step, in manhole chambers, including carriage and setting the same in work to correct lines and levels.	5				5.00	Nos.			

# DETAILED COST ESTIMATE

Sr.	1nd Bi-Annual-				Rate	Amount
sr. No.	2023 (Jun to june) Jhang	Description	Unit.	Quantity	(Rs.)	(Rs.)
		Scheduled Items (A)				
1	3/21	Excavation				
1	5/21	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	11,658.25	38,402
		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 these mentioned in $f(a)$ (i) $f(a)$				
		members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal				
		shuttering) complete in all respects:-				
		(3) Type C (nominal mix 1: 2: 4)	Cft	144.00	473.85	68,234
0	< /1 Q /1	Steel Work				
3	6/12/b	Fabrication of mild steel reinforcement for cement				
		concrete, including cutting, bending, laying in position, making joints and fastenings, including cost				
		of binding wire and labour charges for binding of				
		steel reinforcement (also includes removal of rust				
		from bars):-				
		('b) Deformed bars (Grade-40)	100Kg	3.60	15,949.45	57,418
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).				
		(7.09)	Rft.	250.00	114.25	28,563

# DETAILED COST ESTIMATE

		EXTERNAL ELECTRICAL	WORKS			
Sr. No.	1nd Bi-Annual- 2023 (Jun to june) Jhang	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	800.00	177.75	142,200
6	24/12	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaid G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):-				
		ii) 4 mm sq (7/0.036")	Rft	800.00	94.35	75,480
		iv) 16 mm sq (7/0.064")	Rft	100.00	208.35	20,835
7	24/13	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire / trenches, etc. (rate for cable only):- a) PVC insulated, PVC sheathed twin core, 250/440				
		volts.		800.00	172.45	120 7 (0
		<ul><li>v) 7/1.12 mm (7/0.044")</li><li>b) PVC insulated, PVC sheathed 3 core, 600/1000 volt cable:-</li></ul>		800.00	173.45	138,760
		v) 7/1.12 mm (7/0.044")	Rft	400	267.15	106,860
		c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-				
		vi) 10 mm (7/0.052")	Rft	550.00	525.75	289,163
		vii) 16mm (7/0.064")	Rft	110.00	694.80	76,428
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 ,tappered from 225 mm at bottom to 100 mm at top,with 1500 mmx60 mm dia. arm for luminaire installation, duly G.I.welded with 470x470x20 mm base plate with the help of 4 no triangular stiffeners 100x350x20 mm of GI sheet,with built in junction box with shutter,i/c the cost of nuts & J-rag bolts, duly fixed in prelaid concrete foundation, foundation will be paid additionally as approved and directed by the Engineer Incharge.				
		a) Single Arm				
		(i) 10 mtr height	Each	5.00	116,326.10	581,631
		b) Double Arm	- ·	2.00	100 140 10	<b>2</b> 40 <b>2</b> 0 :
		(i) 10 mtr height 154	Each	2.00	120,142.10	240,284

# DETAILED COST ESTIMATE

	EXTERNAL ELECTRICAL WORKS								
Sr. No.	1nd Bi-Annual- 2023 (Jun to june) Jhang	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							
		(vi) 120 Watt with 14400 Lumens	Each	9.00	56,198.60	505,787			
						,			
10	24/77	Supply and erection of electric energy meter, including meter testing fee, etc.							
		b) three phase, 4 wires:	F 1	1.00	15 007 20	15.007			
		iii) 3x80 Amp, 400 volts	Each	1.00	15,987.30	15,987			
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 screwes,necessary wire complete in all respect as approved and directed by the Engineer Incharge. a) Single Pole							
		(ii) 6-40 Amp (6 KA)							
		DB admin block and shed-2	Each	17.00	1,184.45	20,136			
		DB stroe &shed ,3,4&5	Each	12.00	1,184.45	14,213			
		DB GR,EXT,shed 01	Each	10.00	1,184.45	11,845			
		b) Double Pole							
		(ii) 6-40 Amp (6 KA)							
		DB admin block and shed-2	Each	1.00	3,614.45	3,614			
		DB stroe &shed ,3,4&5	Each	-	3,614.45	-			
		DB GR,EXT,shed 01	Each	3.00	3,614.45	10,843			
		MPB	Each	-	3,614.45	-			
		c) Tripple Pole							
		All DBs (ii) 6 40 Amp (10KA)							
		(ii) 6-40 Amp (10KA) 155							

# DETAILED COST ESTIMATE

		EXTERNAL ELECTRICAL	WORKS			
Sr. No.	1nd Bi-Annual- 2023 (Jun to june) Jhang	Description	Unit.	Quantity	Rate (Rs.)	Amount (Rs.)
			F 1		7.026.05	
		All DBs	Each	-	7,236.95	-
		(iii) 6-63 Amp (10 KA)	<b>F</b> 1	11.00	0.026.05	00.407
		MPB & All DBs	Each	11.00	9,036.95	99,406
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				
		DB admin block and shed-2	Cft	1.50	19,686.70	29,530
		DB stroe &shed ,3,4&5	Cft	1.50	19,686.70	29,530
		DB GR,EXT,shed 01	Cft	1.50	19,686.70	29,530
		MPB	Cft	2.50	19,686.70	49,217
			en	2.50	19,000.70	19,217
15	24/105/iii	Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges, complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge				
		(iii) 25 KVA	Each	1.00	581,485.15	581,485

# DETAILED COST ESTIMATE

		EATERNAL ELECTRICAL				
Sr. No.	1nd Bi-Annual- 2023 (Jun to june) Jhang	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 ( $\frac{1}{2}$ ") 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.		3.00	10,199.15	30,597
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	25.20	2,520
		Sub Total Scheduled Iter	ms: (A)			3,298,499
19	N.S.	Supply, installation, testing, and comissioning of following equipment to be installed in already made DB Box for motor including cost of all necessary accessories i.e: contactors, relay, indication lights, with ON/OFF push button complete in all respects.				
		i) Direct of Line (DOL) Starter for 3HP Motor	Set	1.00	45,110	45,110
		ii) Direct of Line (DOL) Starter for 5HP Motor	Set	1.00	57,060	57,060
		Total Cost (Part B)			Rs.	102,170
		Grand Total (Part A + Part B)			Rs.	3,400,669

## DETAILED COST ESTIMATE

# **ENVIRONMENTAL HEALTH & SAFETY COST**

Sr No	Description	Unit	Quantity	Unit Rate (Rs.)	Amount Rs.
	Labor Safety				
1	Face Masks (3 PLY)	Nos	10.00	700.00	7,000
2	Safety Gum Shoes	Nos	15.00	1,350.00	20,250
3	Hand Gloves	Nos	15.00	245.00	3,675
4	First Aid Box				
	(Including essential Medicine)	Nos	1.00	5,000.00	5,000
5	Safety Hard Helmets MSA	Nos	15.00	2,000.00	30,000
6	Safety Goggles	Nos	15.00	550.00	8,250
7	Reflective Safety Vests	Nos	15.00	550.00	8,250
				Sub Total	82,425
	Working Site Safety				
1	Reflective Safety Signs Boards	Nos	2.00	10,000.00	20,000
2	Reflective Safety Barricading Tape	Nos	2.00	1,500.00	3,000
3	Fire Extinguishers DCP	Nos	1.00	7,000.00	7,000
				Sub Total	30,000
	Total Amount (Rs)				112,425

#### Rate Analysis - 1

Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (crushed stone aggregate and bajri used in concrete items) (Lead 105 Km)

Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs.)
1	1/1	Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contratcor.					
		1st KM	100 Cft	1	1	305.40	305
		2nd KM 3rd KM	100 Cft 100 Cft	1 1	1 1	145.65 114.10	146 114
		4th KM 5th KM	100 Cft 100 Cft	1	1	81.20 75.85	81 76
		6th KM	100 Cft	1	1	74.60	75
		7th KM 8th KM	100 Cft 100 Cft	1	1 1	69.60 68.85	70 69
		9th KM 10th KM	100 Cft 100 Cft	1	1	64.75 60.75	65 61
		From 11 km to 200 km	100 Cft	95	1	52.20	4,959
		Total.					6,019.75
		Total Amount per 100 Cft					6,019.75
		Total Cost for Per Cft					60.20

	#REF! EARTH WORK LEAD CHART									
		Rate Analysis								
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Lead	Unit.	Qty	Rate (Rs)	Amount (Rs)			
1	3/5/i	Earthowrk in ordinary soil for embankments lead upto 100 ft. (30 m), including ploughing and mixing with blade grade or disc harrow or other suitable equipment, and compaction by mechanical means at optimum moisture content and dressing to designed section, complete in all respects:- i) 95% to 100% maximum modified AASHO dry density.	1	1000Cft	1	9,963.35	9,963.35			
2	3/17a.b.c	Carriage								
		upto ¼ mile (400 m).	1	1000 Cft	1	4,472.30	4,472.30			
		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	36.85	442.20			
		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	323.50	2,749.75			
		for every ½ mile (800 m) additional lead or part thereof, beyond 5 miles (8 Km).	0	1000 Cft	1	305.45	-			
		Total Amount I,000 (Rs.).					17,627.60			
		Total Amount Per Cft					17.63			

Rate Analysis - 3

Irus	lered for paym	ent)					
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs)
1		Material					
	18-3 a(ii)	ii) Crushed stone aggregate.	100 Cft	1	1	8,915.25	8,915.2
2		Carriage					
		1st KM	100 Cft	1	1.2	305.40	366.4
		2nd KM	100 Cft	1	1.2	145.65	174.7
		3rd KM	100 Cft	1	1.2	114.10	136.9
		4th KM	100 Cft	1	1.2	81.20	97.4
	1 / 1	5th KM	100 Cft	1	1.2	75.85	91.0
	1/1	6th KM	100 Cft	1	1.2	74.60	89.5
		7th KM	100 Cft	1	1.2	69.60	83.5
		8th KM	100 Cft	1	1.2	68.85	82.6
		9th KM	100 Cft	1	1.2	64.75	77.7
		10th KM	100 Cft	1	1.2	60.75	72.9
		From 11 km to 200 km	100 Cft	95.00	1.2	52.20	5,950.8
		Total.					16,138.9
		Total Amount per 100 Cft					16,138.9

#### Rate Analysis - 4

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

Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs.)
1	18/4(a)	Crushed stone	100 Cft		1	13,909.80	13,910
2		Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contratcor.					
		1st KM	100 Cft	1	1.22	305.40	373
		2nd KM	100 Cft	1	1.22	145.65	178
	1/1	3rd KM	100 Cft	1	1.22	114.10	139
		4th KM	100 Cft	1	1.22	81.20	99
		5th KM	100 Cft	1	1.22	75.85	93
		6th KM	100 Cft	1	1.22	74.60	91
		7th KM	100 Cft	1	1.22	69.60	85
		8th KM	100 Cft	1	1.22	68.85	84
		9th KM	100 Cft	1	1.22	64.75	79
		10th KM	100 Cft	1	1.22	60.75	74
		From 11 km to 200 km	100 Cft	95.00	1.22	52.20	6,050
		Total.					21,253.90
		Total Amount per 100 Cft					21,253.90
		Total Cost for Per Cft					212.54

		SULERVI		Rate An	-		0110112			
Mai	nhole Constru	ction 2 x 2 Ft							Unit	Each
Sr. No.	1nd BI-Annual- 2023 (Jan to June) Jhang	Description	No.	Length	Width	Height	Qty	Unit	Rate (Rs)	Amount (Rs)
1		Excavation.								
	3-42-i	(0 to 7 feet depth)	1	3.50	3.50	3.00	36.75	1000 Cft	12,836.55	471.74
2	6-3-b	Cement concrete brick or stone ballast (1:4:8)	1	3.50	3.50	0.33	4.04	100 Cft	25,717.20	1,039.62
3	6-5-f	Base slab	1	3.50	3.50	0.25	3.06	100 Cft	38,723.50	1,185.91
4	6-6-(a)(i)	Top ring Beam Ratio 1:2:4	1	3.500	3.50	0.33	4.04	100 Cft	583.25	2,357.79
5	6/12 ( c)	Steel work		3.00 kg	per cft		14.15	kg	31,946.30	4,520.00
6	7-7-i	Brick Work Ratio 1:3 Step - 1	1	11.00	0.75	2.00	16.50	100 Cft	33,467.90	5,522.20
7	11-8-c	3/4" thick Plaster Ratio 1:3 (External)	1	11.00		2.00	22.00	100 Sft	4,856.75	1,068.49
8	11-18-a	Cement pointing struck joints, on walls (1:2) (Internal)	1	8.00		2.00	16.00	100 Sft	3,776.40	604.22
9	13-9-i	Bitumen Coating on External Plaster	1	11.00		2.00	22.00	100 Sft	2,264.55	498.20
10	19-40-ii	Supply and fitting of cast iron manhole cover ii) 45 cm (18") dia	1				1.00	Each	1,532.40	1,532.40
								Grar	nd Total.	18,801

#### **RATE ANALYSIS**

	 ~ _			
Description				

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.

								Unit.	Per Sft			
Sr.	Def	Ref Detail			Unit Rate (British System) per Sft							
No.	Kel				Qty		Rate Per Unit		Amount (Rs.)			
		Area 1 Sft										
		Material										
1	MR	Supply of PEB Shed			1	Sft	1,888.00	Sft	1,888			
								Total.	1,888			
		Contractor's Profit	20	%					378			
		Total							2,266			
		ITEM RATES										
		Composite rate Per Sft						Rs.	2,270			

Rate Analysis for 3.50' x 7' = 24.50 Sft

Sr.	Ref	Detail				Unit I	Rate (British S	ystem) pe	r Sft
No.	Input Rate	Detan			Qty	″ <b>.</b>	Rate Per U	nit (Rs.)	Amount (Rs.)
<u>A</u>	12.014	<u>Material</u> Formica sheet (8' x 4') (Rate - 1400 Per Sheet) Size 3.50' x 7' = 24.50			24.50	Sft			
		Wastage 5% Total	5	%	<b>24.50</b> 1.23 25.73	Sft Sft Sft	43.75	P. Sft <b>Total</b>	1,125.47 <b>1,125.47</b>
<u>B</u> 1	12.039	<b>Fitting</b> Glue (Bottle) Best Quality			0.50	Kg	200.00	Kg	100.00
<u>C</u>	LB-029 LB-024	Labour Carpenters Skilled Cooly			0.10 0.10	Nos No	1400.00 1400.00	<b>Total</b> P. Day P. Day	<b>100.00</b> 140.00 140.00
		Total Sundries Total	10	%					<b>280.00</b> 28.00 <b>308.00</b>
		Contractor's profit	20	%			Total (A+	-B+C)	<b>1,533.47</b> 306.69
		Total for 24.50 Sft. Rate Per Sft							1,840.16 75.11
		<u>Item Rates</u> Composite Rate Per Sft Composite Rate Per Sqm						Rs. Rs.	75.11 808.18

RATE ANALYS	SIS
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Description				

Supply, installation, testing, and comissioning of following equipment to be installed in already made DB Box for motor including cost of all necessary accessories i.e. contactors, relay, indication lights, with ON/OFF push button complete in all respects.

								Unit.	Each								
Sr.	Ref	Detail					Unit Rate (British System) per Each										
No.	Nel	Detan	Q	ty	Rate Pe	er Unit	Amount (Rs.)										
		Material															
1	MR	i) Direct of Line (DOL) Starter for 5HP Motor			1.00	No.	44,600	No.	44,600								
								Total.	44,600								
2		Carriage & Installation Charges							2,945								
								Total.	47,545								
		Contractor's Profit on item No. (1&2)	20	%					9,509								
		Total							57,054								
		ITEM RATES															
		Composite rate Per Each						Rs.	57,060								

#### **RATE ANALYSIS**

Description							
Supply installation testing and comissioning of following	equin	ment	to he	insta	lled in alread	v made D	B Box for motor

Supply, installation, testing, and comissioning of following equipment to be installed in already made DB Box for motor including cost of all necessary accessories i.e. contactors, relay, indication lights, with ON/OFF push button complete in all respects.

	1	1						Unit.	Each		
Sr.	Ref	Detail				Unit l	Rate (Britis	h System	) per Each		
No.	Kei Detaii				Q	ty	Rate Per	Unit	Amount (Rs.)		
1	MR	Material           i) Direct of Line (DOL) Starter for 3HP Mote	or		1.00	No.	33,500	No.	33,500		
								Total.	33,500		
2		Carriage & Installation Charges							2,230		
								Total.	35,730		
		Contractor's Profit on item No. (1&2)	20	%					7,146		
		Total							45,106		
		ITEM RATES									
		Composite rate Per Each						Rs.	45,110		

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

		RATH	E ANAI	LYS	IS					
Descr	iption									
	-	lation, testing and commissioning of follow ers nuts and bolts complete in all respect.	ving Flo	ood I	Light, c	comple	te with capa	acitor, ha	anging rod, canop	
								Unit.	Each	
Sr.	Ref	Detail				Unit	Rate (Britis	sh Syste	m) per Each	
No.				1	Q	ty	Rate Per	Unit	Amount (Rs.)	
		<u>Material</u>								
1	MR	Flood Light			1.00	No.	5,525	No.	5,525	
								Total.	5,525	
2		Carriage & Installation Charges							276.2	
								Total.	5,80	
		Contractor's Profit on item No. (1&2)	20	%					1,16	
		Total							6,962	
		ITEM RATES								
		Composite rate Per Each						Rs.	6.96	
		Say						Rs.	7,00	

RATE	ANAI	VSIS

		RATE	ANAL	YSIS	5				
Descri	iption								
		lation, testing and commissioning of follow s, dimmers nuts and bolts complete in all re	-	56"	ceilin	g fan, e	complete wi	ith capaci	itor, hanging roc
								Unit.	Each
Sr.	Ref	Detail				Unit F	Rate (Britis	h System	) per Each
No.	Kel	Detan		1	Q	ty	Rate Per	Unit	Amount (Rs.)
		Material							
1	MR	Ceiling Fan			1.00	No.	5,525	No.	5,525
								Total.	5,525
2		Carriage & Installation Charges							276.25
								Total.	5,801
		Contractor's Profit on item No. (1&2)	20	%					1,160
		Total							6,962
		ITEM RATES							
		Composite rate Per Each						Rs.	6,961
		Say						Rs.	7,000

# 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	А	PR-2	23	M	AY-2	23	Л	UN -2	23	JU	J <b>L-2</b> .	3	A	\UG-	-23		SEP-	23	
1	Construction of Boundary Wall & Gate																			
2	Building & Allied Structures																			
3	Parking Sheds																			
4	Workshop & Washing area																			
5	Walkways & Pathways																			

# Annexure-E E&S Checklist and SOPs

#### ENVIRONMENTAL AND SOCIAL SCREENING CHECKLIST

#### Instructions:

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

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

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

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

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

#### Name of Enumerator/ESFP: MOI & S (Faraz Ahwaz) MOP (M. Aslam)

Name of City/MC/LG: MC Jhang

Sub-Project Sector: Solid Waste Management

Sub-Project Title: Parking Area Development for Solid Waste Machinery. (11.43 Kanals)

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

#### Date of Screening: 16/02/2021

**Sub- Project Categorization:** 

#### **Anticipated Project Activities:**

- Boundary wall and Entrance Gate
- Sheds for vehicles with Steel Columns and Aluzinc sheeting at the top
- Administrative Building
- Workshop with tool room and toilet
- Open Service Station
- Parking aprons
- Guard room
- Silt Holding Tank & Septic Tank
- External Water supply, Sewerage and Drainage system

#### Estimated Cost of Sub-Project: 89.45 Million PKR

Approx. Completion Time: 06 Months

#### Estimated Labor for Sub-Project: 10-15

Screening Questions	Yes	No	Remarks
A. Project Siting			
Is the Sub-Project area adjacent to or within any of	the fol	lowing	?
Environmentally sensitive areas?			
Cultural heritage site		√	No cultural heritage site observed within 250 meters of periphery of Sub-Project.
Legally protected Area (core zone or buffer zone)		✓	No legally protected area exists within 250 meters of radius of Sub-Project.
Any surface water body (river, canal, stream, lake, wetland) within 250 meters of proposed project?		√	A water body observed nearby Sub-Project location.
Mangrove Forest		$\checkmark$	No mangrove forest observed.
Estuarine		✓	No estuarine exists in Sub-Project proposed scope of work.
Special area for protecting biodiversity		√	No protected area/buffer zone lies within peripheral zone of Sub-Project.
Buffer zone of protected area		$\checkmark$	
Man-made forest /game reserve, orchid/crops or any other area of environmental importance	~		Some trees observed within jurisdiction of Sub- project but no cutting of trees required as per design.
Socially sensitive/Important areas/communities/	people	?	
PCRs and or any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, Gordwarah, Temple, Fort, archeological/historical site) within 100 m of the proposed subproject		✓	No PCRs exists within 100 meters of periphery of Sub-Project which will be negatively impacted due to any work activities.
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meters of the proposed sub project		✓	No such socially sensitive receptors observed nearby location of Sub-Project.
Any graveyard of local community (Muslims or Christians)		✓	No graveyard observed.
Any demographic or socio-economic aspects of the sub-project area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments of the society and women or children)?		✓	No such aspects get triggered due to any Sub- Project interventions.
Already existing infrastructure (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		✓	No dismantling to any public infrastructure envisaged as working activities will be inside disposal station premises.
<b>B.</b> Potential Environmental Impacts			1
Will the Sub-Project cause			
1. Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?		✓	

2. Cutting of trees?		✓	No trees cutting required as per scope of work under Sub-Project.
3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?		✓	No disruption to any habitat/ecosystem due to any Sub-Project activities.
4. Generation of wastewater during construction or operation?	~		Wastewater will be generated during operational phase from washing pit and will be discharged directly into nearby sewerage system.
<ol> <li>Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of waste water?</li> </ol>		✓	No such impact anticipated.
6. Alteration of surface water hydrology of waterways resulting in increased sediment in streams/rivers or due to increased soil erosion at construction site?		~	No alteration of any waterway involved in the scope of Sub-Project.
7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker- based camps and chemicals used in construction?		✓	No workers-based camp will be required to be established as per limited work activities under Sub- Project.
8. Over pumping of ground water, leading to salinization and ground subsidence?		√	No over pumping of ground water required under Sub-Project interventions.
9. Serious contamination of soil due to construction works?		✓	No such impact expected.
10. Aggravation of solid waste problems in the area?		✓	Negligible impact projected.
11. Generation of solid waste/hazardous waste?		~	
12. Increased air pollution due to sub-project construction and operation?	~		Negligible impact due to limited work activities.
13. Noise and vibration due to sub-project construction or operation?		~	No such impact expected.
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/liquid?		√	No such impact expected.
15. Use of chemicals during construction?		√	No usage of hazardous chemicals envisaged after review of proposed work activities.
C: Potential Social Impacts			1
Will the Sub-Project cause			
1.Impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?		~	No damage to any PCRs required under scope of Sub-Project.
2. Displacement or involuntary resettlement of people? (Physical displacement and/or economic displacement)		✓	No displacement/ any sort of resettlement/ economic loss envisaged due to any Sub-Project interventions.

3. Disproportionate impacts on the poor, women and children and or other vulnerable groups ¹ (mentioned above)?		~	No such impact expected.
4. Temporary impediments in movements of people/transport and animals?	~		There will be temporary hindrance in the movement of traffic and pedestrians.
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)?		~	No such impact expected.
6. Social conflicts if workers from other areas are hired?		√	Local labor will be preferred to avoid such conflicts.
7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	~		OHS risks needs to be addressed during the construction phase.
8. Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?		•	No such impact expected.
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?		~	No such impact expected.
10. Any impact on sensitive receptors (mentioned above)		~	No such impact expected
11. Any impact of negative nature on already existing infrastructure including public amenities		~	No public amenity will be negatively impact due to Sub-Project interventions.

#### **Prepared By:**

Name: Faraz Ahwaz

**Designation:** MOI & S

Organization: Municipal Committee, Jhang

Signature:

#### **Endorsed By:**

Name: Asif Gillani

Designation: Deputy Program Officer ESSs

**Organization:** PMDFC

## Signature:

Nort of

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

#### INVOLUNTARY RESETTLEMENT SCREENING CHECKLIST

Name of City/MC/LG: M	C Jhang
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Sub-Project Sector: Solid Waste Management

Sub-Project Title: Parking Area Development for Solid Waste Machinery

Sub- Project Categorization: S-1 S-2 S-3

Date of Screening: 16/02/2021

SECTION 1	Yes	No	Expected	Remarks
Does the project require land acquisition? Yes/No		~		MC owns the 36.76 Kanals land and 11.43 Kanals will be capitalized under Sub-Project.
If yes, then describe the type of land being acquired from the categories below:				
Has any AED been conducted at the proposed location by the government ¹ ? Yes/No		~		No AED has been conducted on the proposed location by MC.
Land (Quantify and describe types of land being acquired in "remarks column".				N/A
Government and LG owned land free of occupation (agriculture or settlement)	~			Sub-project site under possession of MC and free from all sorts of settlements.
Government or state-owned land (other than LG) free of occupation (agriculture or settlement)		~		N/A
Private land		~		N/A
Residential		~		N/A
Commercial		~		N/A
Agricultural		~		N/A
Communal		✓		N/A
Others (specify in "remarks").		✓		N/A
Name of owner/owners and type of ownership document if available.	✓			MC owns the land for Sub- Project.
If land is being acquired, describe any structures constructed on it		~		No land needs to be acquired under Sub-Project.
Land-based assets:		✓		
Residential structures		~		N/A
Commercial structures (specify in "remarks")		✓		N/A
Community structures (specify in "remarks")		✓		N/A
Agriculture structures (specify in "remarks")		~		N/A

¹ The sub-projects have to avoid all locations where any government led AED has been conducted.

Public utilities (specify in "remarks")	×	No public utility will be damaged due to any work activity.
Others (specify in "remarks")	✓	
If agricultural land is being acquired, specify the following:	✓	No agriculture land required under Sub-Project.
Agriculture related impacts	✓	N/A
Crops and vegetables (specify types and cropping area in "remarks).	×	N/A
Trees (specify number and types in "remarks").	✓	N/A
Others (specify in "remarks").	✓	N/A
Affected Persons (APs)	✓	No APs as per scope of work and its impacts.
Will any people be displaced from the land when acquired? Yes/No	✓	No displacement of any people required under Sub- Project.
Number of APs	✓	No APs as per scope of work and its impacts.
Males	✓	N/A
Females	✓	N/A
Titled landowners	✓	N/A
Tenants and sharecroppers	✓	N/A
Leaseholders	✓	N/A
Agriculture wage laborers	✓	N/A
Encroachers and squatters (specify in remarks column)	~	No encroachment on the Sub-project site.
Vulnerable APs (e.g. women headed households, minors and aged, orphans, disabled persons, and those below the poverty line). Specify the number and vulnerability in "remarks".	×	No Vulnerable APs recorded as per Sub-Project interventions.
Others (specify in "remarks")	✓	
How will people be affected?	✓	There will no negative impact of Sub-Project interventions.

#### **Prepared By:**

**Endorsed By:** 

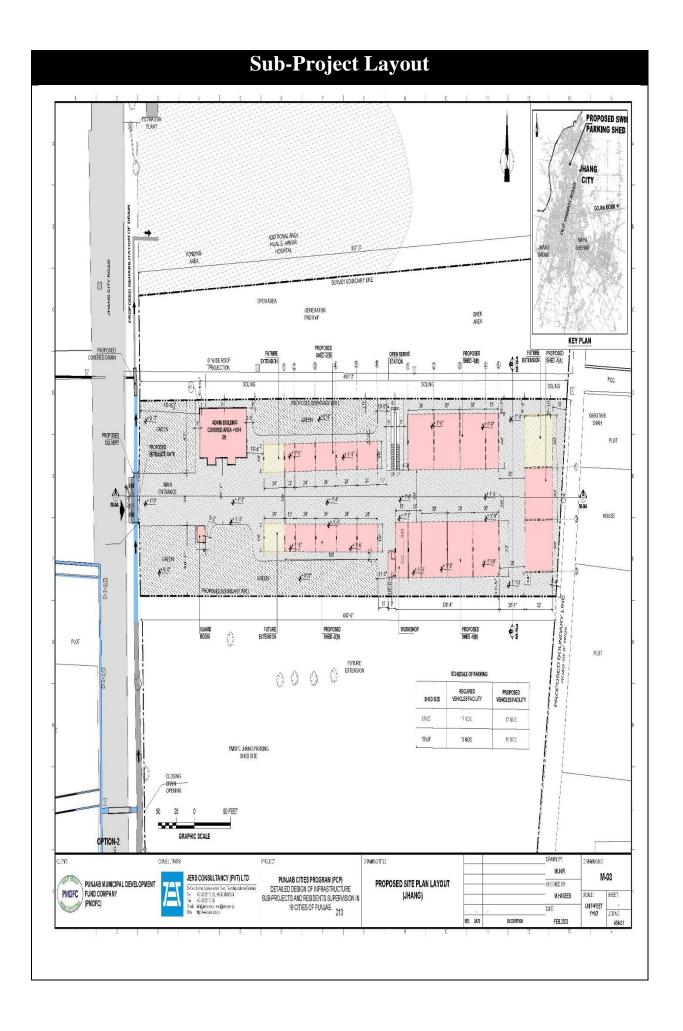
Name: M. Aslam

Name: Asif Gillani

**Designation:** MOP, MC Jhang

Designation: Deputy Program Officer ESSs PMDFC

Nent of





## Environmental & Social Management & Monitoring Plan

## Parking Shed at MC Jhang

Sr. no	Activity	Environmental / social impact	Intensity of impact Low/medi um/high	Mitigation/ Remediation	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility			
	Design phase										
1	Planning	Land acquisition and resettlement	low	This proposed site for parking shed is MC owned land. There is no illegal settlements inside disposal station.	MC ESFPs	Verification by MC		PMDFC			
				Construction phase							
1	Construction material storage, handling and use	<ul> <li>Environmental Issues:         <ul> <li>Ground water may be contaminated due to the any oil spillages from machinery.</li> <li>Health risk to workers and local inhabitants.</li> <li>Poor Housekeepin g</li> </ul> </li> </ul>	Medium to negligible	<ul> <li>Construction material will be covered to ensure safe passage between the destinations during transportation.</li> <li>Materials will not be loaded to a higher level than the side and tail boards and shall be covered with a good quality tarpaulin;</li> <li>At subproject site there will be vacant space after clearance of site for safe and temporary storage of material Anyhow, if land may need to be acquired for temporary storage of machinery &amp; materials contractor will be liable to compensate the land</li> </ul>	Contractor	Visual/ Pictures	<ul> <li>Daily site visit during constructio n phase</li> <li>Fortnightly/ Weekly Once during the construction phase</li> </ul>	•ESFPs •DPO ESM •Supervision Consultants E&S team			

Sr. no	Activity	Environmental / social impact	Intensity of impact Low/medi um/high	Mitigation/ Remediation	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
		Social Issues: Land acquisition for storage of construction material		<ul> <li>owner accordingly through agreement/ negotiations/voluntarily.</li> <li>Contractor will lay/utilize construction materials as per work requirement from his storage site.</li> <li>Contractor will use night vision reflective signboards/ reflective tapes to cordon off the area during construction activities.</li> </ul>				
2	Labor Camp (if established by Contractor)	Health impacts due to absence of housing and sanitation facilities in labor camp	Medium	<ul> <li>Only 10-15 local labor will be hired by the contractor.</li> <li>There will be no need to establish the labor camp or house rent.</li> <li>In case, there is need to accommodate the Environmental, Health &amp; Safety SOPs for labor will be followed. Contractor will submit Campsite Management Plan and approve from DPO-ESSs before the execution of work.</li> </ul>	Contractor	Visual/ Pictures	<ul> <li>Daily site visit during constructio n phase</li> <li>Fortnightly/ Weekly</li> <li>Once during the constructio n phase</li> </ul>	•ESFPs •DPO ESM •Supervision Consultants E&S team
3	Vehicle Movement	<ul> <li>Traffic congestion</li> <li>Conflicts</li> <li>Vehicle emissions</li> </ul>	Negligible	• Sign boards and posters will also be displayed at Sub-project site and adjacent areas as well. Inform the residents about timing, schedule and construction work duration.	Contractor	Visual/ Pictures, Vehicle emission tests reports,	<ul> <li>Daily site visit during constructio n phase</li> <li>Fortnightly/ Weekly</li> </ul>	• ESFPs • DPO ESM • Supervision Consultants E&S team

Sr. no	Activity	Environmental / social impact	Intensity of impact Low/medi um/high	Mitigation/ Remediation	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
						GRM ² Complaints record	• Once during the constructio n phase	
4	Cutting of Trees	• Aesthetic impact	High	• No trees need to be cutted as per design.	Contractor Supervision Consultants E&S team	Visual/ Pictures	• Once during the constructio n phase	• ESFPs • DPO ESM • Supervision Consultants E&S team
5	Construction activity and Vehicle	Noise pollution/ due to construction vehicle Air Pollution due to dust	Moderate	<ul> <li>Labor will be exposed to noise &amp; air pollution.</li> <li>Contractor will ensure the use of well-tuned machinery and skilled labor</li> <li>Providing Personal Protective measures to labors.</li> <li>Water sprinkling will be done on regular basis.</li> </ul>	Contractor	Visual/ Pictures	Once during the construction phase	•ESFPs •DPO ESM Supervision Consultants E&S team
6	Construction waste	waste generation due to construction activities	Moderate	<ul> <li>Waste will be removed from site on alternate days.</li> <li>At project site one area within boundary will be used as</li> </ul>	Contractor	Visual/ Pictures	Once during the construction phase	•ESFPs •DPO ESM

² GRM for subproject implementation will cater to all subproject beneficiaries. The GRM mechanism is based on two-tier grievance redress committees—at MC Jhang, PMDFC/LG&CDD level. At construction site number of GRC members will be display.

Sr. no	Activity	Environmental / social impact	Intensity of impact Low/medi um/high	Mitigation/ Remediation	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
				<ul> <li>collection and transfer point of waste.</li> <li>Waste bins will be hanged at site at different location.</li> </ul>				Supervision Consultants E&S team
		Contamination of nearby water body	Moderate to Negligible	• Labor will be trained not to dispose of construction material in any surface water body. This training will be conducted before start of construction phase. Time to time training on waste management will be imparted.	Contractor	Visual/ Pictures	Once during the construction phase	•ESFPs •DPO ESM Supervision Consultants E&S team
07	Occupational Health & Safety	Injuries to workers/LTI	High	<ul> <li>Contractor will follow PMDFC designed Environment, Health and Safety SOPs for Labor/Workers for all activities on the site and these SOPs will be the part of his term of reference and contractual agreement.</li> <li>Workers will be trained by the PMDFC ESM team and guided to follow SOPs and will be provided with necessary PPEs (Safety Helmets, Safety Shoes, Gloves, Chemical Masks etc.) wherever required.</li> <li>First aid will be provided onsite</li> <li>Careful monitoring will also be carried out.</li> </ul>	Contractor	Visual/ Pictures	<ul> <li>Daily site visit during constructio n phase</li> <li>Fortnightly/ Weekly Once during the construction phase</li> </ul>	•ESFPs •DPO ESM Supervision Consultants E&S team

Sr. no	Activity	Environmental / social impact	Intensity of impact Low/medi um/high	Mitigation/ Remediation	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
			1	<b>Operational Phase</b>				
1	Washing Vehicles	Wastewater Generation	Medium	<ul> <li>The cleaning facility must be properly designed, with the necessary slope so that washing water is correctly collected and, therefore, it is not missed around and causes problems (flooding, odour, nuisance to neighbours, etc.).</li> <li>It is recommended to close or delimit the washing area with walls to prevent spray and stuck dirt getting out of the washing area.</li> <li>The washing area must be far from cleaning products storage area to avoid chemical products runoff.</li> <li>Avoid washing vehicles out of the area specially designed for it, and it also prevents wastewater discharge into surface water or soil.</li> </ul>	MC		Regular	MC officials

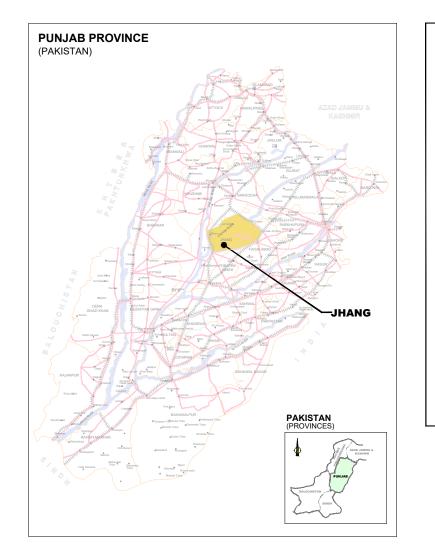
Sr. no	Activity	Environmental / social impact	Intensity of impact Low/medi um/high	Mitigation/ Remediation	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
2	Water Consumption & Conservation	Impact on water quantity	medium	<ul> <li>Build suitable drainage systems in the workshop to avoid flooding of wastewater</li> <li>Set up wastewater intercepting facilities (such as kerb or collection channels) around workshops to avoid egress wastewater.</li> <li>Do not allow the overflow of wastewater</li> <li>Pressure lances must be replaced by washing brushes when cleaning the ground, thus decreasing water consumption.</li> </ul>	МС	_	Regular	MC officials
				<ul> <li>decreasing water consumption.</li> <li>Use buckets to carry water and towels to wash cars</li> <li>Do not allow water to run continuously from taps and spray.</li> <li>Users must be informed about how much water is saved when washing the car in efficient facilities.</li> </ul>				

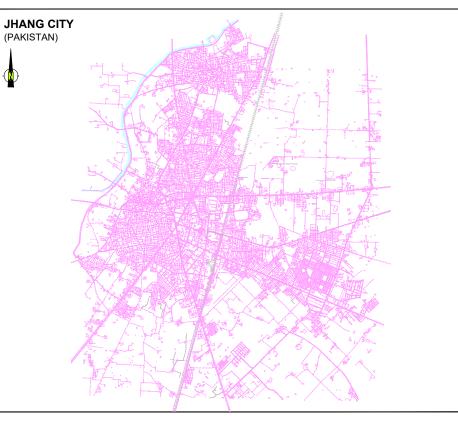
Sr. no	Activity	Environmental / social impact	Intensity of impact Low/medi um/high	Mitigation/ Remediation	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
				• Environmental benefits derived from proper management of water must be announced.				

	Estimated Environment Management & mitigation cost Parking Shed MC Jhang									
Sr. no	Description	Unit	Quantity	Unit rate	Amount (Rs)					
	Face Masks (3 PLY)	Nos	10.0	700./RS	7000.					
	Safety Gum Shoes	Nos	15.0	1350./RS	20,250					
	Hand Gloves	Nos	15.0	245./RS	3675					
	*First Aid Box (Including essential Medicine)	Nos	1.0	5000./RS	5000					
	*Safety Hard Helmets MSA	Nos	15.0	2000./RS	30,000					
	Safety Goggles	Nos	15.0	550./RS	8250					
	*Reflective Safety Vests	Nos	15.0	550./RS	8250					
	Sub-Total				82,425					
	*Reflective Safety Signs Boards	Nos	2.0	10,000. /RS	20,000					
	*Reflective Safety Barricading Tape	Nos	2.0	1500./RS	3000					
	*Fire Extinguishers DCP	Nos	1.0	7000./RS	7000					
	Sub-Total				30,000					
	Total amount				112,425					

## Annexure-F Project Drawings

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







CONSULTANT:



Tel: Fax: Web:

CLIENT:



**PUNJAB MUNICIPAL DEVELOPMENT** FUND COMPANY (PMDFC)

## **DETAILED DESIGN DRAWINGS OF SWM PARKING AREA MC JHANG PUNJAB, PAKISTAN**

## FEBRUARY, 2023

#### **JERS CONSULTANCY (PVT) LTD**

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

## LIST OF DRAWINGS

Sr.No.	SURVEY AND MASTER PLANNING	DRAWING NO.
1	PROJECT AREA LOCATION LAYOUT PLAN	M-00
2	LEGEND AND NOTES	M-01
3	TOPOGRAPHIC SURVEY LAYOUT PLAN - SWM PARKING SHED	M-02
4	PROPOSED LAYOUT PLAN - SWM PARKING SHED	M-03
5	SECTIONAL DETAIL PARKING SHED AREA	M-04
	ARCHITECTURE DRAWINGS	
7	ARCHITECTURE DETAIL - ADMINISTRATIVE BUILDING	AR-01 TO 10
8	ARCHITECTURE DETAIL - GUARD ROOM	AR-11
9	ARCHITECTURE DETAIL - WORKSHOP	AR-12 TO 20
10	ARCHITECTURE DETAIL - OPEN SERVICE STATION	AR-21
11	ARCHITECTURE DETAIL - MAIN GATE	AR-22
12	ARCHITECTURE DETAIL - EXTERNAL BOUNDARY WALL	AR-23
13	ARCHITECTURE DETAIL - PARTITION WALL	AR-24
14	TYPICAL DETAIL OF PARKING SHED-1 (30' x 32')	AR-25
15	TYPICAL DETAIL OF PARKING SHED-2 (24' x 16')	AR-26
	STRUCTURE DRAWINGS	
16	GENERAL NOTES	GN-00
17	FOOTING LAYOUT PLAN - PARKING SHED-1A	ST-01
18	FOOTING DETAIL PEDESTAL PARKING SHED-1A	ST-02
19	ANCHOR BOLT LAYOUT PLAN - PARKING SHED-1A	ST-03
20	TYPICAL ANCHOR BOLTS DETAIL SHED - PARKING SHED-1A	ST-04
21	ROOF FRAMING LAYOUT PLAN - PARKING SHED-1 A	ST-05
22	ROOF SHEETING LAYOUT PLAN - PARKING SHED-1A	ST-06
23	TYPICAL CROSS SECTION - PARKING SHED-1A	ST-07
24	FOOTING LAYOUT PLAN - PARKING SHED-1B	ST-08
25	FOOTING DETAIL PEDESTAL PARKING SHED-1B	ST-09
26	ANCHOR BOLT LAYOUT PLAN - PARKING SHED-1B	ST-10
27	TYPICAL ANCHOR BOLTS DETAIL SHED - PARKING SHED-1B	ST-11
28	ROOF FRAMING LAYOUT PLAN - PARKING SHED-1 B	ST-12
29	ROOF SHEETING LAYOUT PLAN - PARKING SHED-1B	ST-13
30	TYPICAL CROSS SECTION - PARKING SHED-1B	ST-14
31	FOOTING LAYOUT PLAN - PARKING SHED-2B	ST-15
32	FOOTING DETAIL PEDESTAL PARKING SHED-2B	ST-16
33	ANCHOR BOLT LAYOUT PLAN - PARKING SHED-2B	ST-17
34	TYPICAL ANCHOR BOLTS DETAIL SHED - PARKING SHED-2B	ST-18
35	ROOF FRAMING LAYOUT PLAN - PARKING SHED-2B	ST-19
36	ROOF SHEETING LAYOUT PLAN - PARKING SHED-2B	ST-20
37	TYPICAL CROSS SECTION - PARKING SHED-2B	ST-21
38	TYPICAL ELEVATION - PARKING SHED-2B	ST-22

Sr.No.	STRUCTURE DRAWINGS
39	ADMINISTRATIVE BLOCK (FOUNDATION LAYOUT PLAN)
40	ADMINISTRATIVE BLOCK (FOOTING SCETION)
41	ADMINISTRATIVE BLOCK (SLAB REINFORCEMENT)
42	ADMINISTRATIVE BLOCK (BEAM SECTION)
43	FOOTING LAYOUT PLAN - WORKSHOP FOUNDATION
44	WORKSHOP FOUNDATION DETAIL & TYPCAL CROSS SECTION
45	WORKSHOP REINFORCEMENT LAYOUT PLAN
46	FOOTING LAYOUT PLAN - WORKSHOP SHED
47	FOOTING DETAIL PEDESTAL WORKSHOP SHED
48	ANCHOR BOLT LAYOUT PLAN - WORKSHOP SHED
49	TYPICAL ANCHOR BOLTS DETAIL SHED - WORKSHOP SHED
50	ROOF FRAMING LAYOUT PLAN - WORKSHOP SHED
51	ROOF SHEETING LAYOUT PLAN - WORKSHOP SHED
52	TYPICAL CROSS SECTION - WORKSHOP SHED
53	GUARD ROON (FOOTING PLAN ,SCETION & SLAB REINFORCEMENT
54	EXTERNAL BOUNDARY WALL (FOOTING, SECTION & ELEVATION)
55	OPEN SERVICE STATION (FOUNDATION PLAN)
56	OPEN SERVICE STATION (FOOTING SCETION)
57	ENTRANCE GATE FOOTING & SECTION
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59	
Sr.No.	PLUMBING DRAWINGS
60	LEGENDS AND NOTES
61	WATER SUPPLY LAYOUT PLAN - SWM PARKING SHED
62	SEWER SYSTEM LAYOUT PLAN - SWM PARKING SHED
63	DRAINAGE SYSTEM LAYOUT PLAN - SWM PARKING SHED
64	WATER SUPPLY & SEWER SYSTEM LAYOUT PLAN - SWM PARKING
65	SILT HOLDING TANK DETAIL - SWM PARKING SHED
66	WASHING PIT DETAIL - SWM PARKING SHED
67	SEPTIC TANK DETAIL - SWM PARKING SHED
	ELECTRICAL DRAWINGS
68	LEGEND & NOTES - SWM PARKING SHED
69	CABLE ROUTE LAYOUT PLAN - SWM PARKING SHED
70	LIGHTING LAYOUT PLAN - SWM PARKING SHED
71	LIGHTING & POWER LAYOUT PLAN ADMIN BLOCK & GUARD ROOM - SWM PARKING SHED
72	LIGHTING LAYOUT PLAN - SWM PARKING SHED-1,2 &3
73	DETAIL OF SHED LIGHTING LAYOUT PLAN
74	DETAIL OF SHED LIGHTING LAYOUT PLAN
75	SINGLE LINE DIAGRAM OF MAIN PANEL BOARD - SWM PARKING SH
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 JERS CONSULTANCY (PVT) LTD

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

 Tel:
 +92.42 35113123, +92.42 35113124

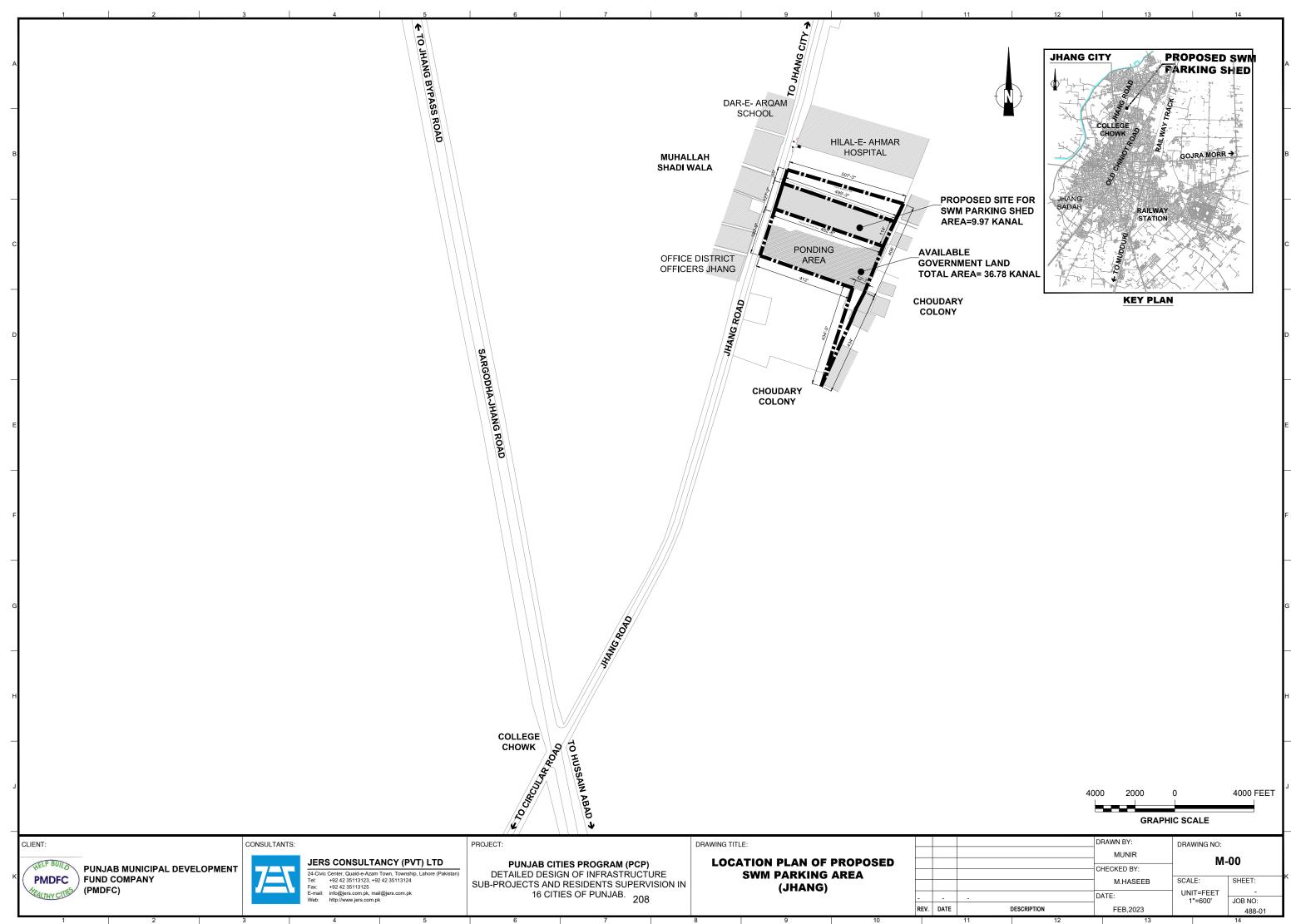
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 PUNJAB MUNICIPAL DEVELOPMENT LIST OF DRAWINGS 7 SWM PARKING SHED (PMDFC) (JHANG) REV. DATE 4 3 6 8 9

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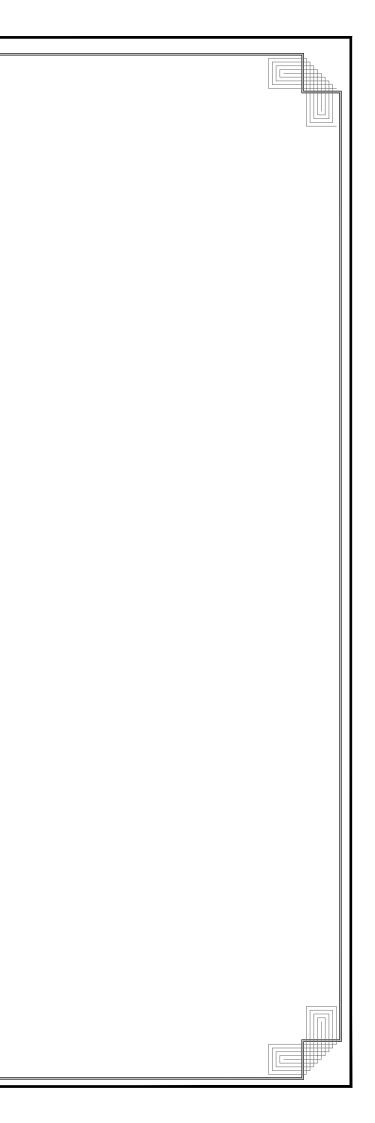
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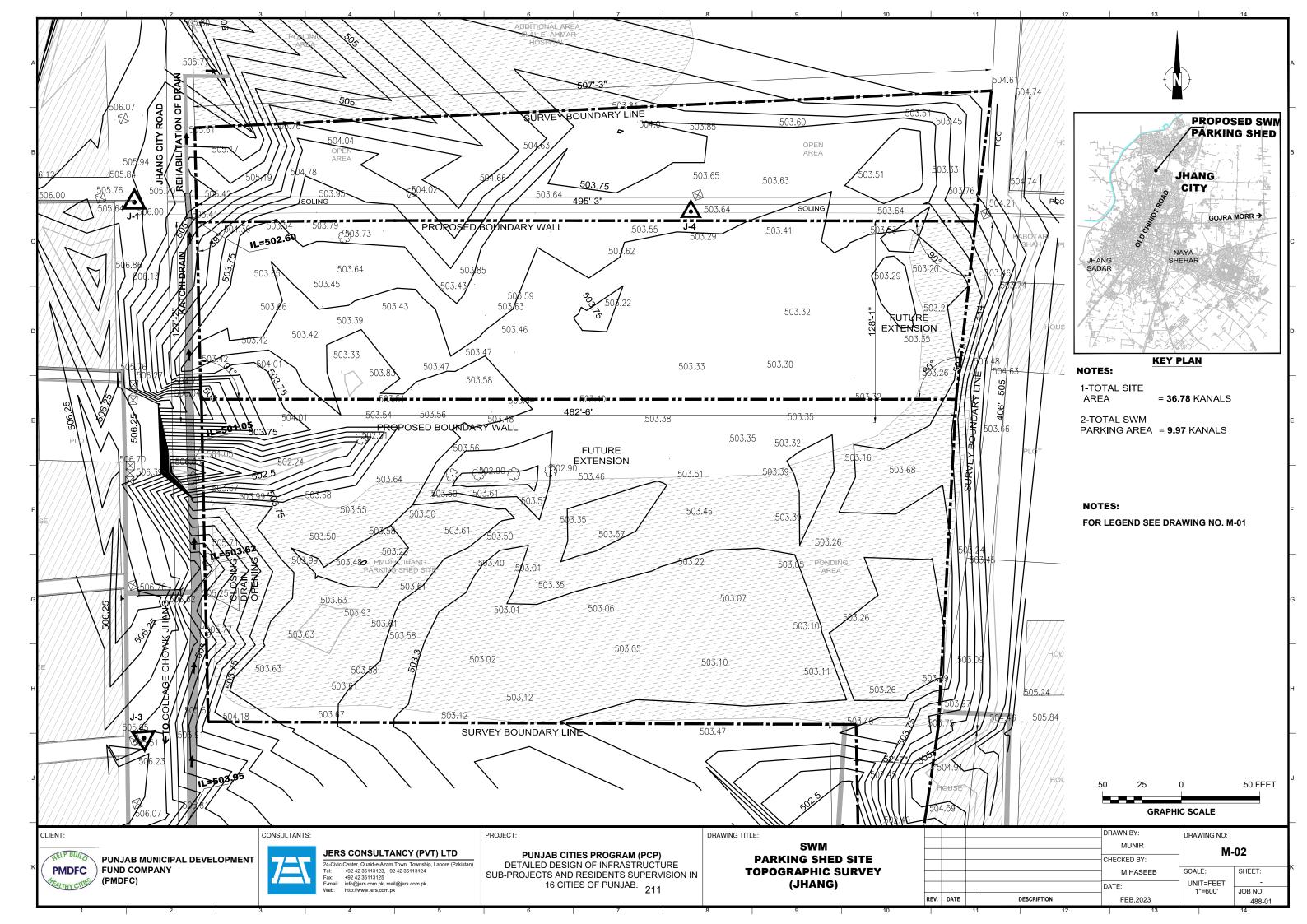
BUILDING		BENCH MARK (BM)
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ROAD/STREET		ELECTRIC POLE
KATCHA TRACK		TELEPHONE POLE
FOOTPATH		LIGHT POLE
GATE		SEWER MANHOLE
DRAIN		TREE
DRAIN NULLAH	NULLAH —	TREE BREAK LINE
NULLAH		BREAK LINE
NULLAH PROPOSED BOUNDARY LINE		BREAK LINE

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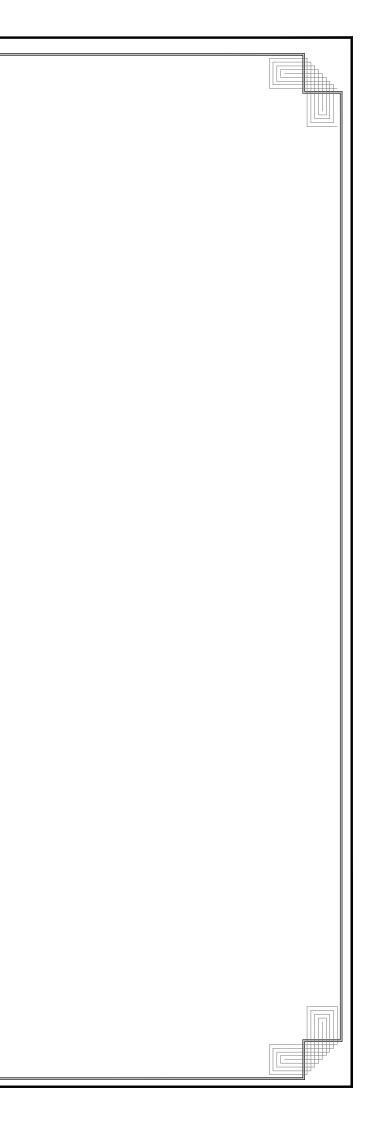
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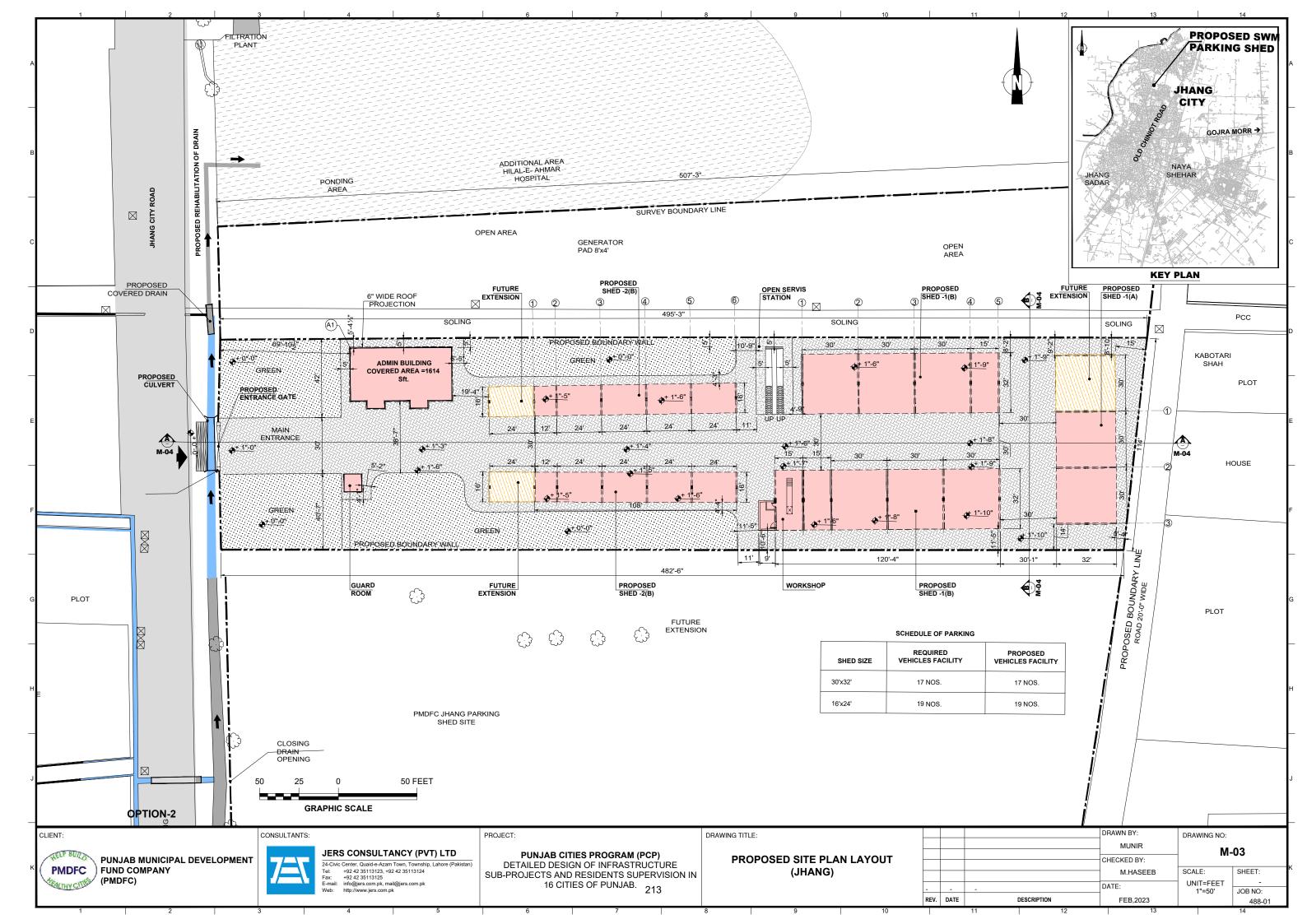


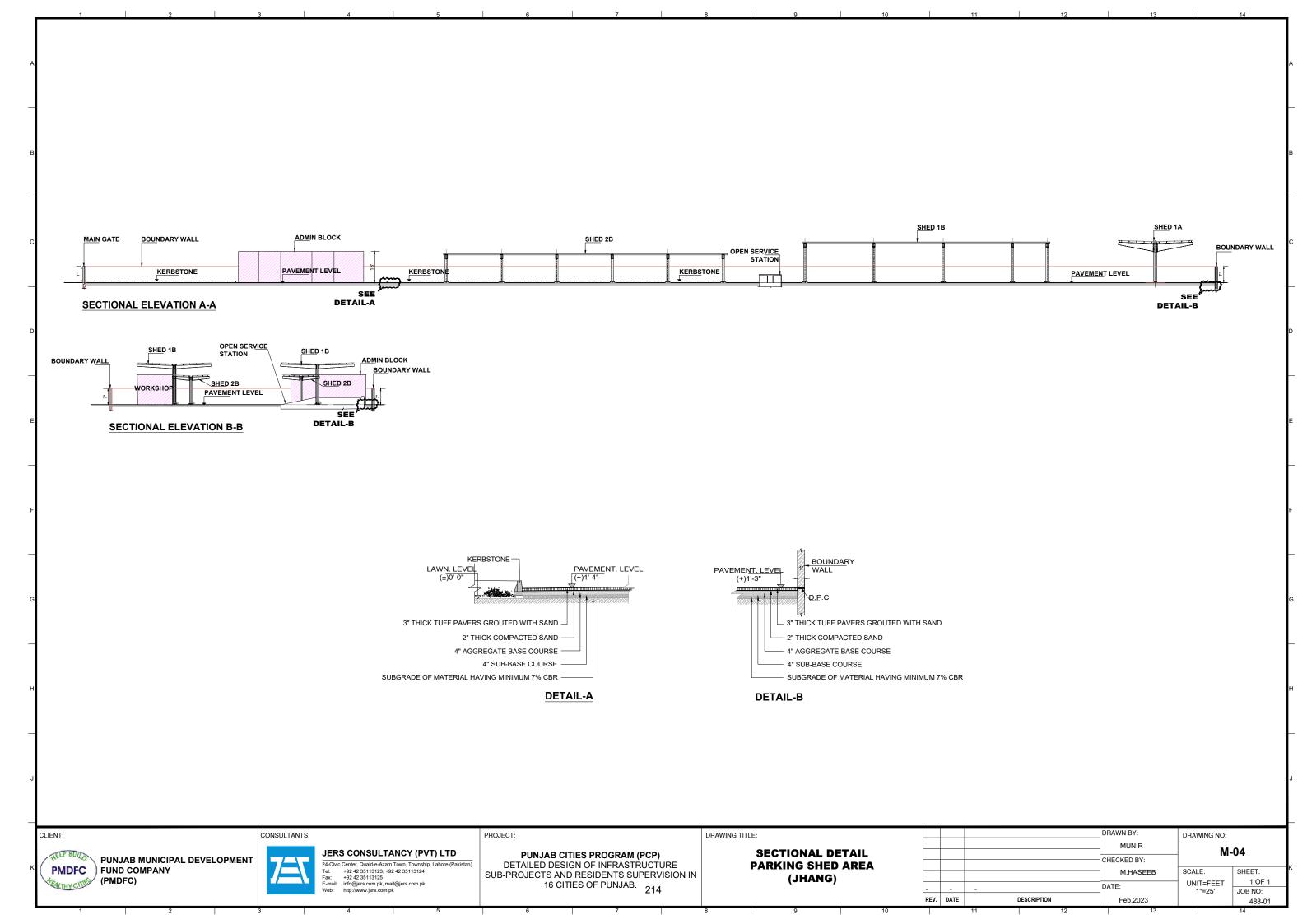




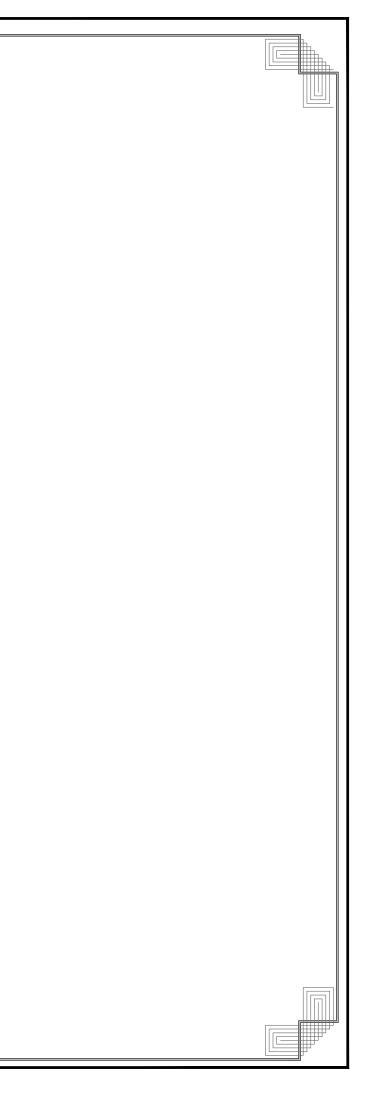
# **MASTER LAYOUT PLAN**

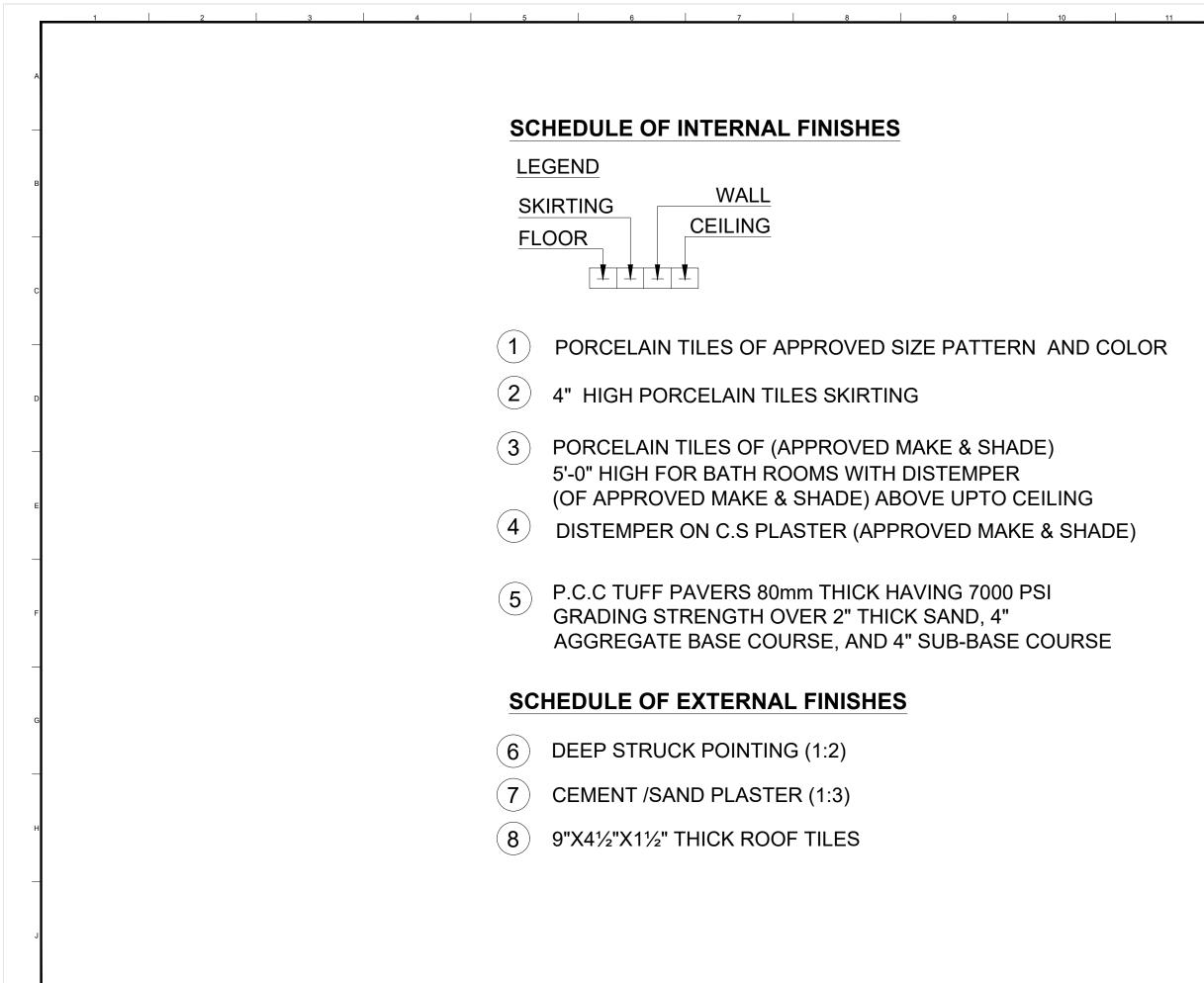






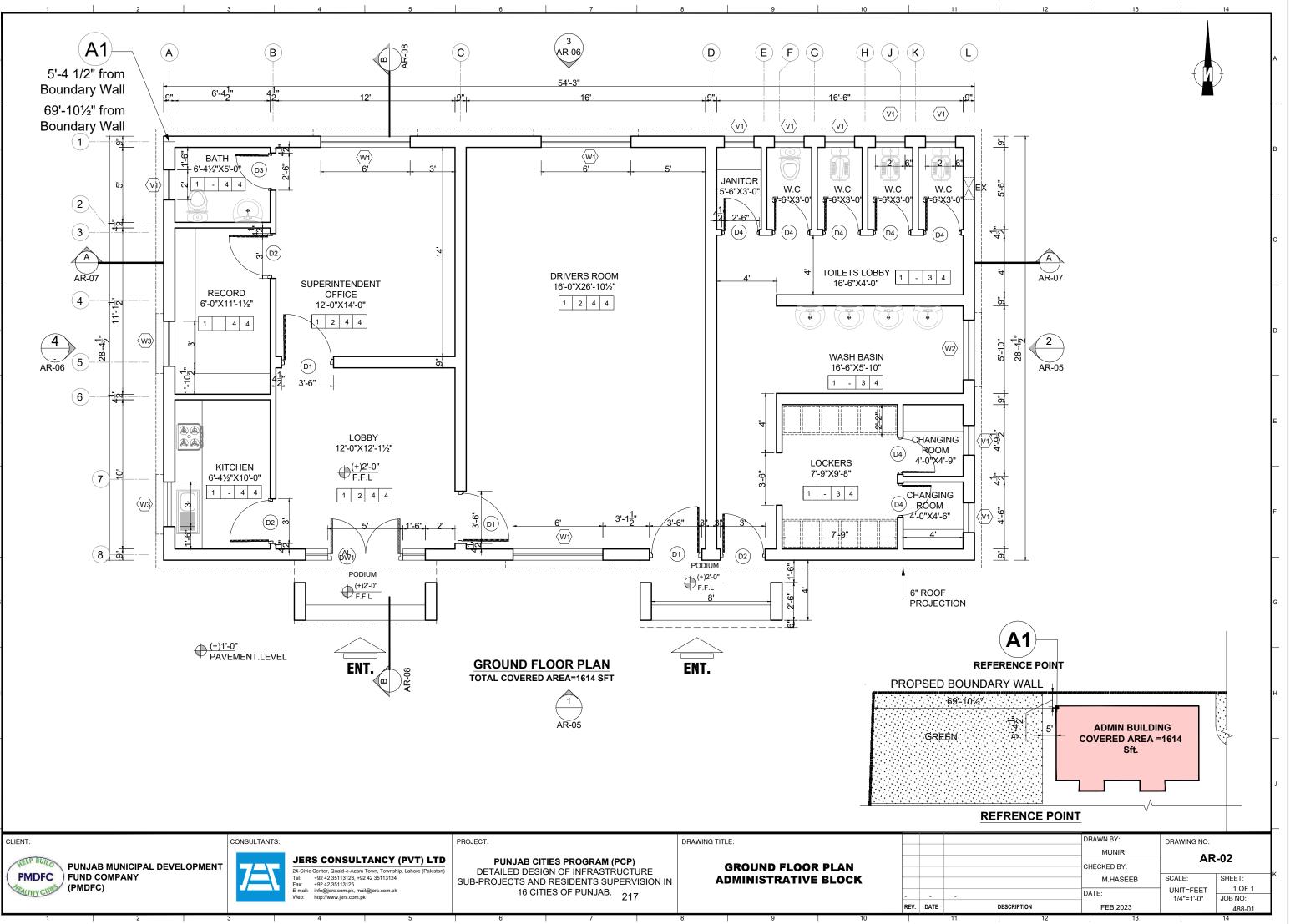
# **ARCHITECTURAL DRAWINGS**

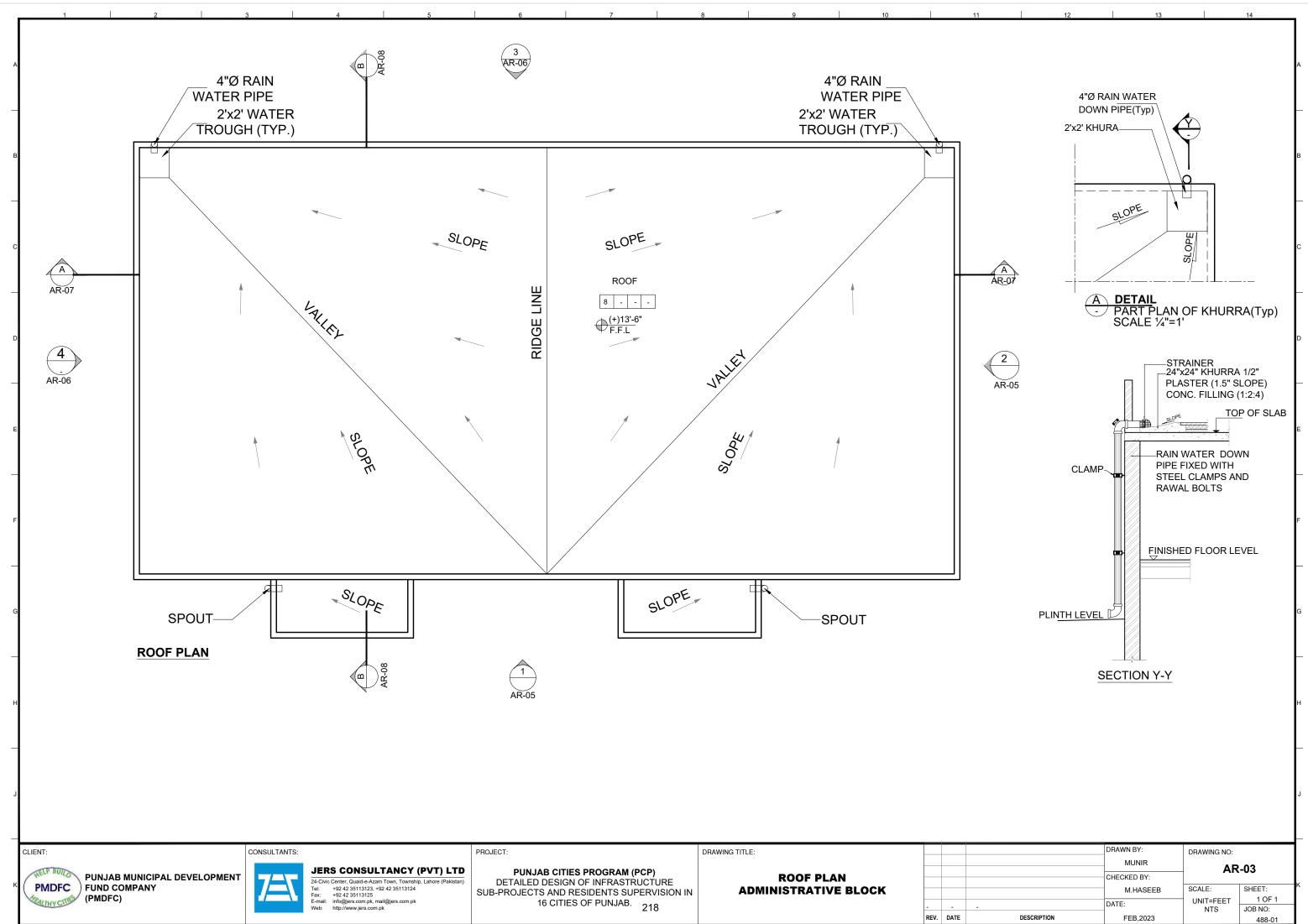


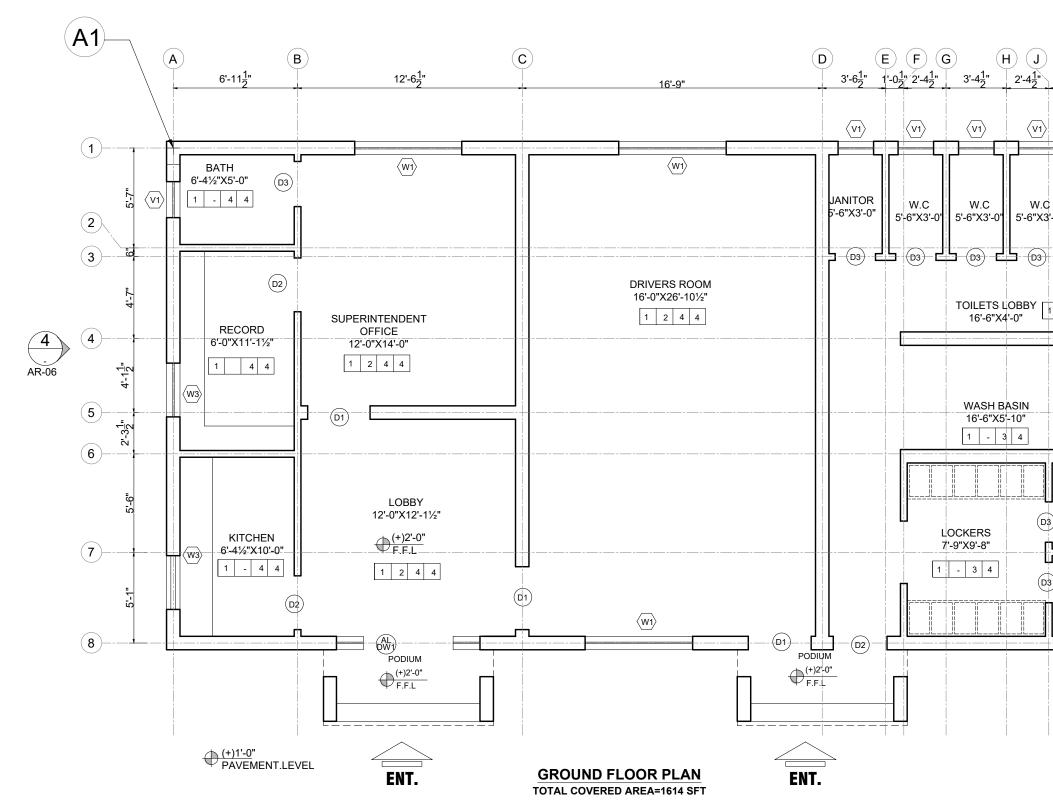


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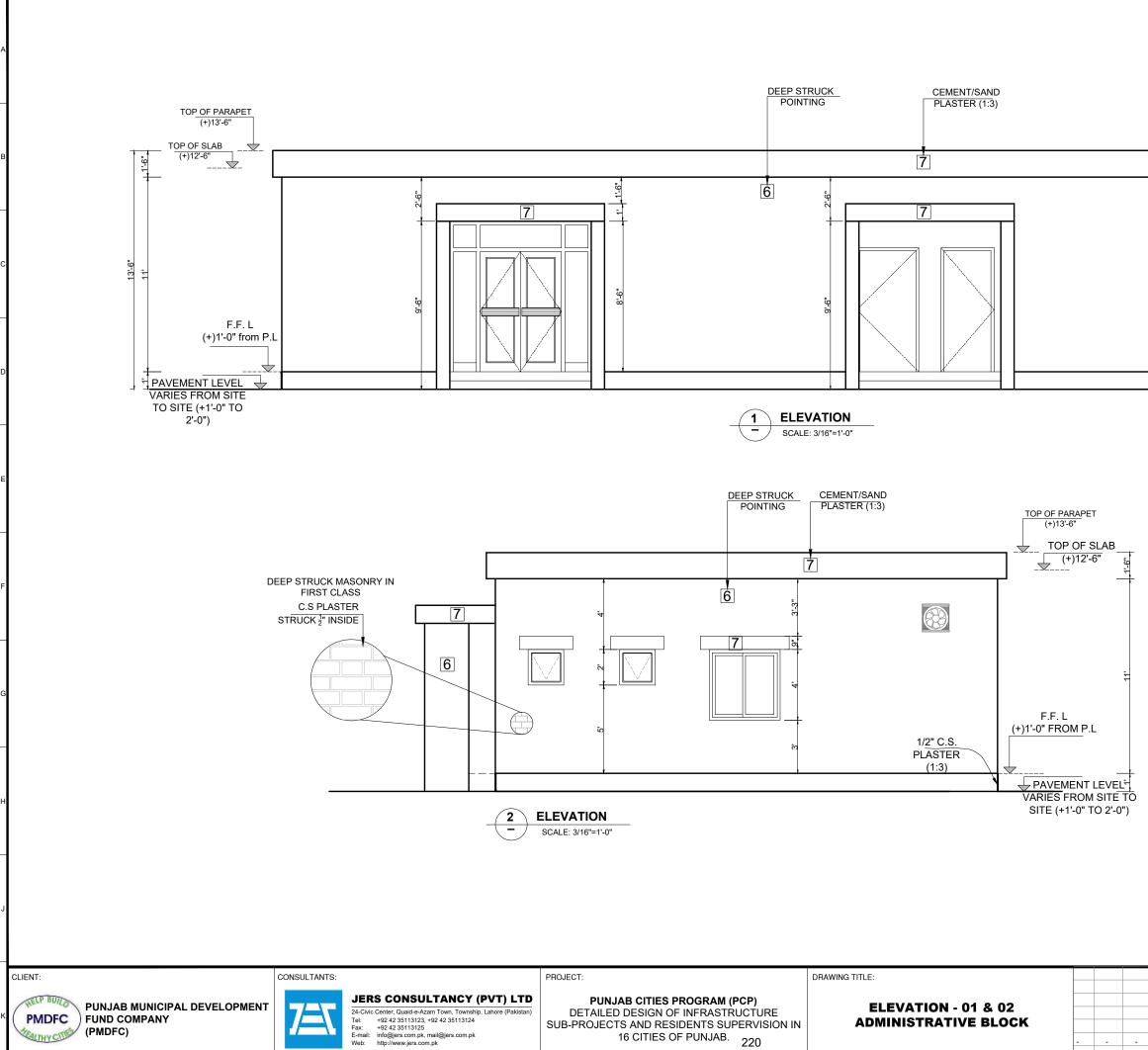




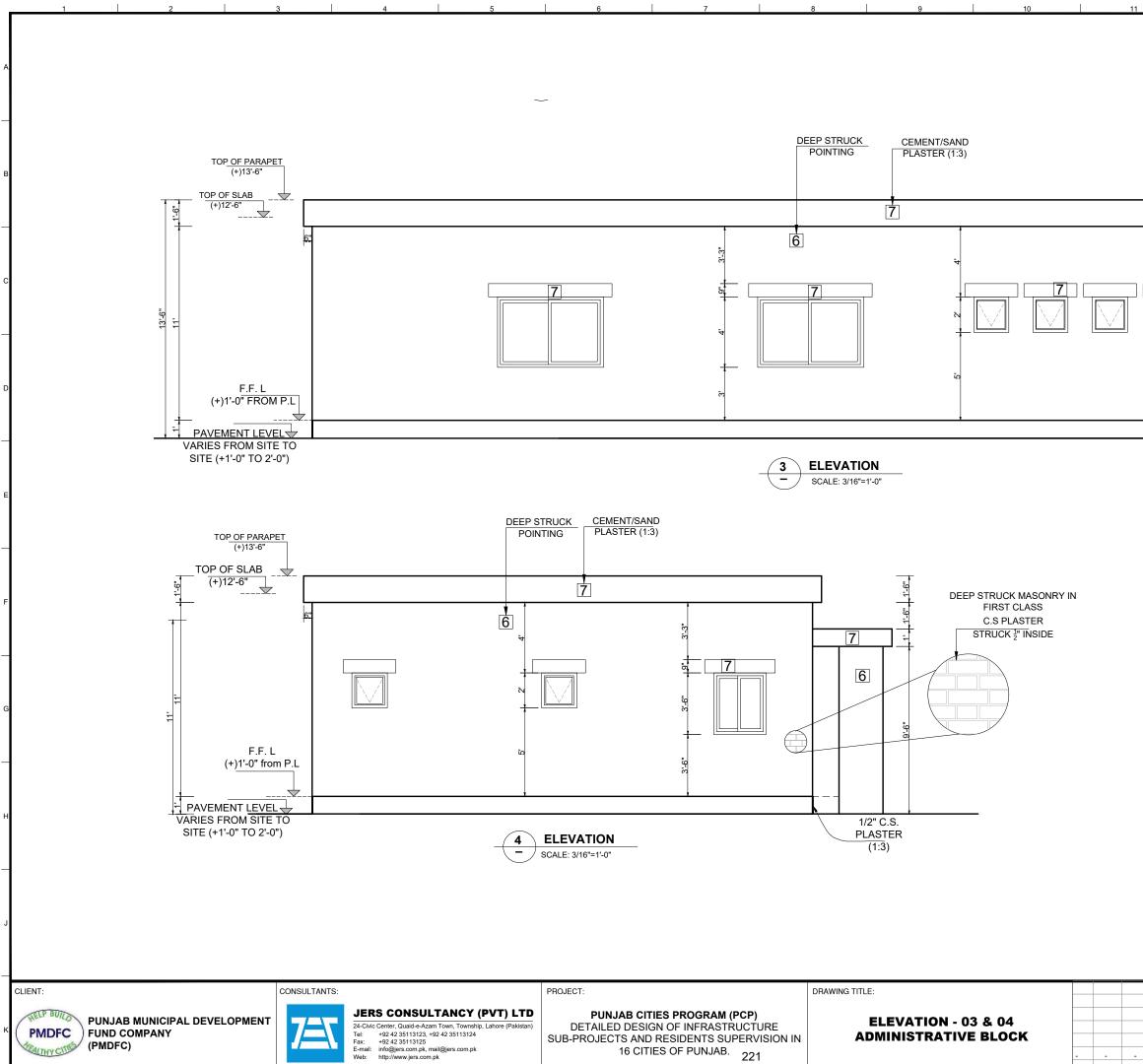
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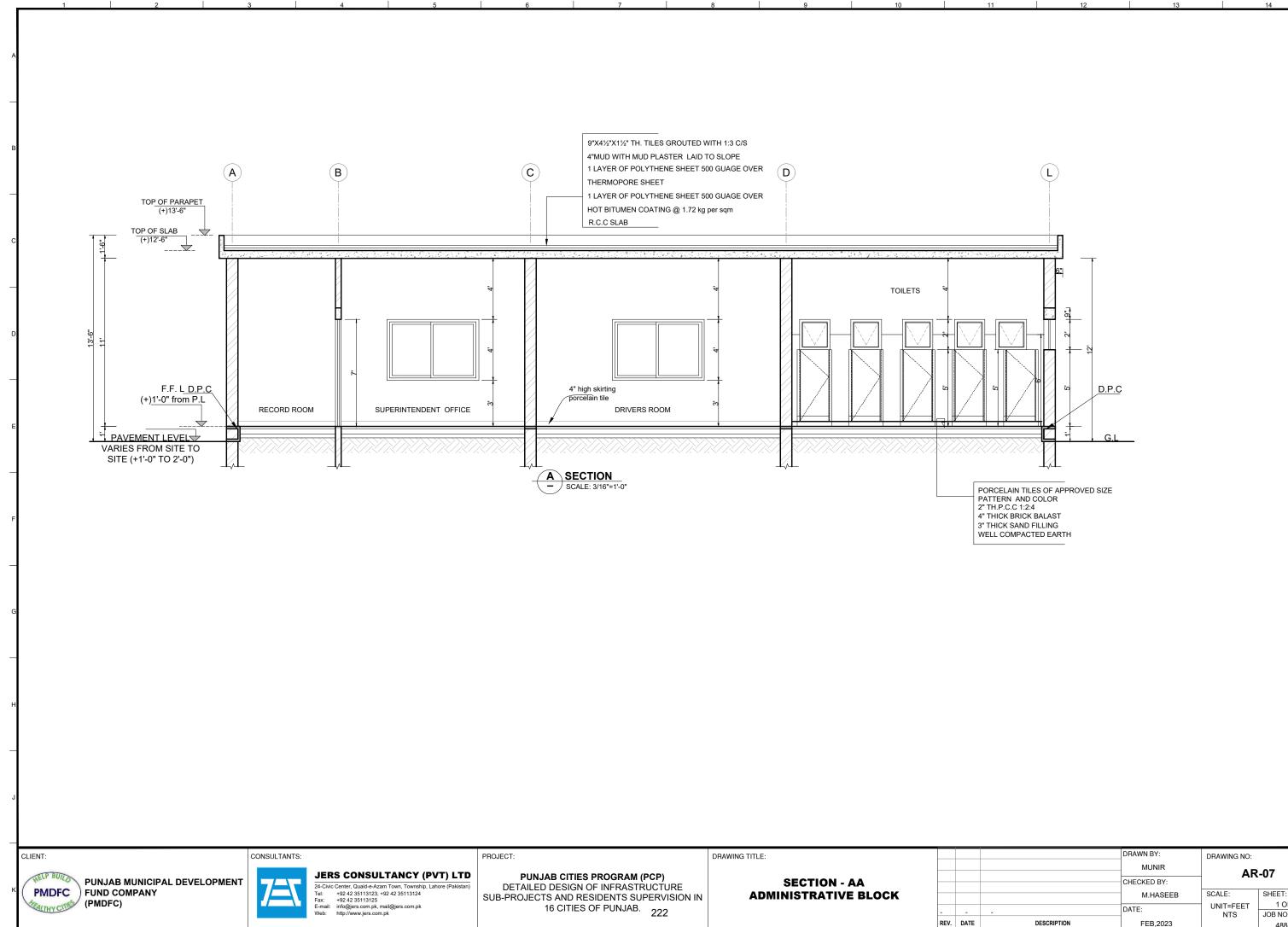
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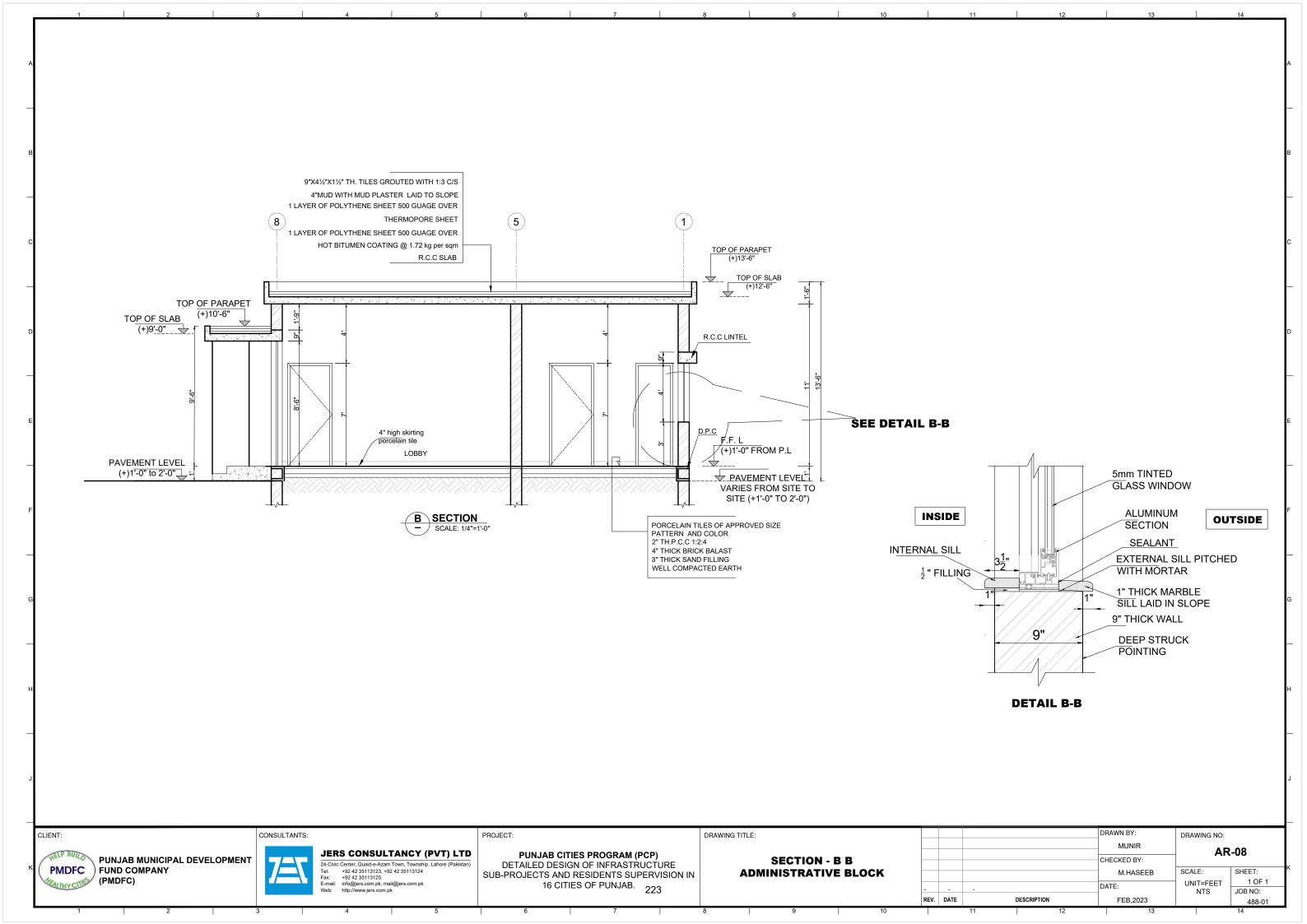
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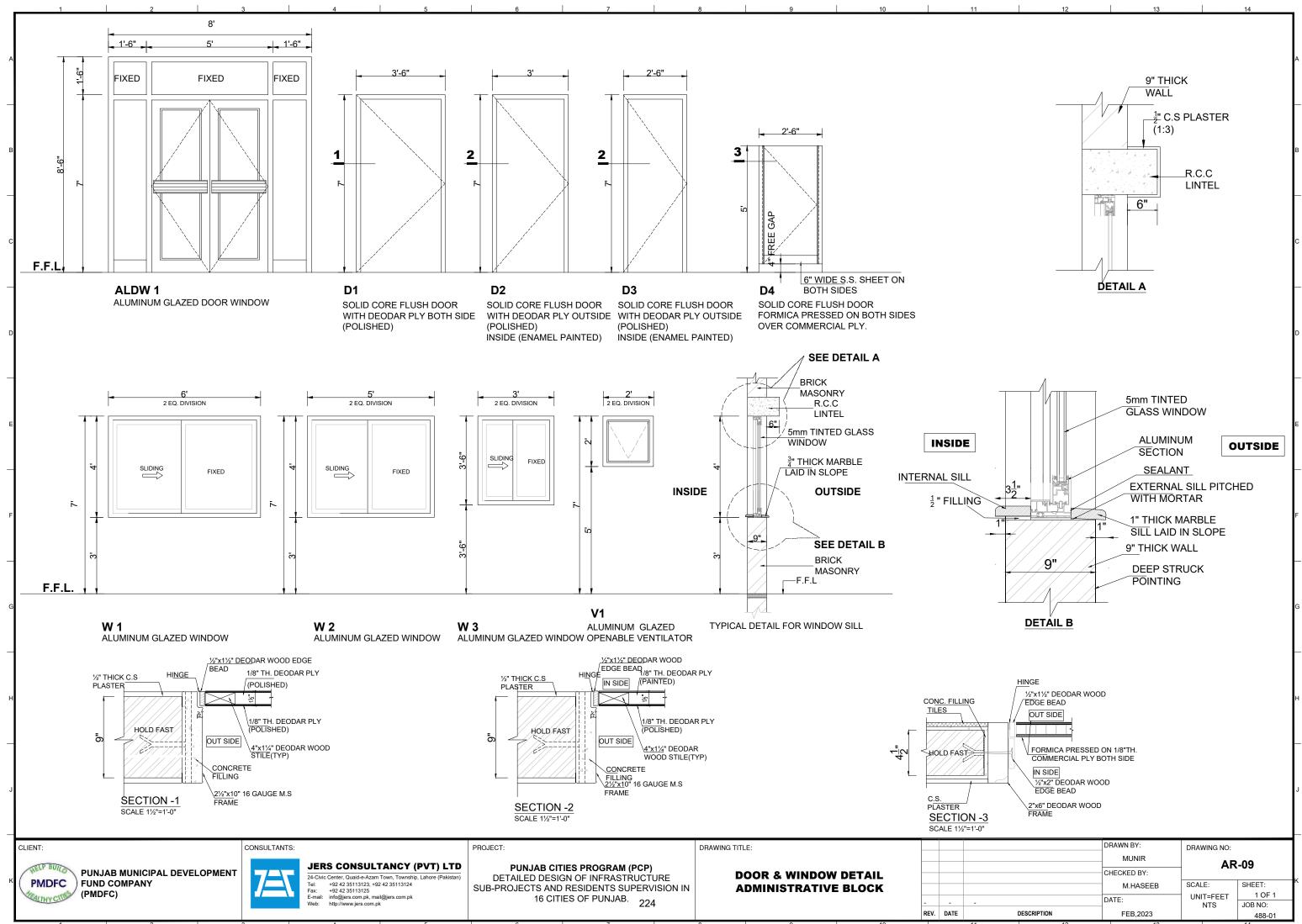
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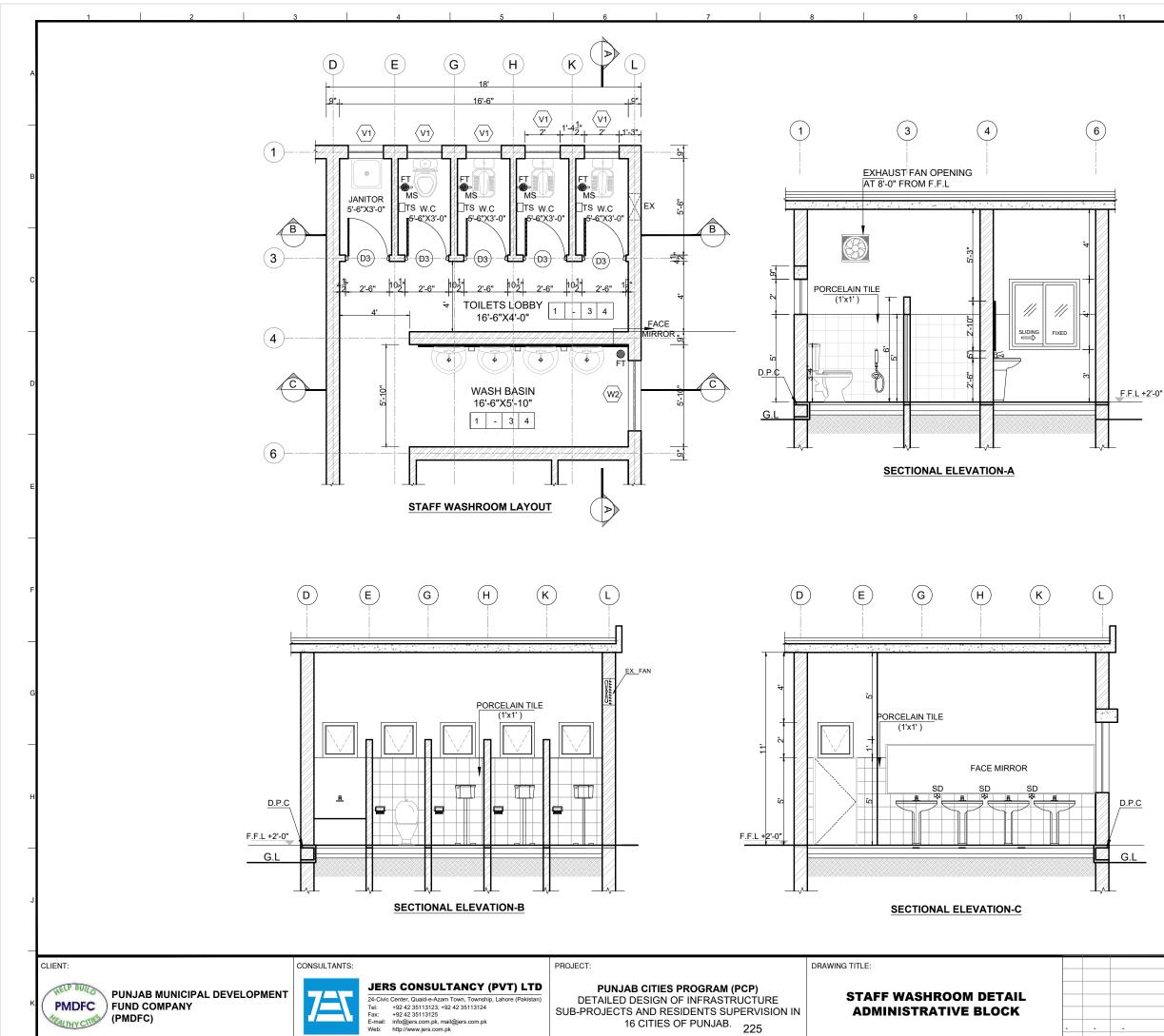
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#### PAINT OVER 1/2" C.S. PLASTER

LEGEND:-1. FLOOR

- 2. DADOO UPTO 5'-0"
- 3. WALL
- 4. CEILING

LEGEND:-

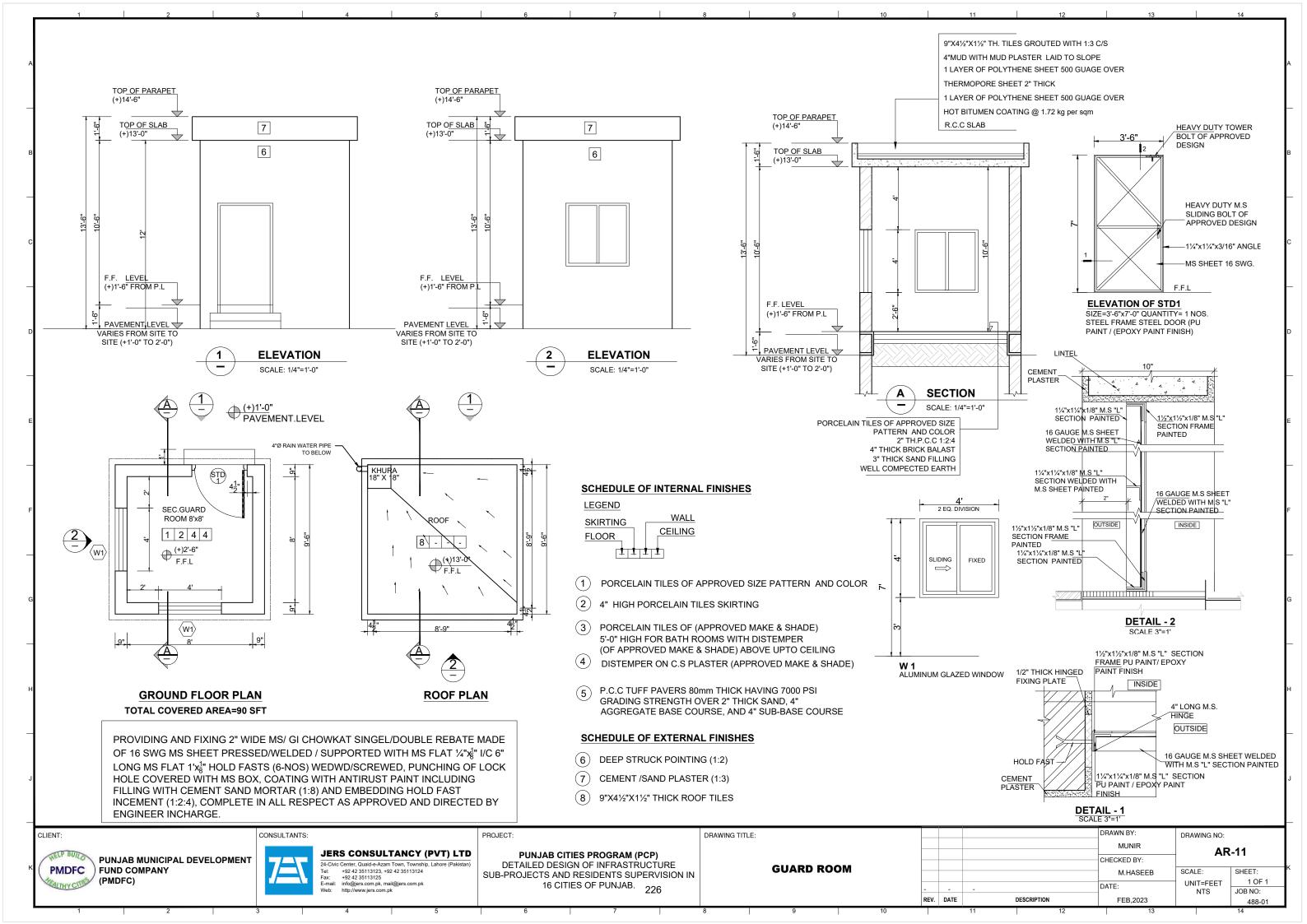
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3. TISSUE HOLDER	TS	
4. SOAP DISPENSER	SD	

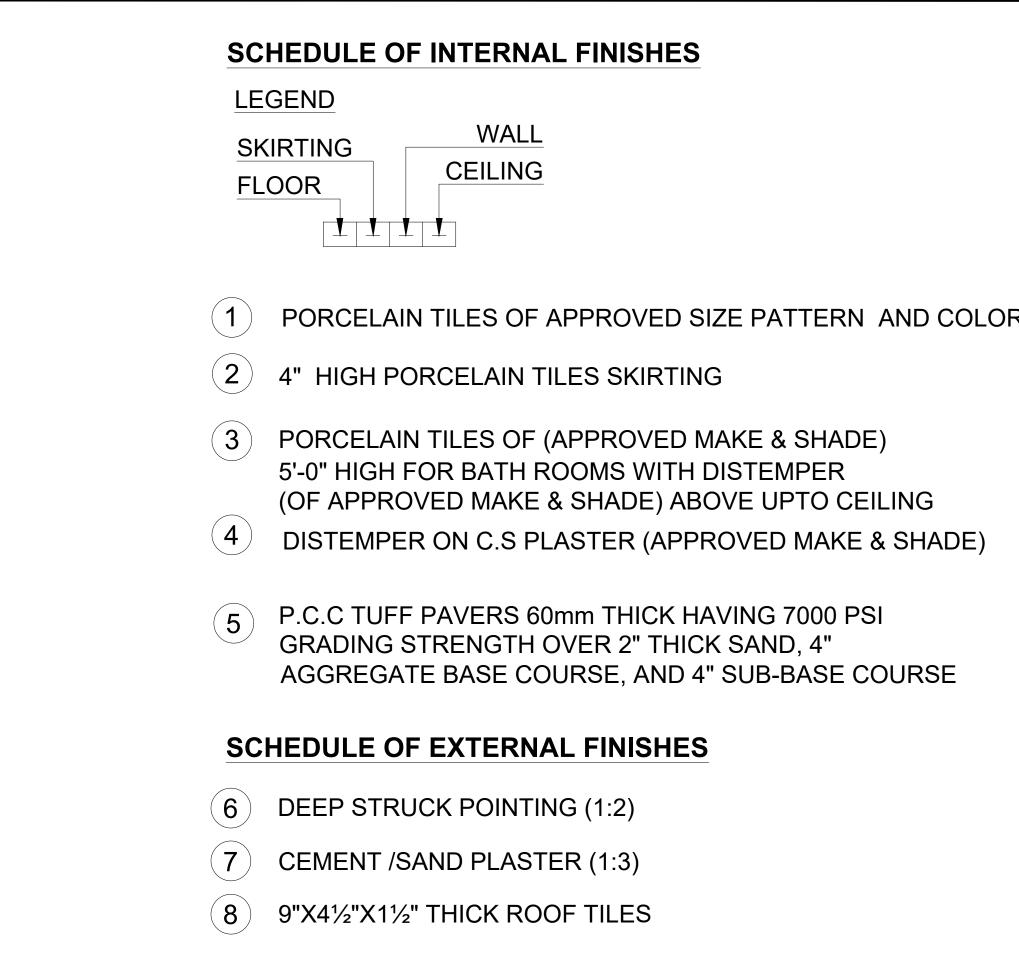
NOTE

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• F.F.L. OF TOILET SHOULD BE DEPRESSED 1½" FROM THE F.F.L. OF ROOM AREA. ALL THE PIPE ARE SUSPENDED ABOVE FALSE CEILING

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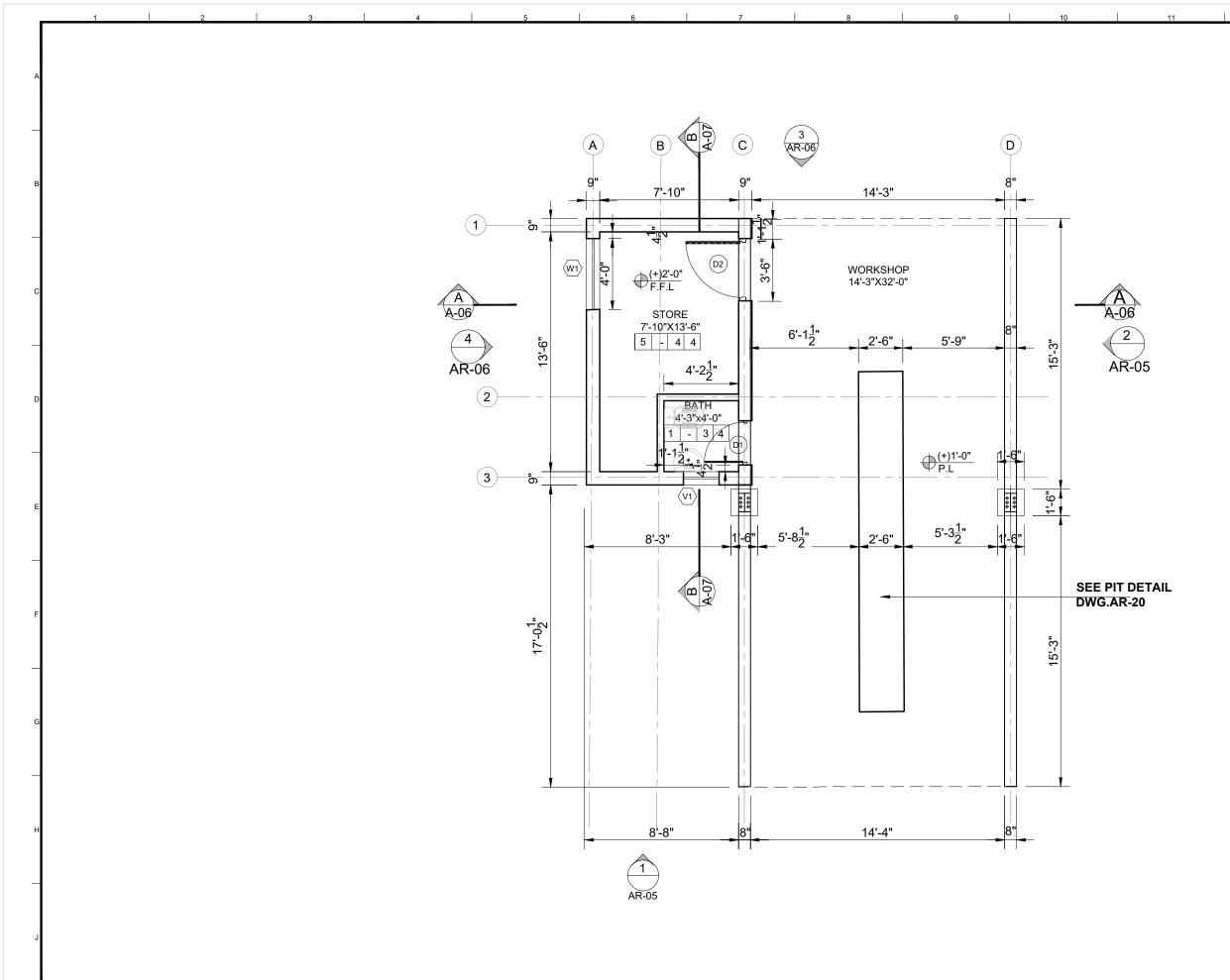
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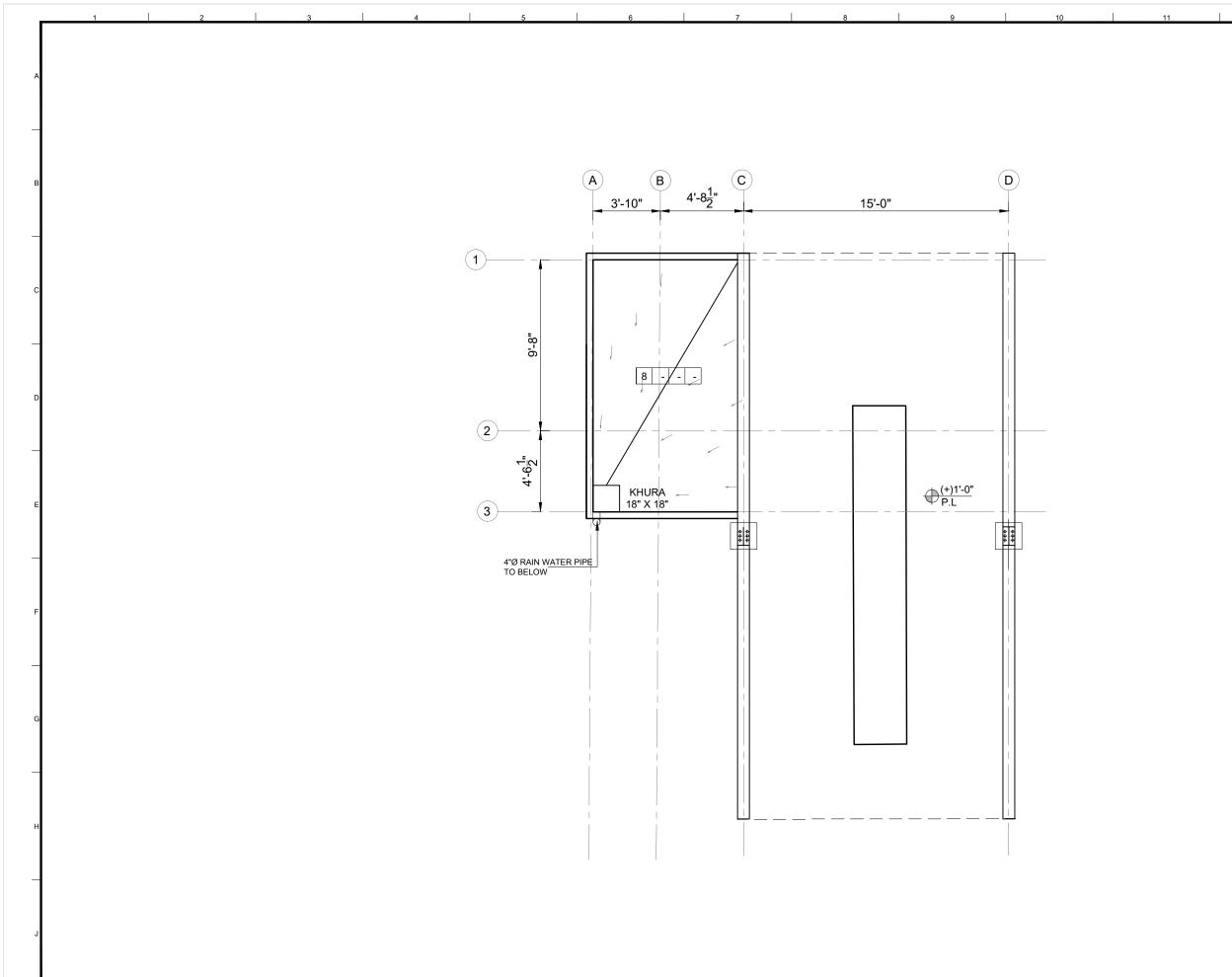
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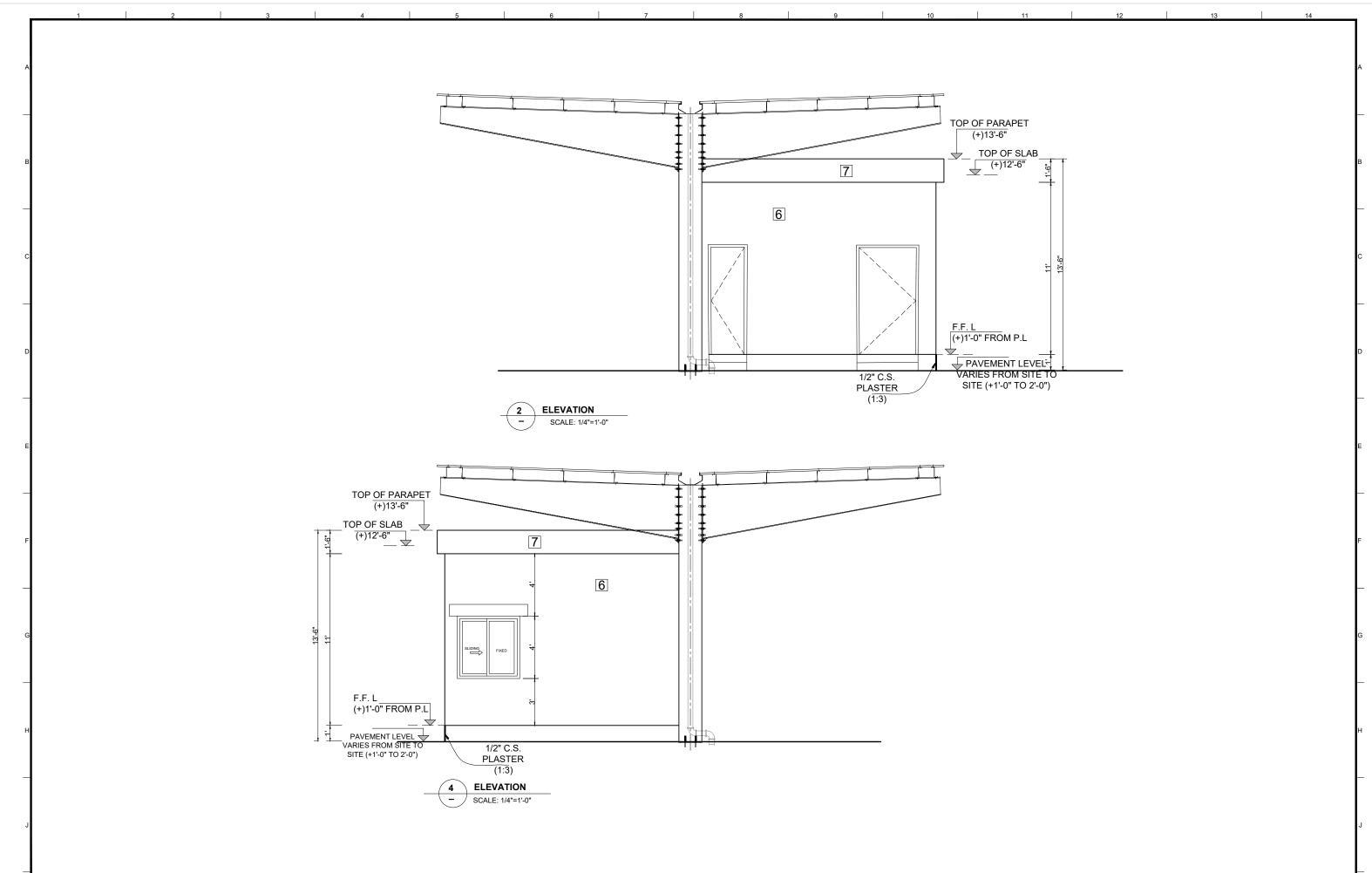
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	(PMDFC)		Fax: +92 42 35113125 Fax: +92 42 35113125 E-mail: info@jers.com.pk, mail@jers.com.pk	SUB-PROJECTS AND RE		SION IN	GROUND FLOOP	-			
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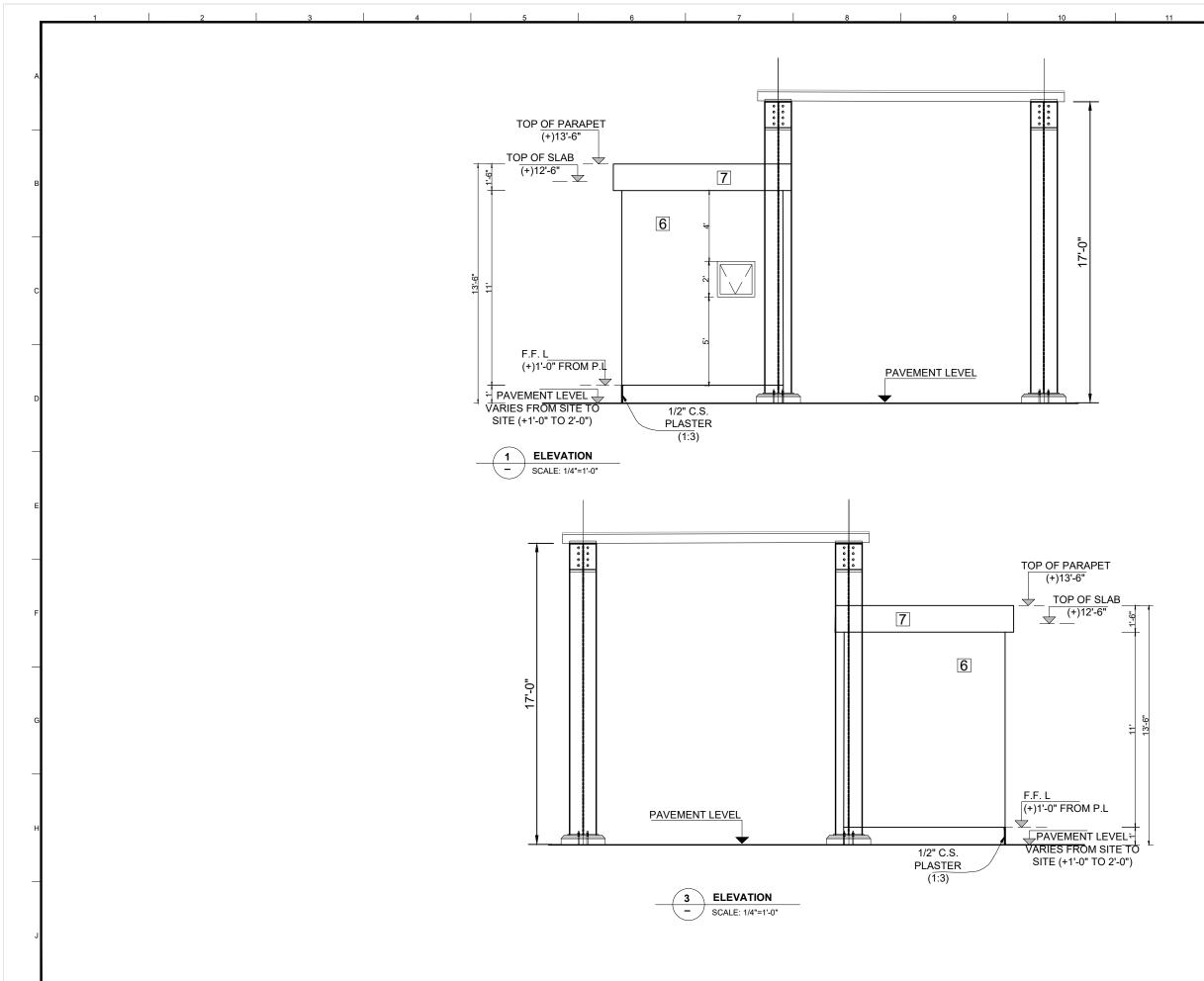


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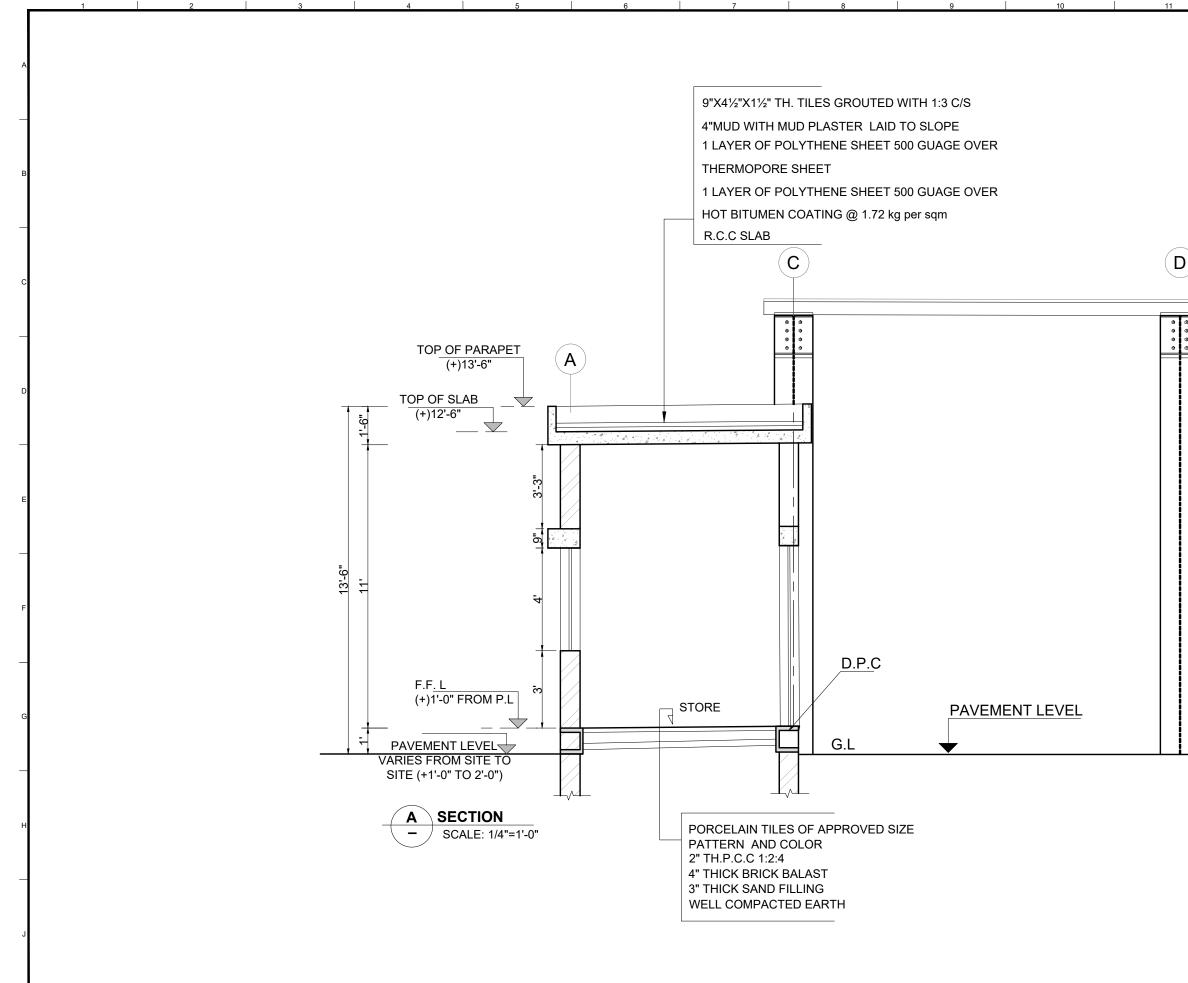


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(PMDFC)		Fax: +92 42 35113125 E-mail: info@jers.com.pk, mail@jers.com.pk Web: http://www.jers.com.pk	5	SUB-PROJECTS / 16		PUNJAB.				ATION 2 & 4			-		DATE:	UNIT=FEET NTS	1 OF 1 JOB NO:
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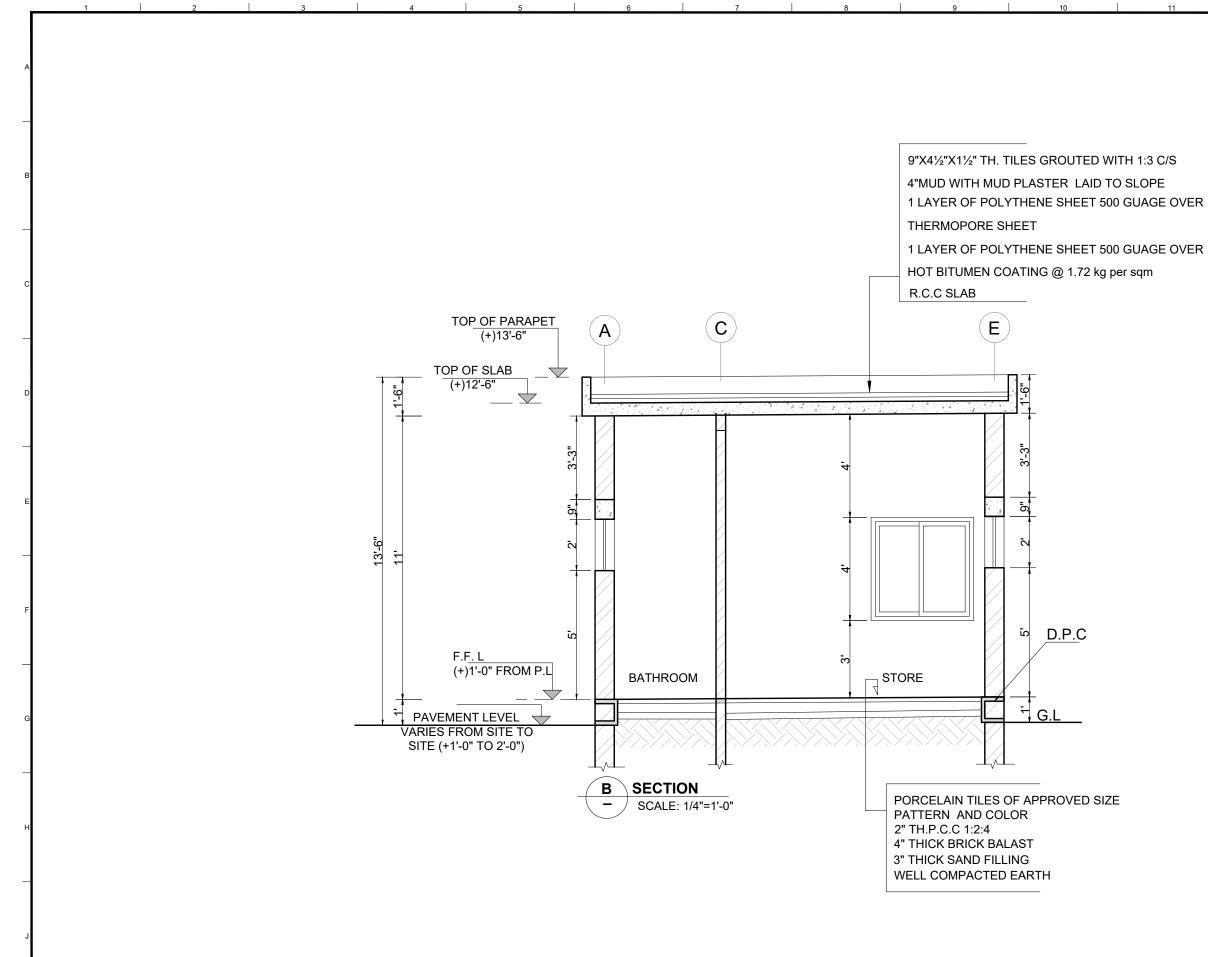
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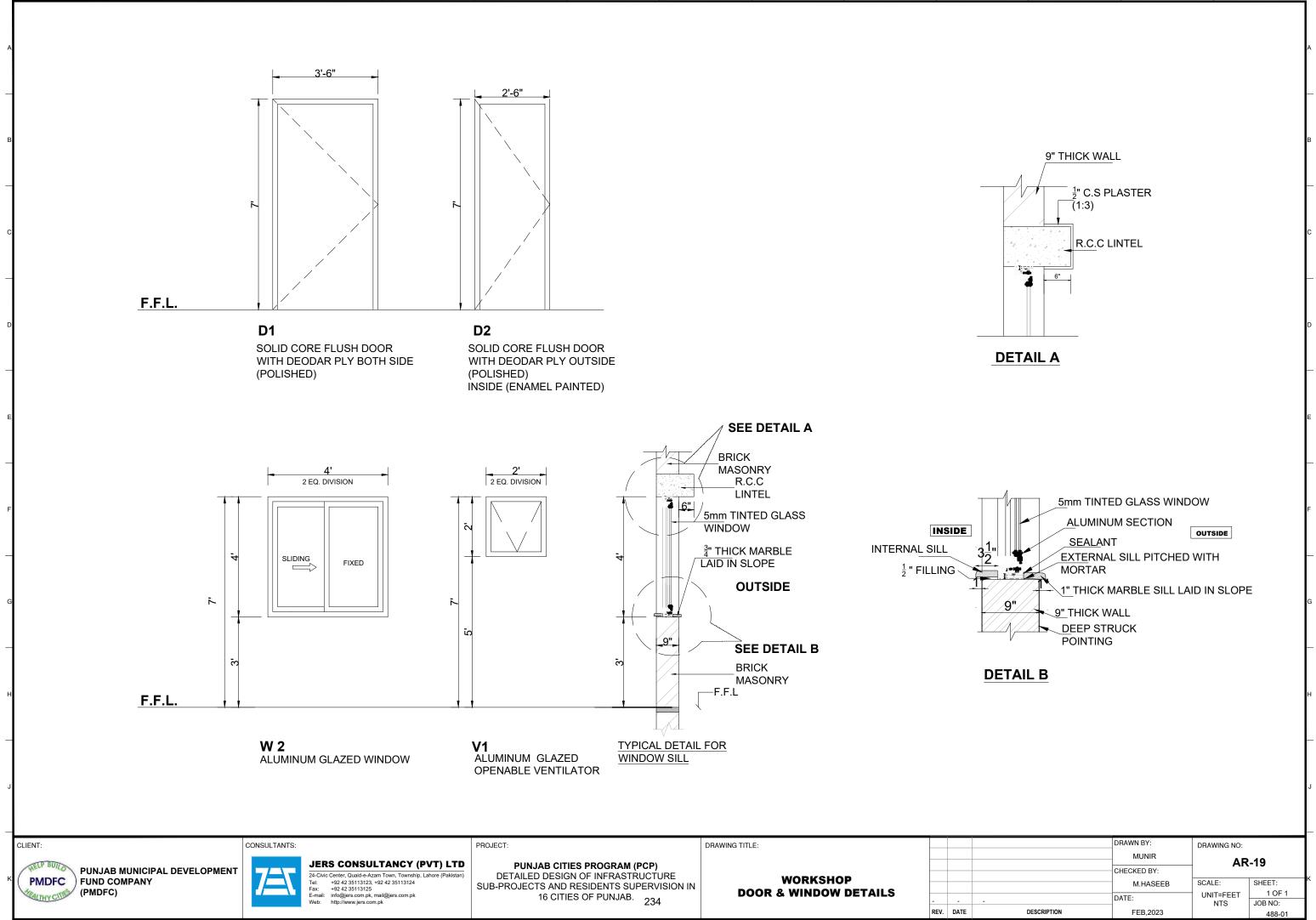
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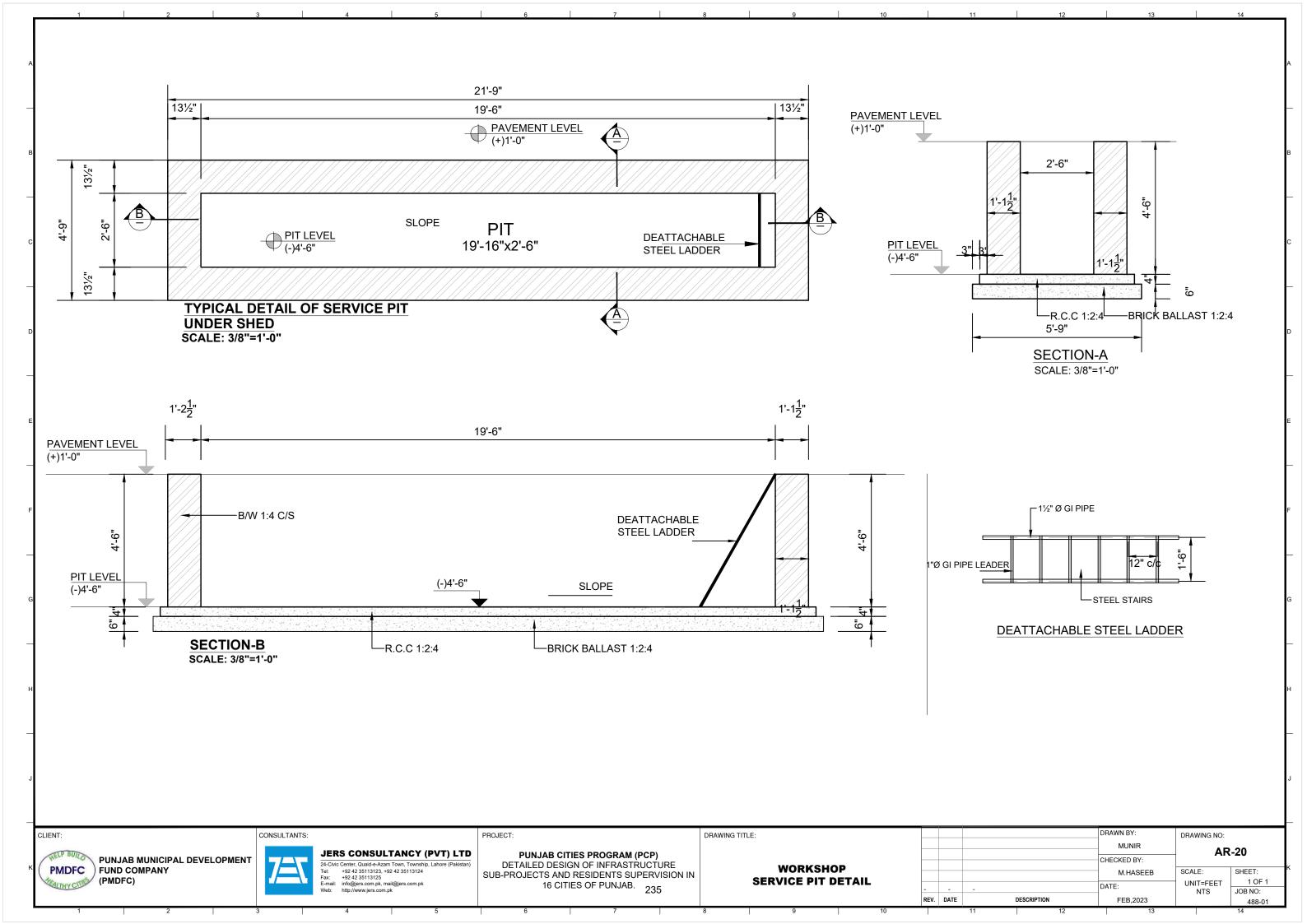
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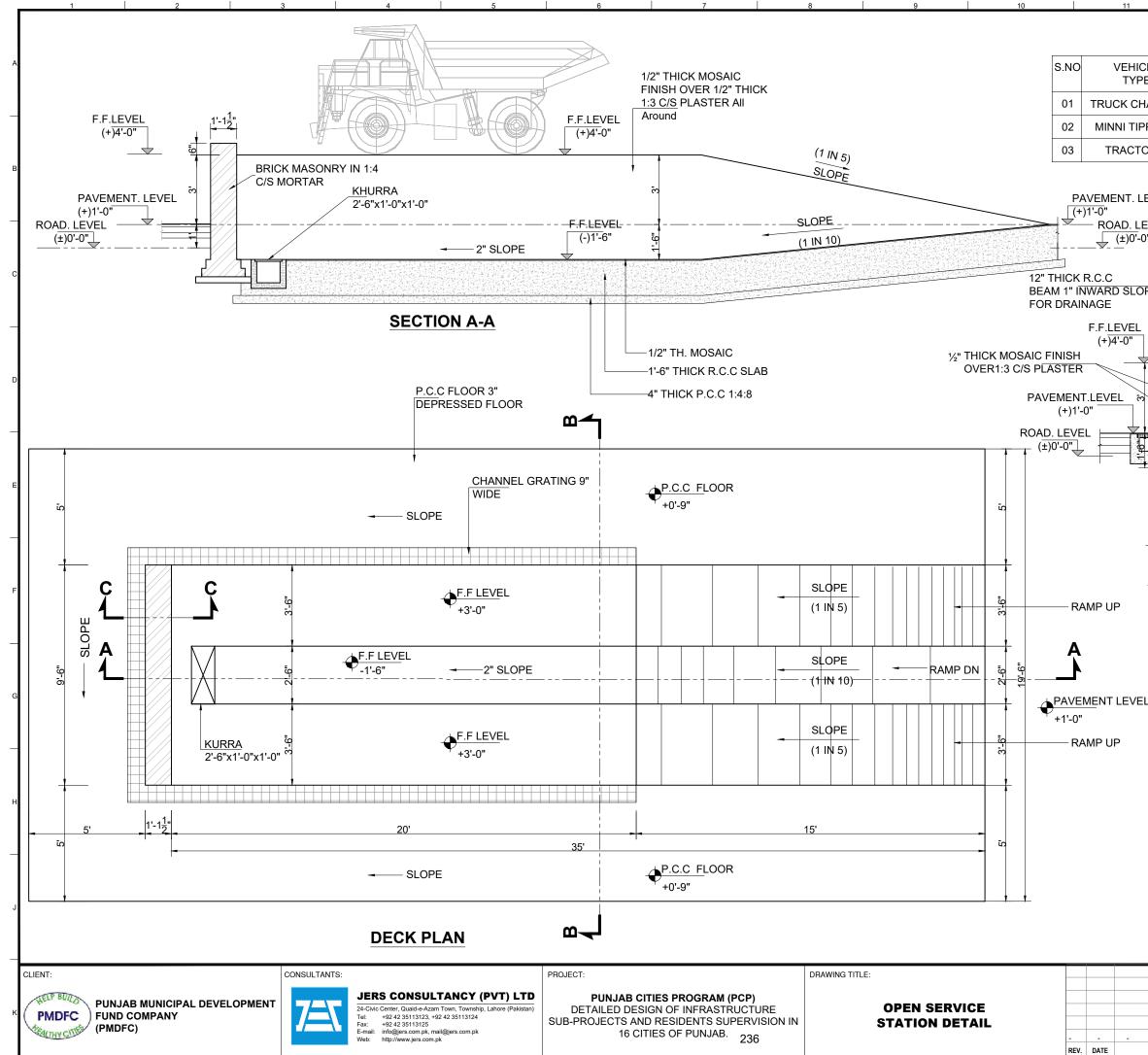


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ĸ	PUNJAB MUNICIPAL DEVELOPMENT PMDFC (PMDFC) (PMDFC)	JERS CONSULTANCY (PVT) LTD 24-Civic Center, Quaid-e-Azam Town, Township, Lahore (Pakistan) Tel: +92 42 35113123, +92 42 35113124 Fax: +92 42 35113126 E-mail: info@jers.com.pk, mail@jers.com.pk	PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB. 233	WORKSHOP SECTION B			MUNIR CHECKED BY: M.HASEEB	AR-18 SCALE: SHEE UNIT=FEET 1	K
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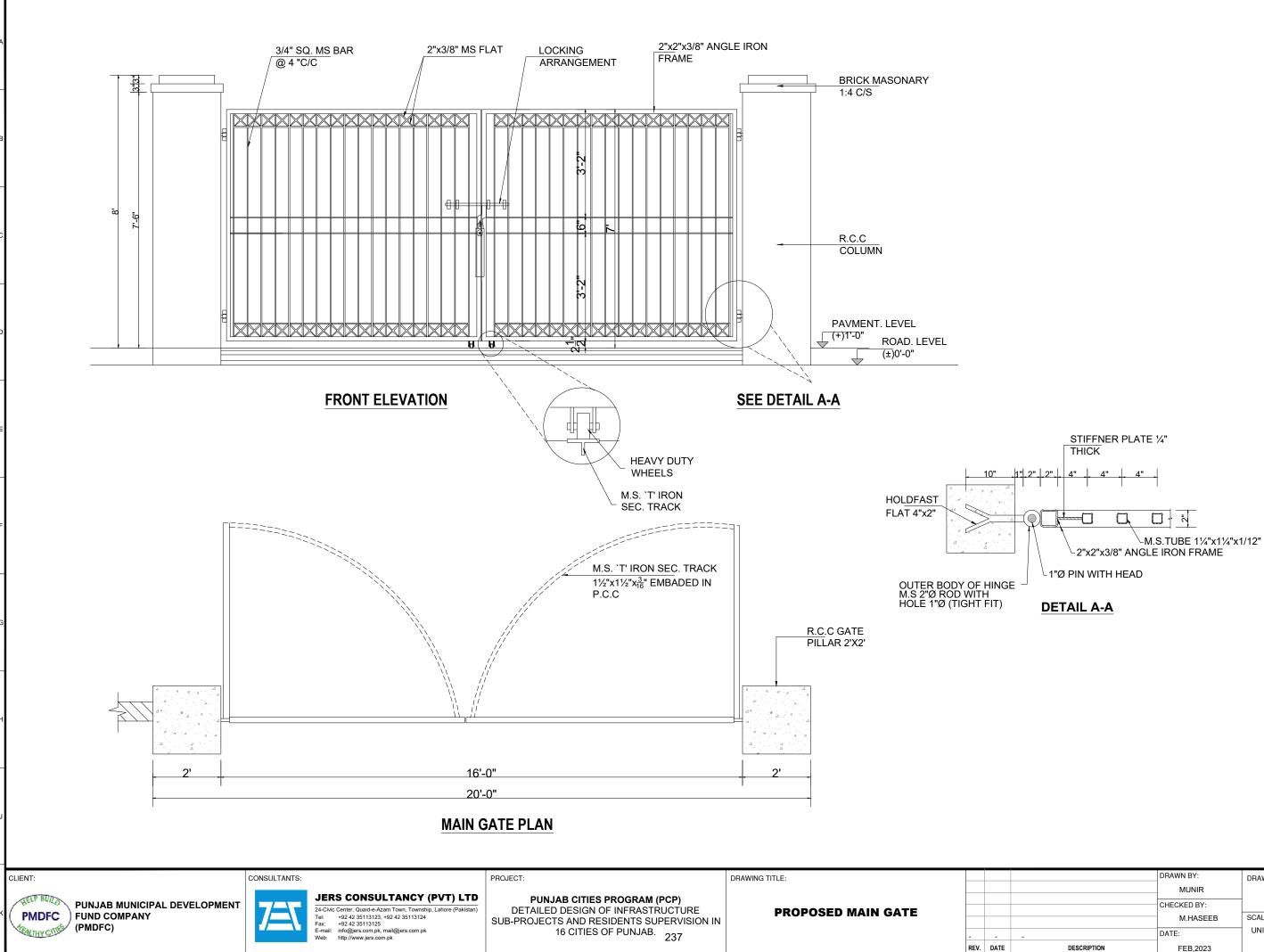


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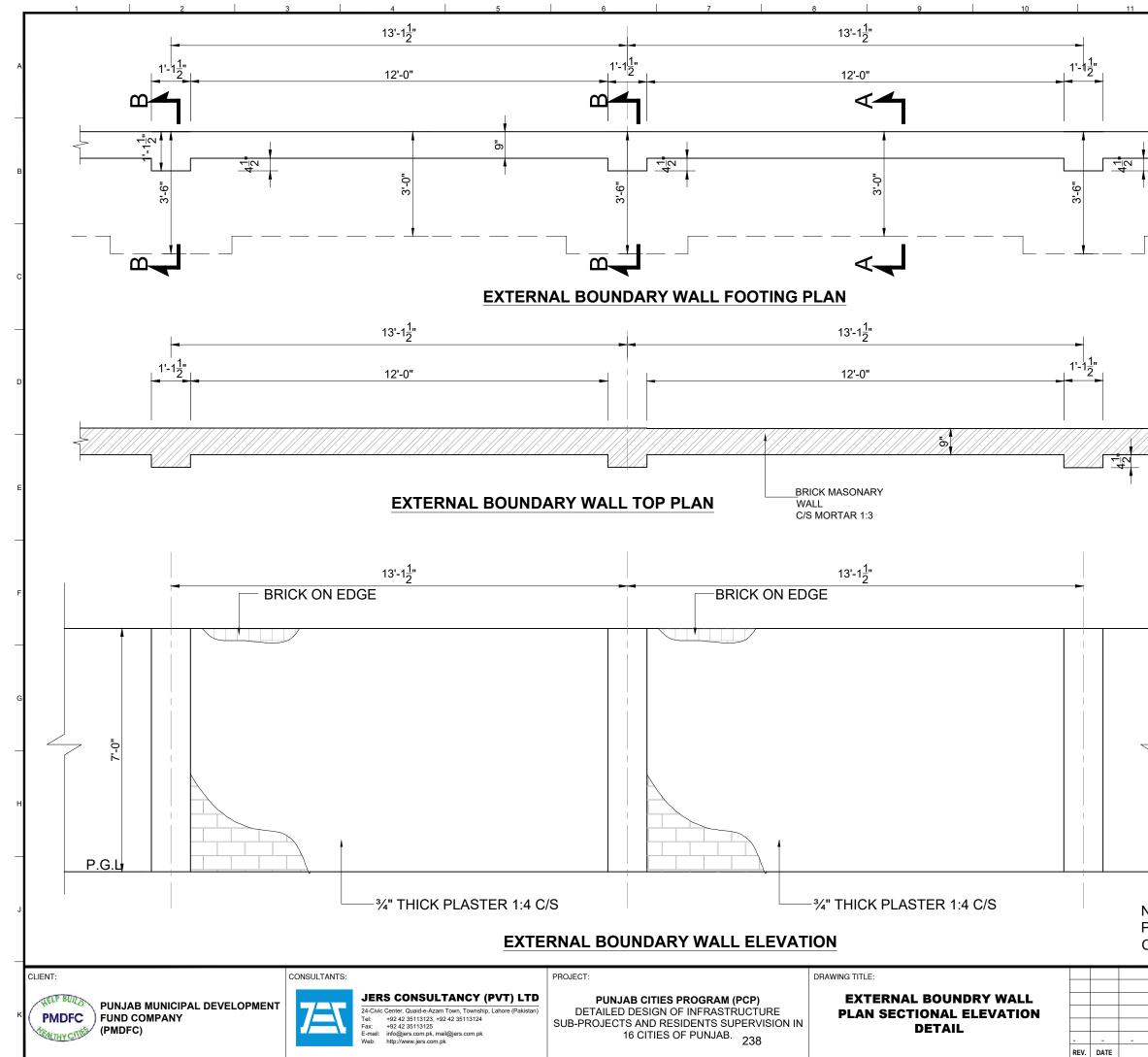
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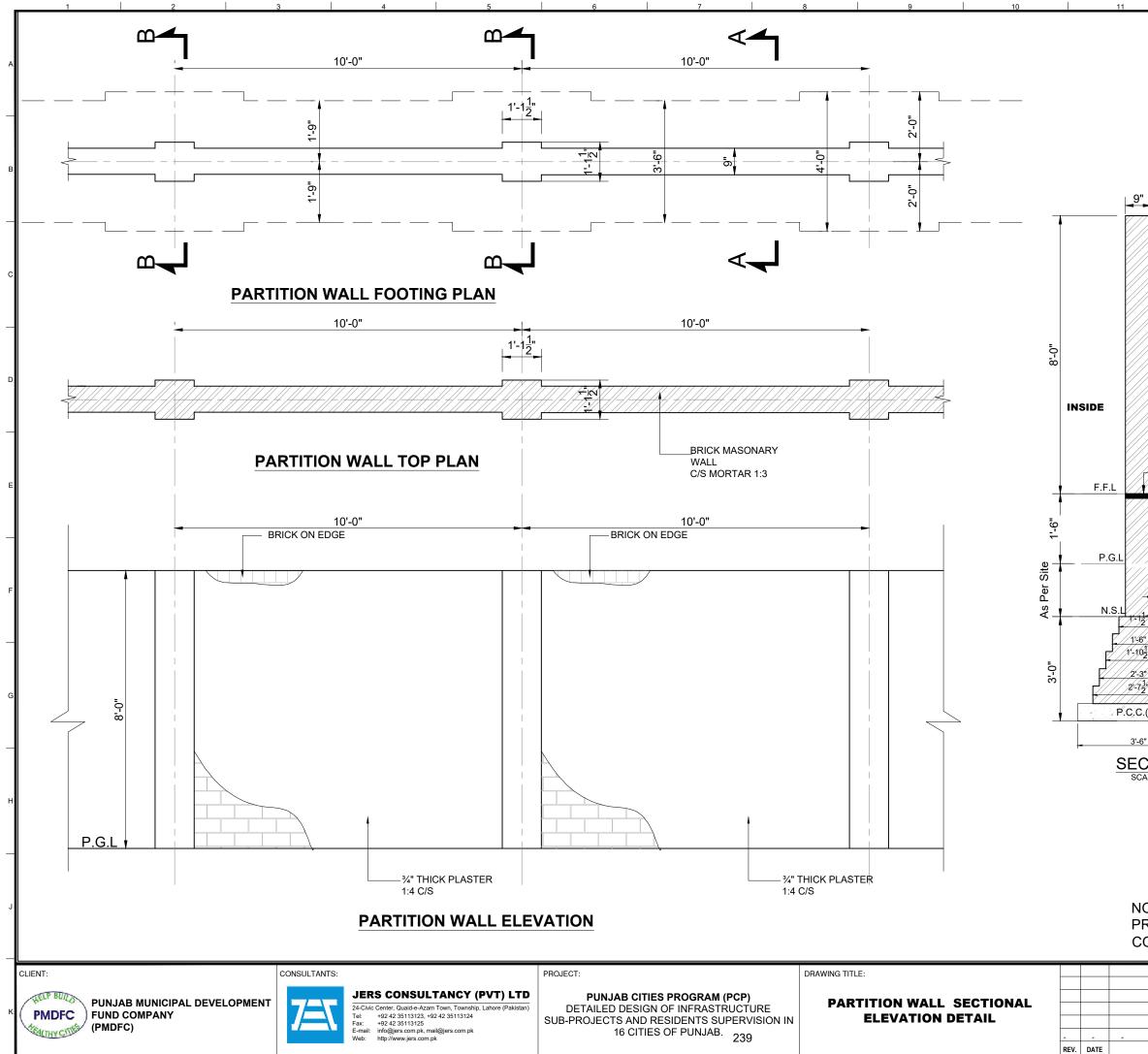
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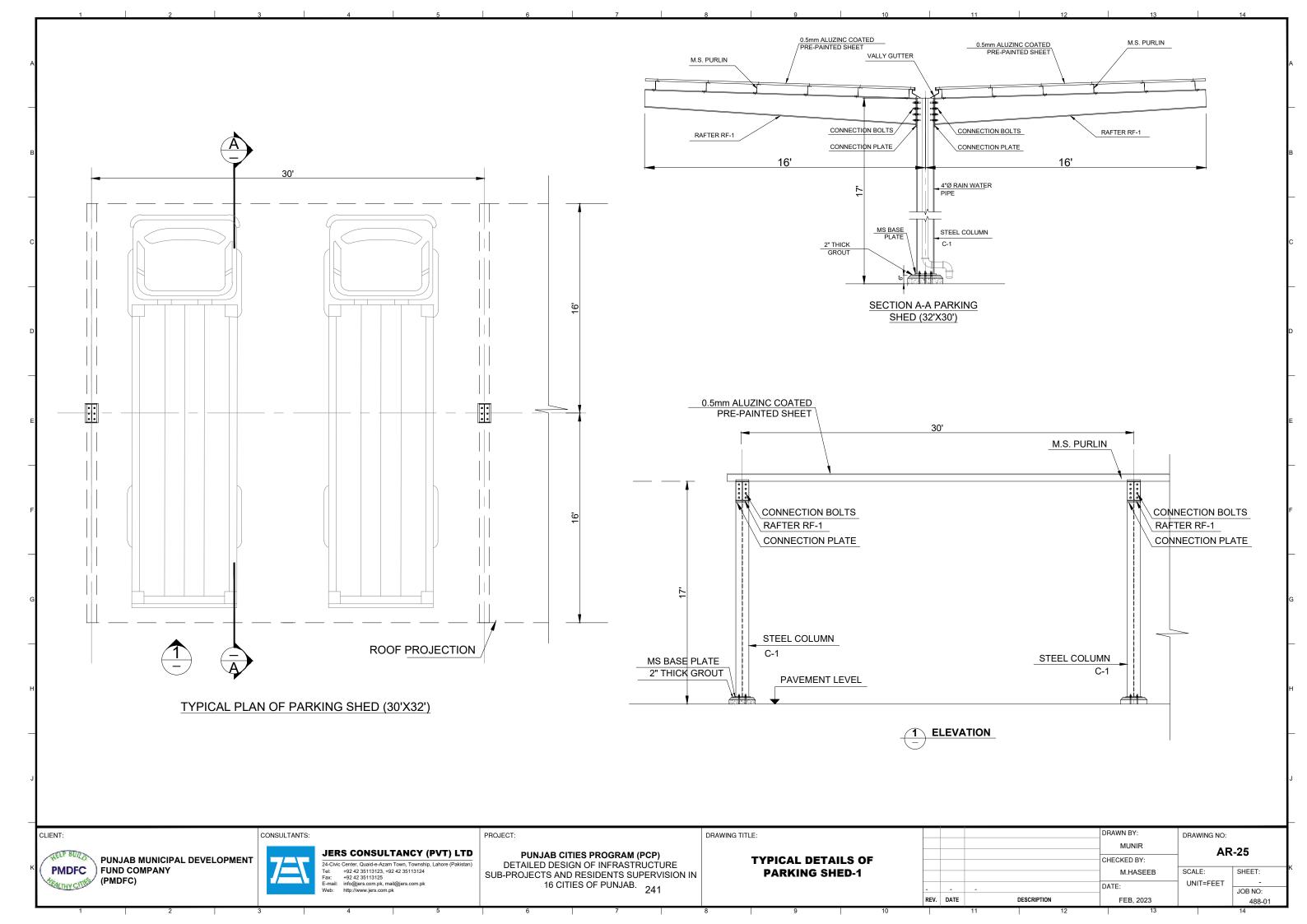
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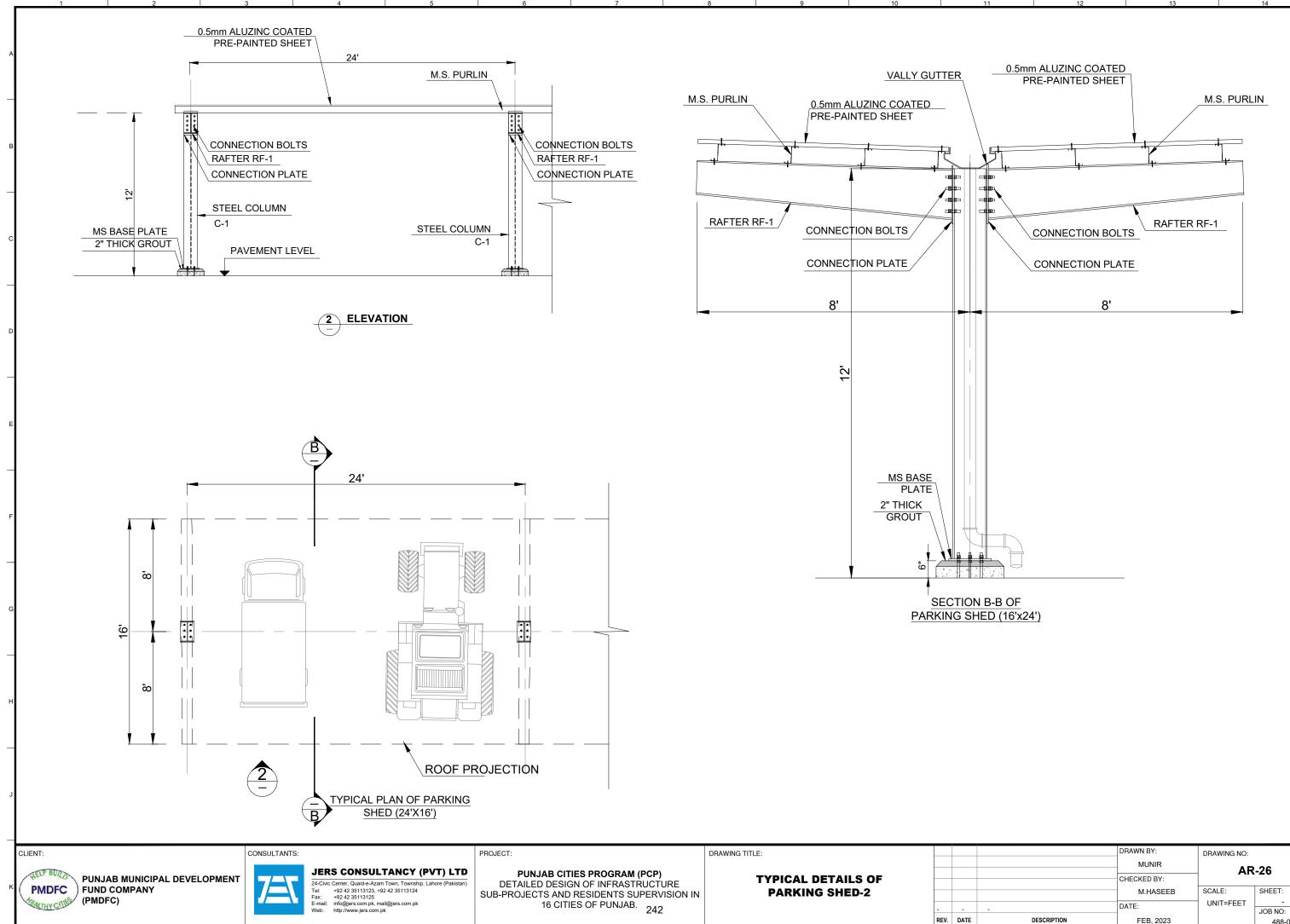


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# PARKING SHED ARCHITECTURE

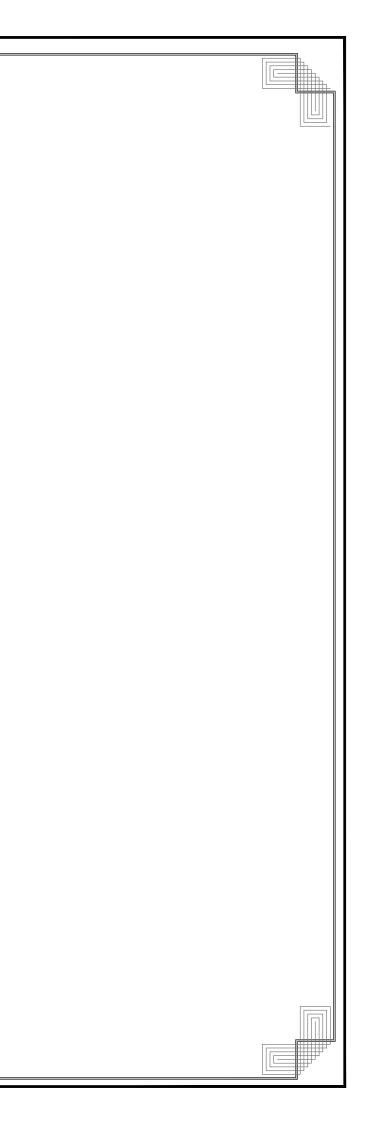






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# **STRUCTURAL DRAWINGS**



### **GENERAL**

- 1- ALL STRUCTURAL DRAWINGS MUST BE READ IN CONJUNCTION WITH THE RELEVANT ARCHITECTURAL DRAWINGS.
- 2- ALL DIMENSIONS AND LEVELS ARE IN FEET & INCHES UNLESS NOTED OTHERWISE.
- 3- NO DIMENSION IS TO BE SCALED FROM THE DRAWINGS AND THE CONTRACTOR IS TO RECHECK ALL THE DIMENSIONS BEFORE START OF THE WORKS.
- 4- PROJECT SPECIFICATIONS, BOQ DESCRIPTION WILL GOVERN EXCEPT AS NOTED ON THE DRAWINGS.
- 5- ALL FOUNDATIONS BLINDING CONC. SHALL BE PLACED ONTO FIRM UNDISTURBED SOIL.
- 6- ALL EARTH SURFACES AGAINST WHICH CONCRETE IS TO BE POURED SHALL BE CLEAN AND FREE OF ANY DETRIMENTAL IMPURITIES, ORGANIC MATTER OR UNSUITABLE MATERIAL.
- 7- ALL EXCAVATED AREA MUST BE PROOF ROLLED BEFORE BLINDING CONCRETE POURING.
- 8- CONCRETING SHOULD NOT BE DONE IN STANDING WATER.
- 9- FOUNDATIONS SHOULD BE BACK FILLED BY APPROVED MATERIAL COMPACTED IN LAYERS OF 9" LOOSE THICKNESS.
- 10-FOUNDATIONS DESIGN IS BASED ON ALLOWABLE SOIL BEARING PRESSURE OF 0.8 TONS PER SQUARE FOOT.

#### REINFORCEMENT

- 1- ALL REINFORCEMENT SHALL BE GRADE 60, DEFOMED STEEL AS PER ASTM A615
- 2- CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS (THE DIMENSIONS INDICATE THE CLEAR DISTANCE FROM THE EDGE OF THE SECONDARY REINFORCEMENT (TIES OR STIRRUPS) TO THE

CONCRETE SURFACE)	
(i) FOUNDATIONS	3 INCH 📖
(ii) FOOTING BEAMS	2 INCH
(iii) COLUMNS	1½" INCH
(iv) BEAMS IN SUPER STRUCTURE	1½" INCH
(v) SLABS IN SUPER STRUCTURE	3/4 INCH
(vi) WALLS	
(a) OUTER FACE OF RETAINING WALLS	2 INCH

#### 3- FOR BAR LAP LENGTHS REFER TO TABLE 1.

- 4- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIX ALL EMBEDDED ITEMS PRIOR TO START OF R.C.C. WORK.
- 5- PROVIDE #3 BARS @12" C/C FOR BINDING ALL TOP STEEL OF SLAB.

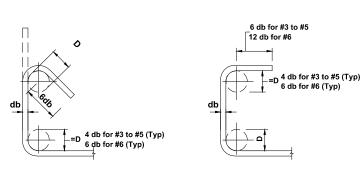
#### CONCRETE

- 1- REINFORCED CONCRETE MATERIALS SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE NOTED ON THE DRAWING:-
  - (i) CEMENT FOR FOUNDATIONS & PLINTH BEAMS SHALL CONFORM TO ASTM C-150 TYPE-1 (0RDINARY PORTLAND CEMENT)
  - (ii) CEMENT FOR SUPERSTRUCTURE SHALL CONFORM TO ASTM C-150 TYPE-1 (ORDINARY PORTLAND CEMENT)
  - (iii) AGGREGATE SHALL CONFORM TO THE "STANDARD SPECIFICATIONS FOR CONCRETE AGGREGATE ASTM C33"
  - (IV) WATER SHALL BE FREE FROM OIL OR OTHER MATERIALS THAT CAN ADVERSELY AFFECT CONCRETE STRENGTH OR DURABILITY
- 2- ALL CONCRETE EXPOSED SURFACES SHALL HAVE FAIR FACE FINISH. ALL CONCRETE SURFACES BURIED INTO GROUND MAY HAVE ORDINARY FINISH.
- 3- CONCRETE SHALL HAVE THE FOLLOWING 28 DAYS COMPRESSIVE CYLINDER STRENGTH AND SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE ACI- 318-2002 (CUBE STRENGTH IN BRACKETS)
  - (i) PLAIN CEMENT CONCRETE (BLINDING CONCRETE 1:4:8) 800 psi (1000 psi) (ii) REINFORCED CONCRETE 1:2:4 (FOOTINGS, SLABS, BEAMS ETC.) 2500 psi (3000 psi)

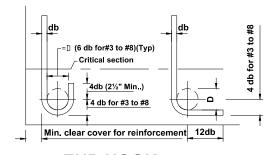
### MASONRY

- 1- ALL BRICK WORK SHALL BE FIRST CLASS SOLID BURNT BRICK MASONRY LAID IN THE FOLLOWING CEMENT-SAND MORTAR RATIOS. (i) BRICK WORKING IN FOUNDATION 1:6 (ii) IN SUPER STRUCTURE FOR 9" & 13½" BRICK WORK 1:6 (iii) IN SUPER STRUCTURE FOR 4½" AND LESS. BRICK WORK 1:4 2- ALL HORIZONTAL D.P.C SHALL BE 11½" THICK 1:2:4 P.C.C
- 3- ALL VERTICAL D.P.C SHALL BE 3/4" THICK 1:4 CEMENT-SAND MORTAR
- 4- 1/4" THICK,1:3 CEMENT-SAND PLASTER SHALL BE PROVIDED ON SOFFITS OF CEILING, CANTILEVER SLABS, SIDES & SOFFITS OF BEAM.
- 5- 1/2" THICK,1:5 CEMENT-SAND PLASTER SHALL BE PROVIDED ON ALL INTERNAL FACES OF MASONRY AND COLUMNS.
- 6- ALL EXTERNAL BRICK COLUMNS & EXTERNAL FACES OF MASONRY SHALL RECIEVE DEEP RULED POINTING IN 1:3 CEMENT-SAND MORTAR

	TABLE 1
BARS	LAP LENGTHS
BAR USE	LAP LENGTHS
#3	18"
#4	2'-0"
#6	3'-3"
#8	4'-6"



#### STIRRUP 135° HOOK STIRRUP 90° HOOK



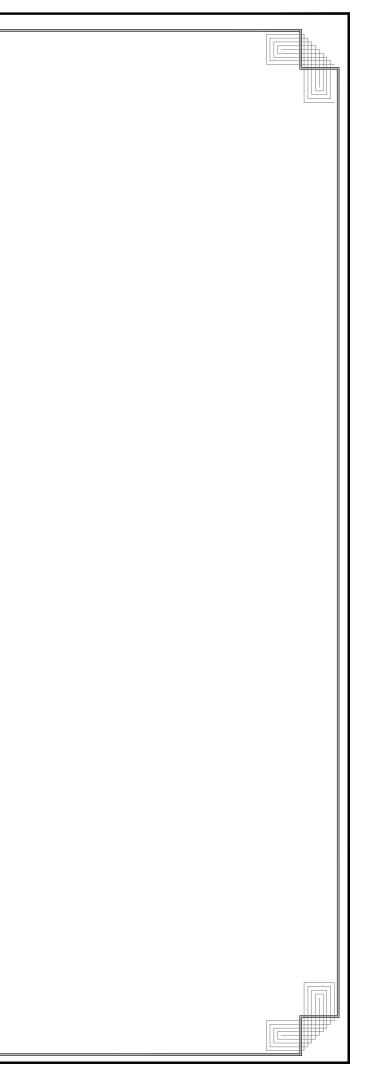
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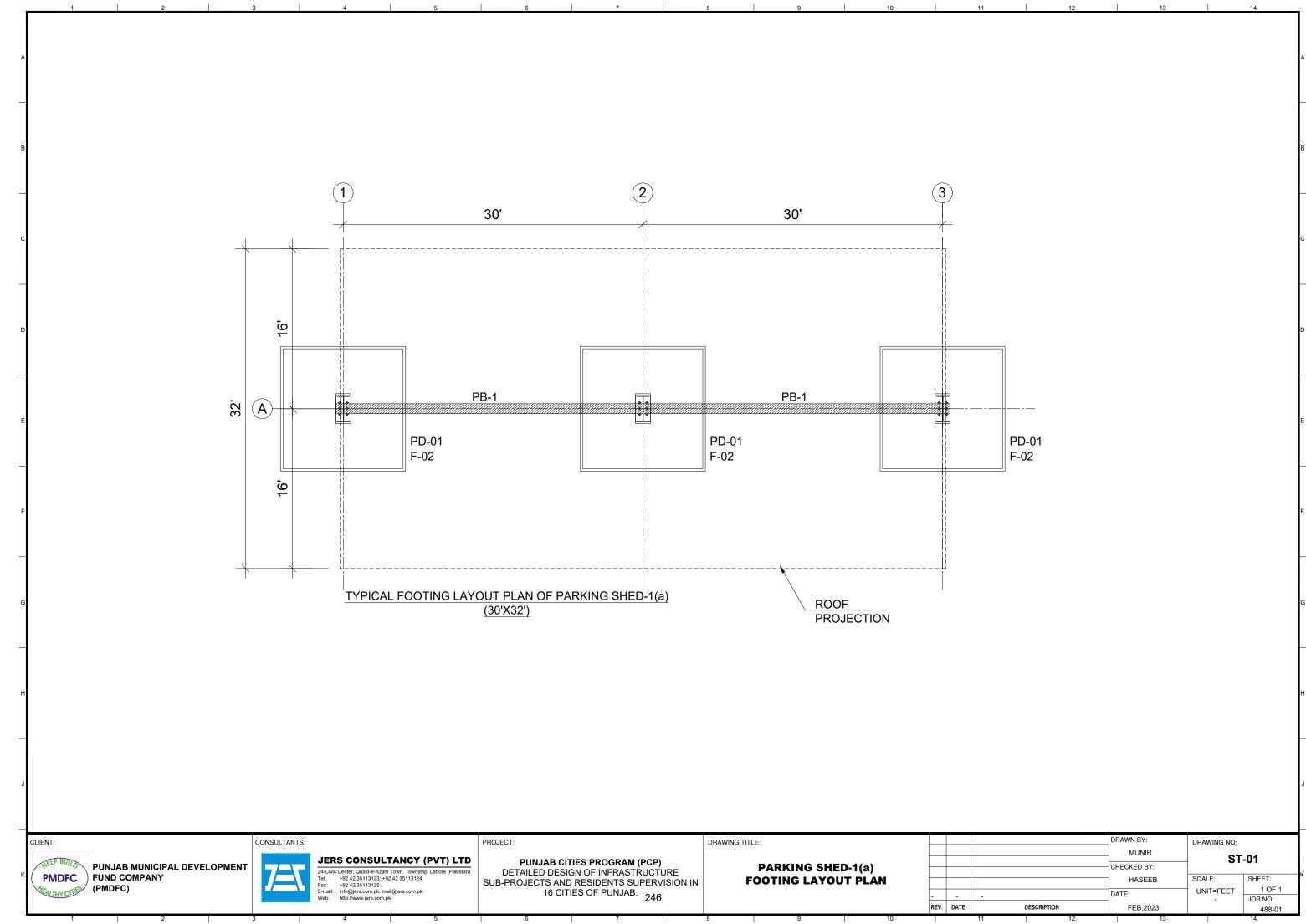
		ABB	REVIATIONS		
G	BENERAL	REI	NFORCEMENT		CONCRETE
0	AT	@	AT	@	AT
RCH	ARCHIECHTURAL		TOP BARS	в	BEAM
BOQ	BILL OF QUANTITIES		BOTTOM BARS	BOF	BOTTOM OF FOOTING
:/C	CENTER TO CENTER	AB	ALTERNATE BARS	BOR	BOTTOM OF RAFT
HQ	CHEQUERED	ADD	ADDITIONAL	BOTT	BOTTOM
L	CENTER LINE	BF	BOTTOM FACE	С	COLUMN
AI	DIAMETER	CONT	CONTINUOUS	CJ	CONSTRUCTION JOINT
P.C	DAMP PROOF COURSE			CONC	CONCRETE
RG	DRAWING	DIR	DIRECTION	EJ	EXPANSION JOINT
L	ELEVATION	DISTR	DISTRIBUTION	F	FOOTING
LEC	ELECTRICAL	DWLS	DOWELS	FB	FLOOR BEAM
Q	EQUAL	EF	EACH FACE	fc'	CYLINDER COMP. STRENGTH
FL	FINISHED FLOOR LEVEL	EL	EACH LAYER	GB	GRADE BEAM
GL	FINISHED GRADE LEVEL	FF	FAR FACE	P.C.C.	PLAIN CEMENT CONCRETE
IG	FIGURE	fy	YEILD STRENGTH OF STEEL	PC	PRECAST CONCRETE
t	FEET	IF	INNER FACE	R.C.C.	REINFORCED CEMENT CONCRET
6L	GROUND LEVEL	IL	INSIDE LAYER	RW	RETAINTING WALL
IEX	HEXAGONAL	MS	MILD STEEL	SSL	STRUCTURAL SLAB LEVEL
D	INNER DIAMETER	NF	NEAR FACE	TL	TOP LEVEL
n	INCH	ø	REINFORCEMENT BAR DIAMETER	тов	TOP OF BEAM
g	KILOGRAM	OF	OUTER FACE	тос	TOP OF CONCRETE
1	METER	OL	OUT SIDE LAYER	U.R.C.	UNREINFORCED CONCRETE
IAX	MAXIMUM	REBAR	REINFORCING BAR	w	WALL
IECH	MECHANICAL	REINF	REINFORCEMENT	WF	WALL FOOTING
н	MANHOLE	STR	STIRRUPS		
IN	MINIMUM	TF	TOP FACE		
m	MILLIMETER	WWF	WELDED WIRE FABRIC		
ЮМ	NOMINAL				
TS	NOT TO SCALE				
с	ON CENTER				
ост	OCTAGONAL				
D	OUTER DIAMETER				
ROJ	PROJECTION				
<b>NTY</b>	QUANTITY				
2	RADIUS				
REQ	REQUIRED				
ЕСТ	SECTION				
iL	SECTION LINE				
PA	SPACING				
Q	SQUARE				
ΥM	SYMMETRICAL				
ЕМР	TEMPERATURE				
нк	THICK				
ΥP	TYPICAL				
AR	VARIABLE, VARIES				
L	WATER LEVEL				

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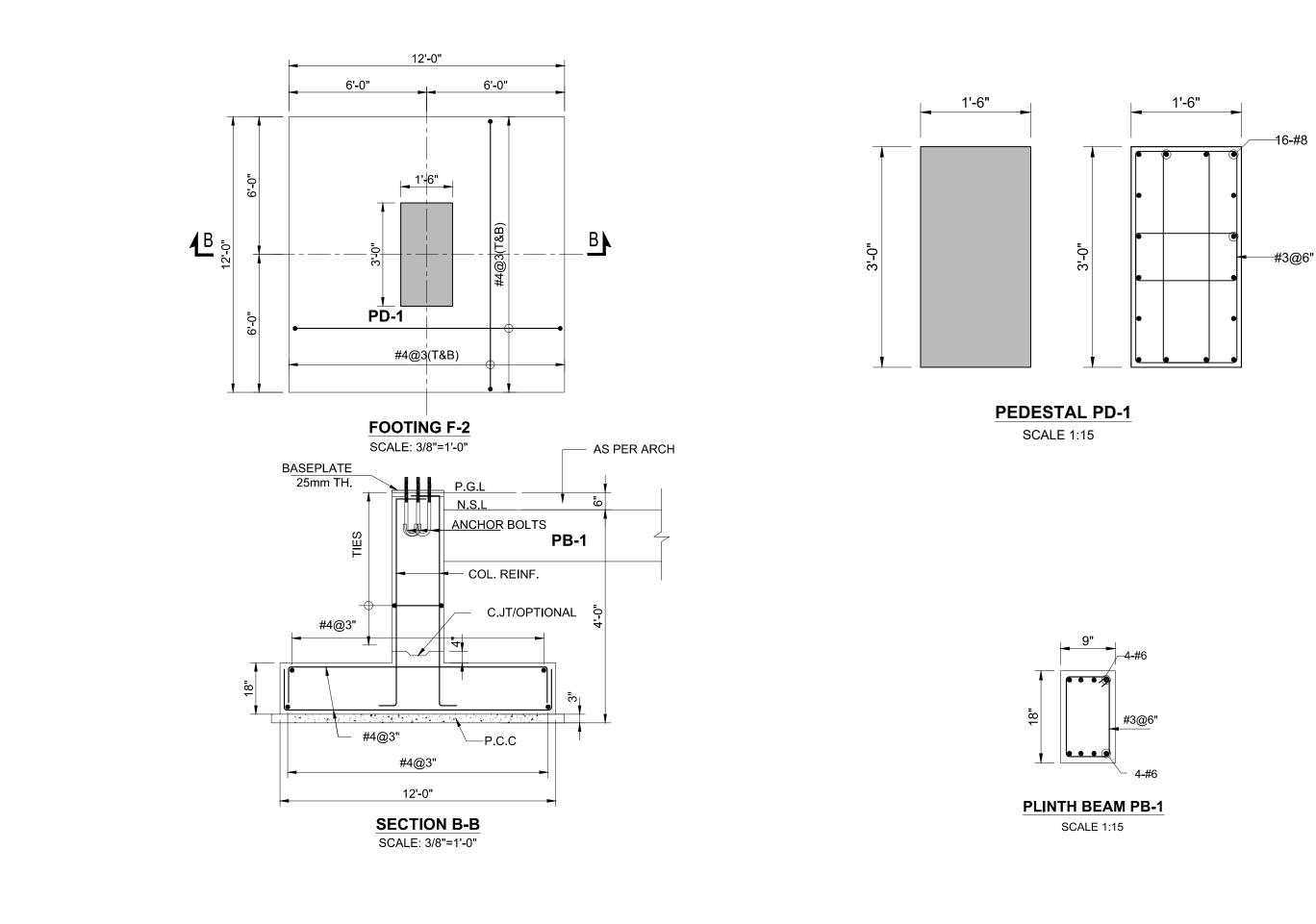
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# **PARKING SHED STRUCTURE**



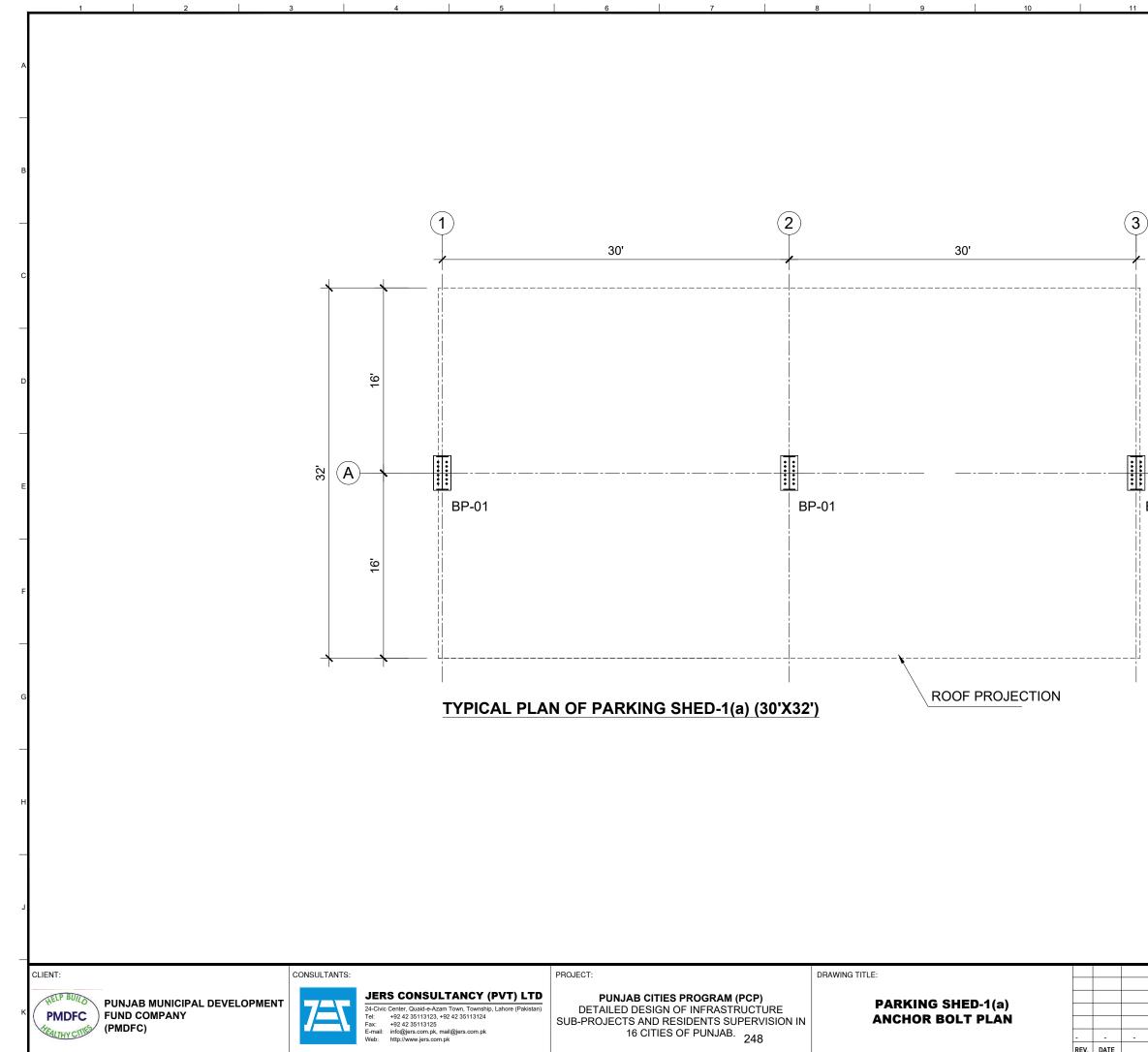


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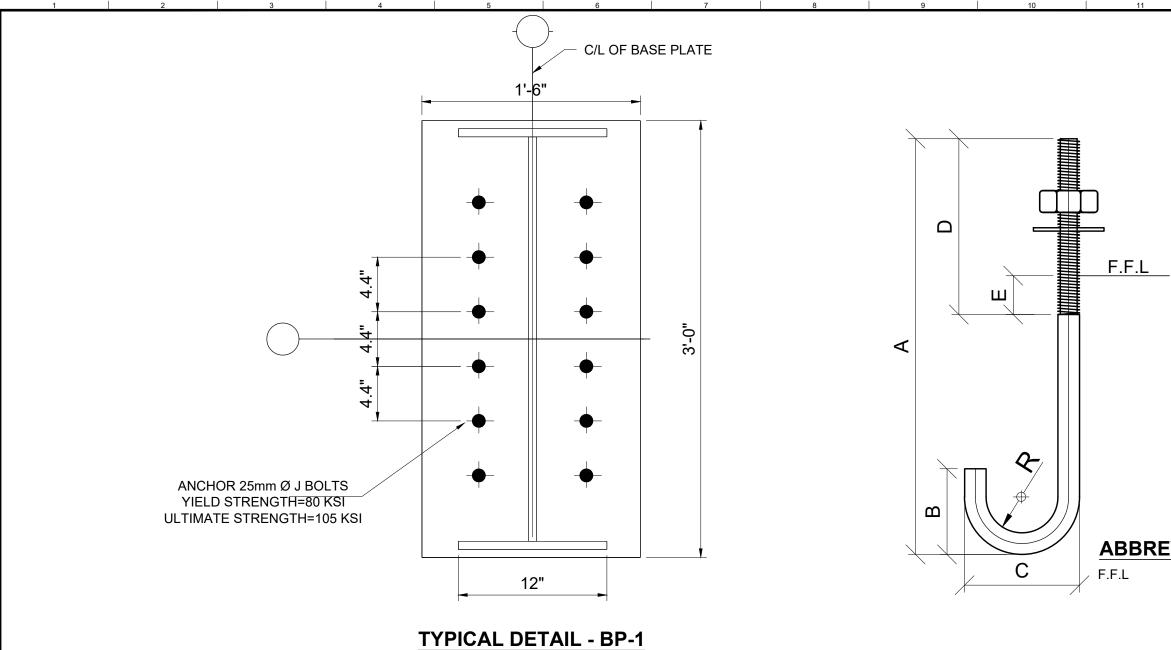
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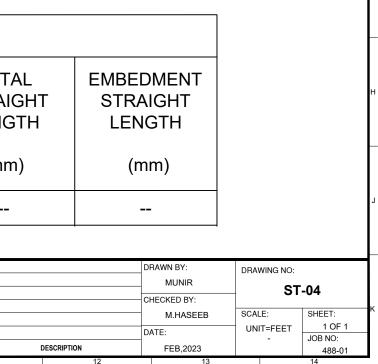


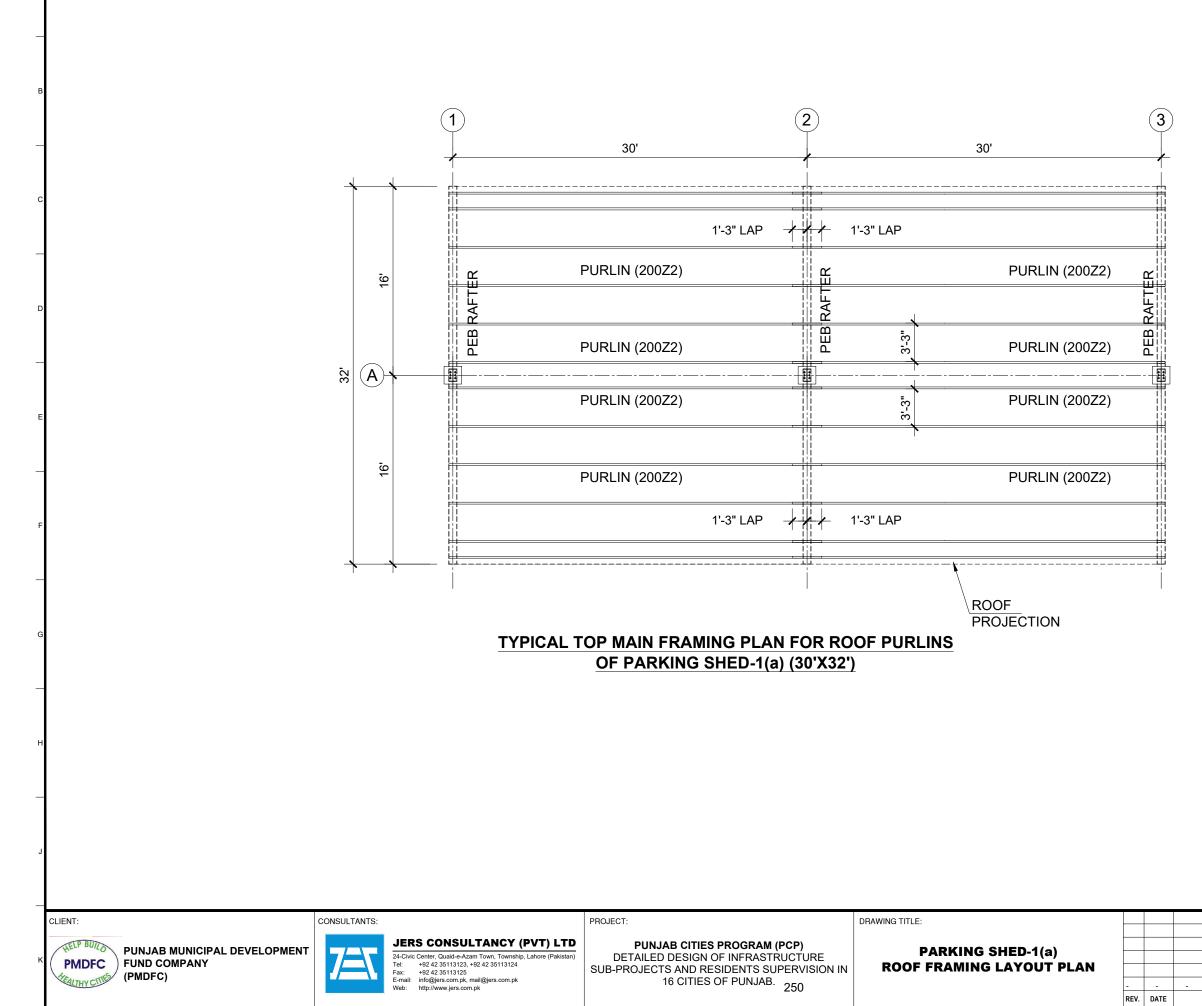
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к	PUNJAB MUNICIPAL DEVELOPMENT PMDFC FUND COMPANY (PMDFC)	7=5	JERS CONSULTANCY (PVT) LTD 24-Civic Center, Quald-e-Azam Town, Township, Lahore (Pakistan) Tel: +92.42 35113123, +92.42 35113124 Fax: +92.42 35113125 E-mail: info@jers.com.pk, mail@jers.com.pk Web: http://www.jers.com.pk	PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB. 249		- REV.	 DATE	
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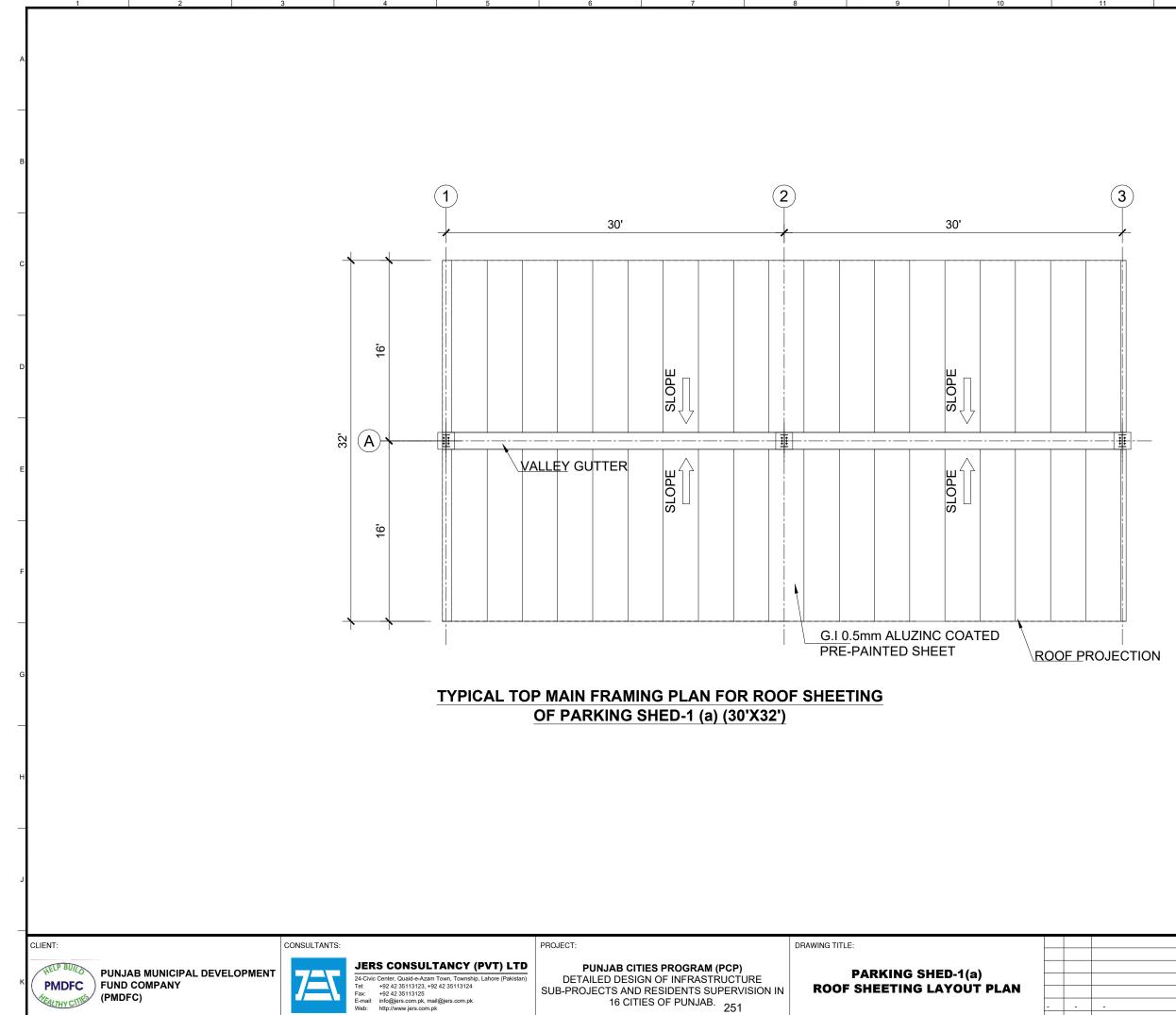
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- FINISH FLOOR LEVEL





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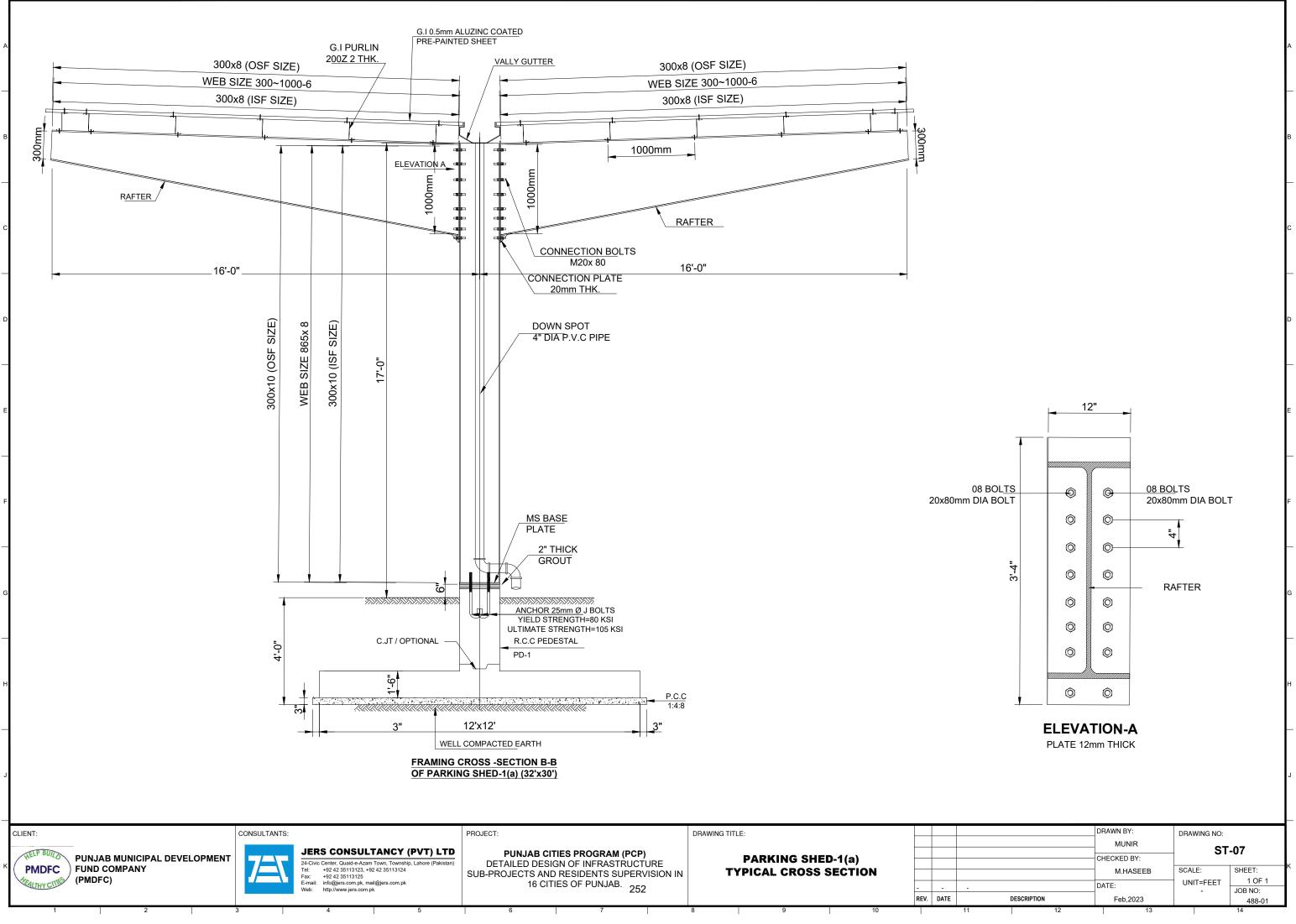
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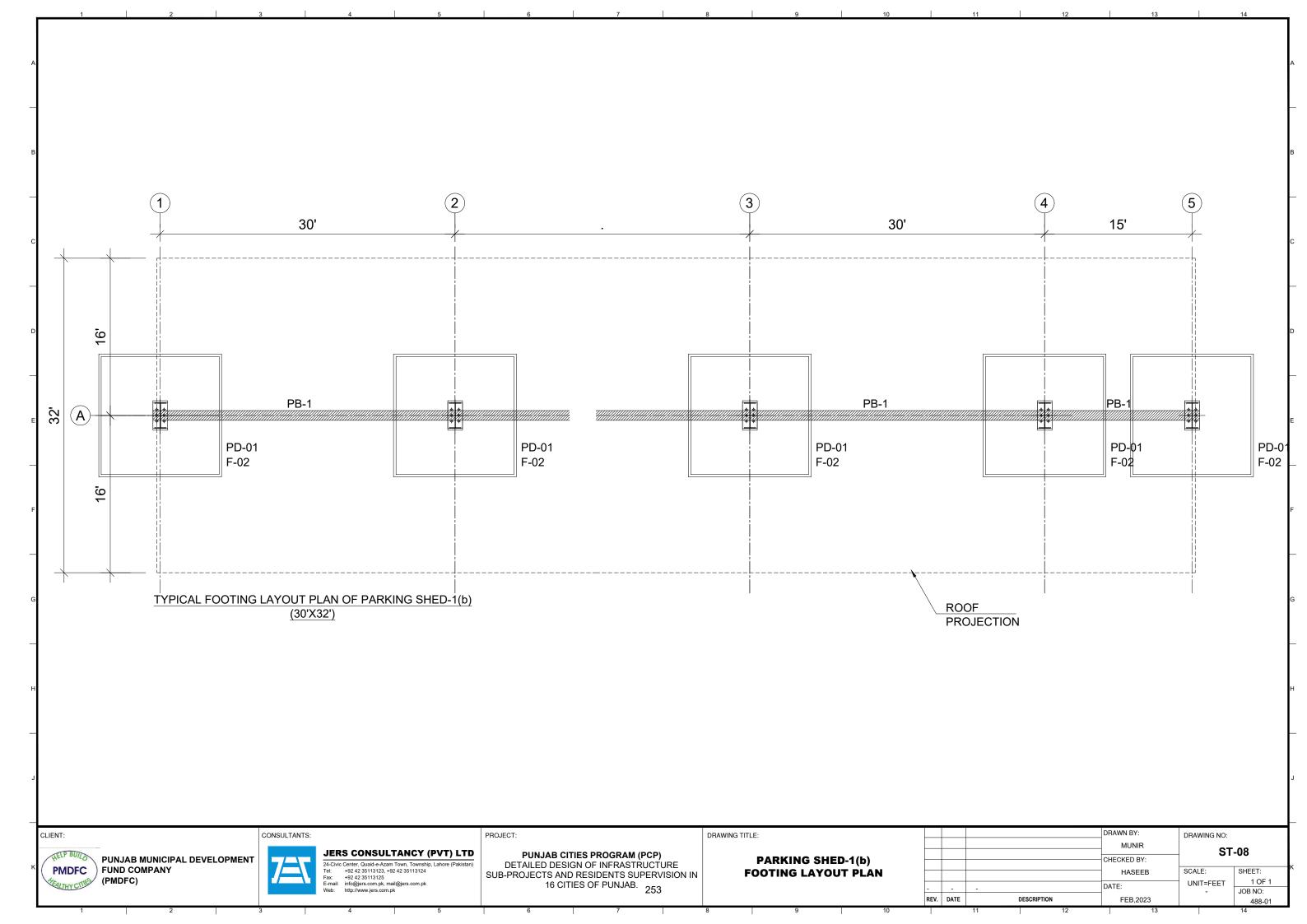
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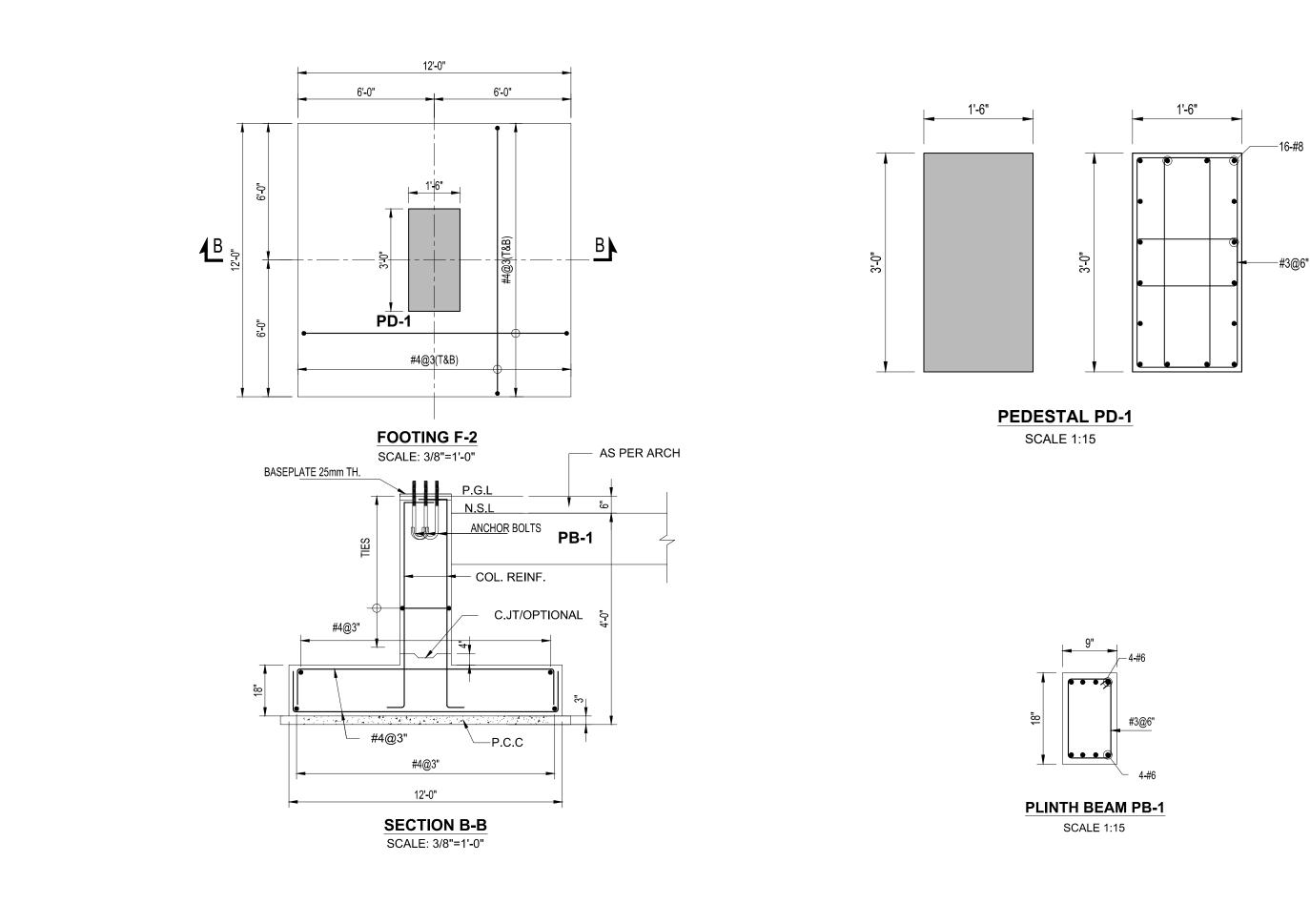
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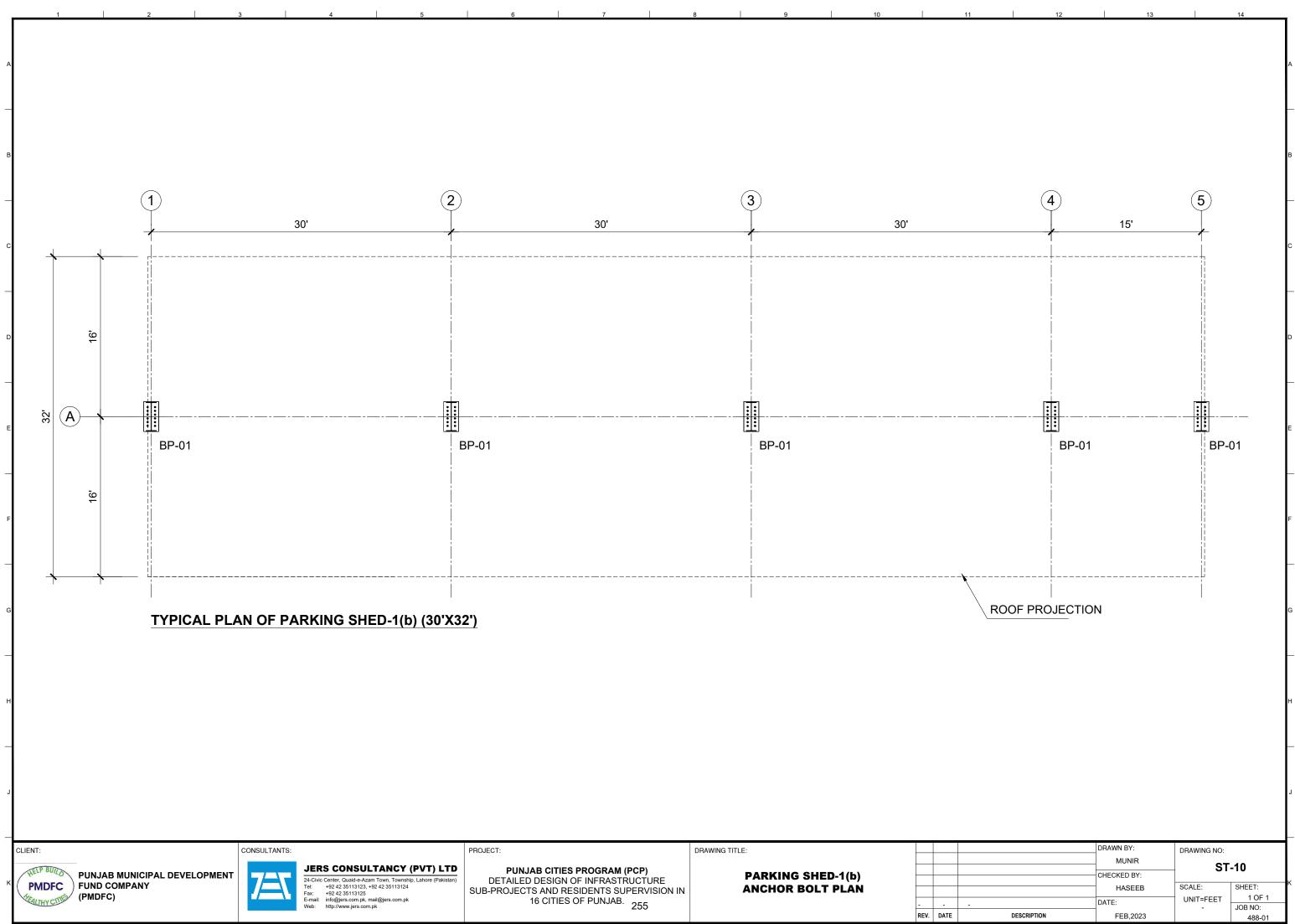


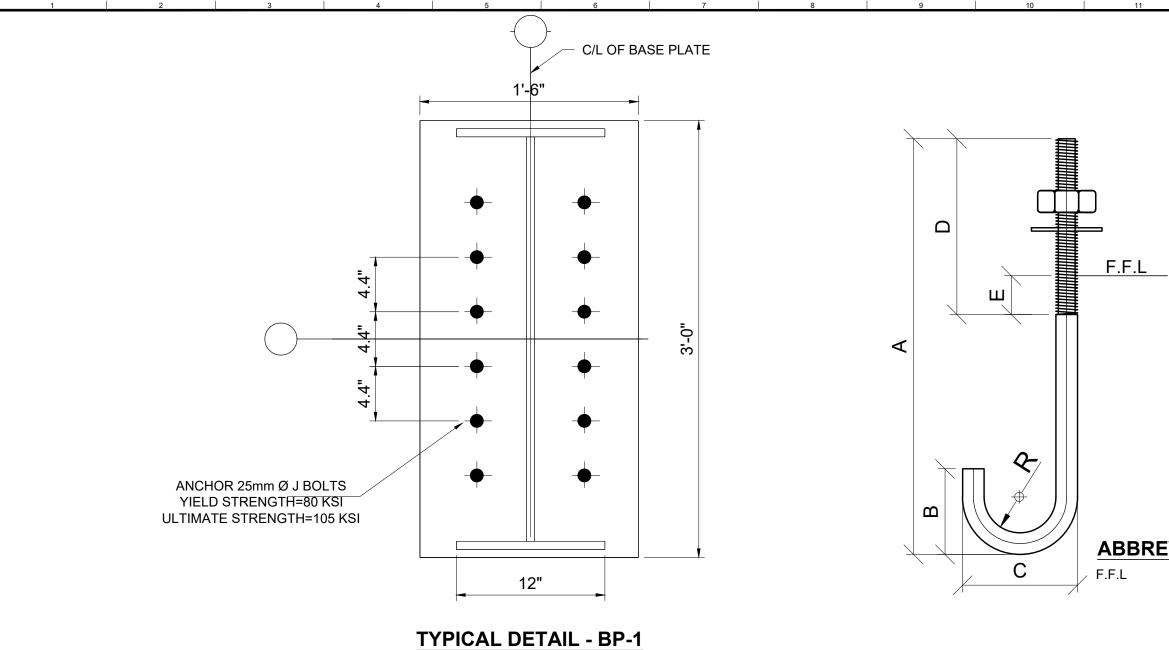


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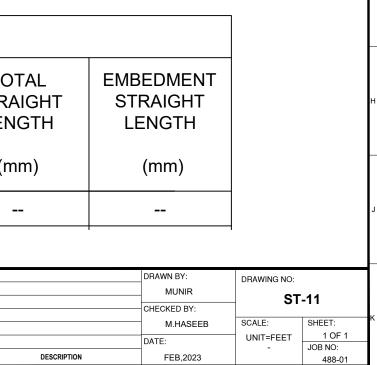


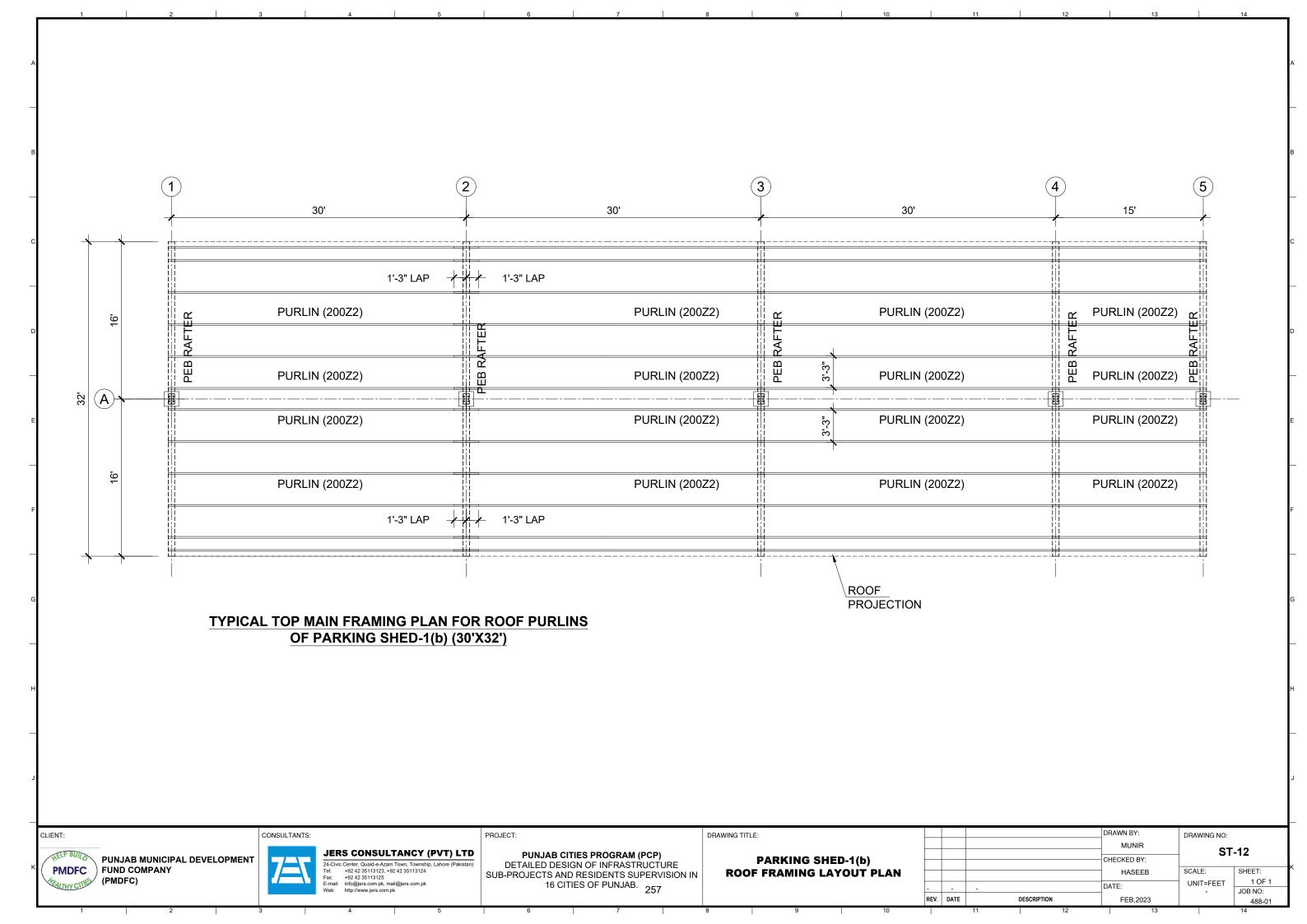
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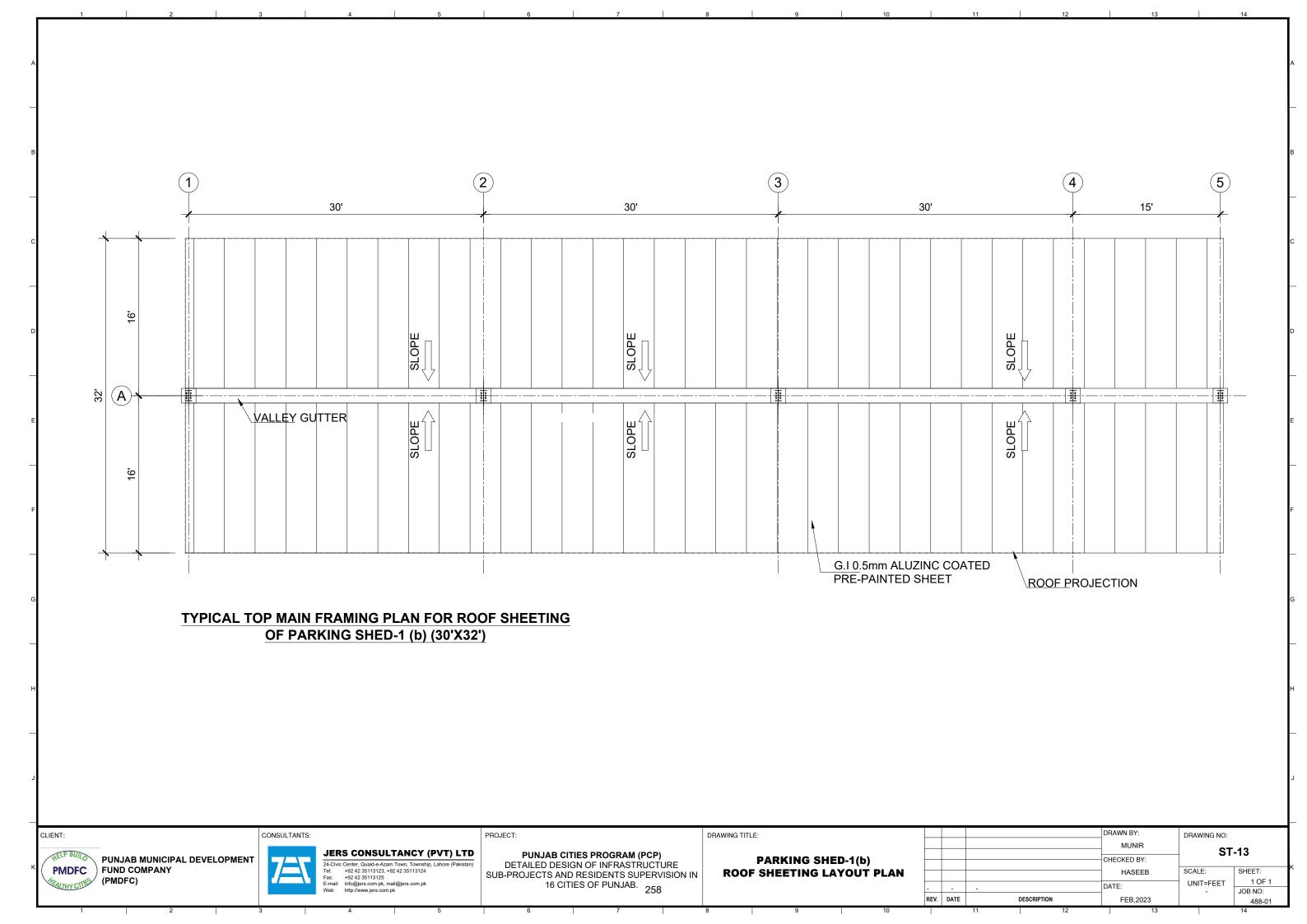
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к	PUNJAB MUNICIPAL DEVELOPMENT PMDFC FUND COMPANY (PMDFC)	7=\	JERS CONSULTANCY (PVT) LTD 24-Civic Center, Quaid-e-Azam Town, Township, Lahore (Pakistan) Tel: +92 42 35113123, +92 42 35113124 Fax: +92 42 35113125 E-mail: info@jers.com.pk, mail@jers.com.pk Web: http://www.jers.com.pk	PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION 16 CITIES OF PUNJAB. 256	IN TYPICAL ANCHOR BOLTS DETAIL SHED-01(b)	- REV.	 
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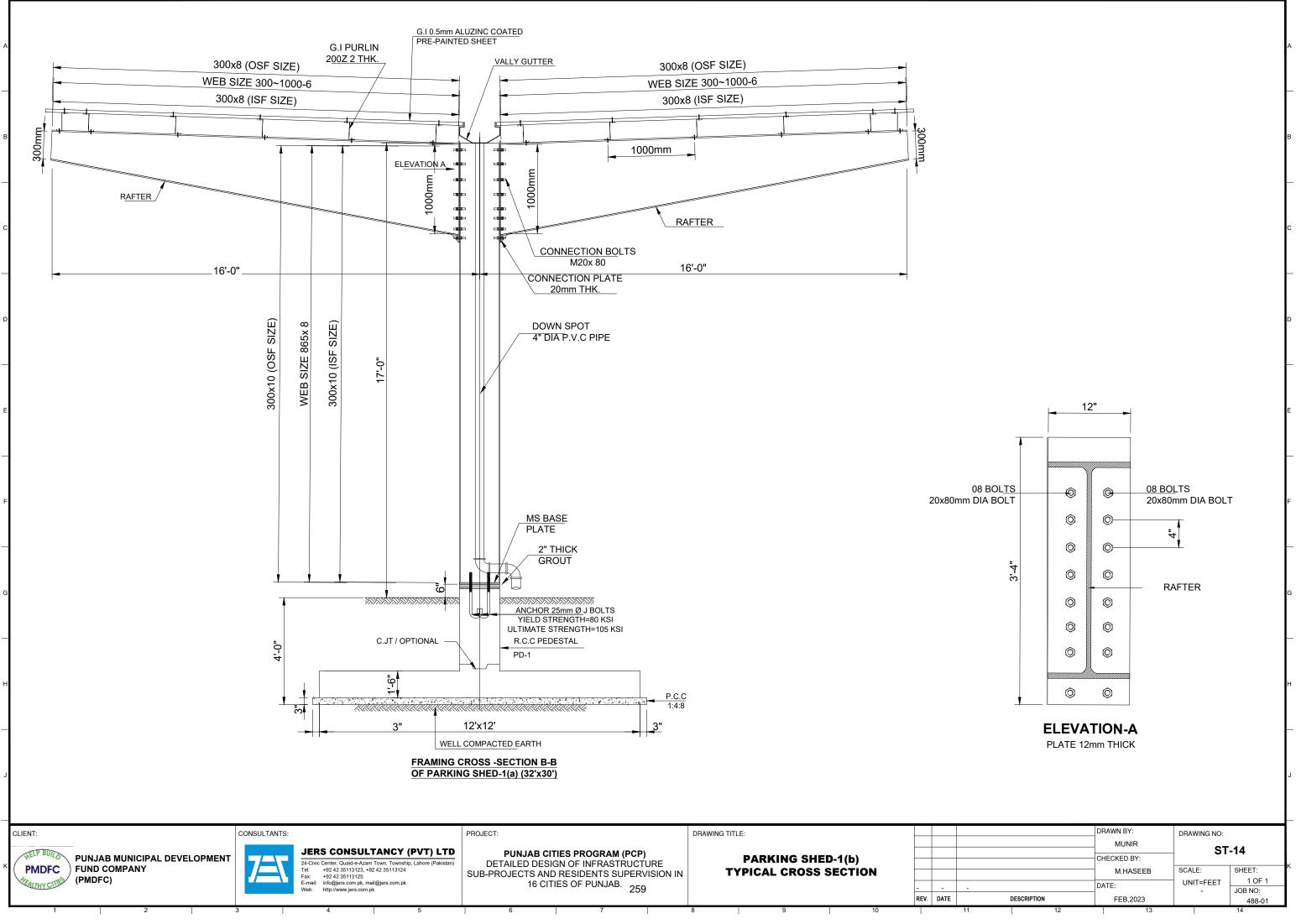
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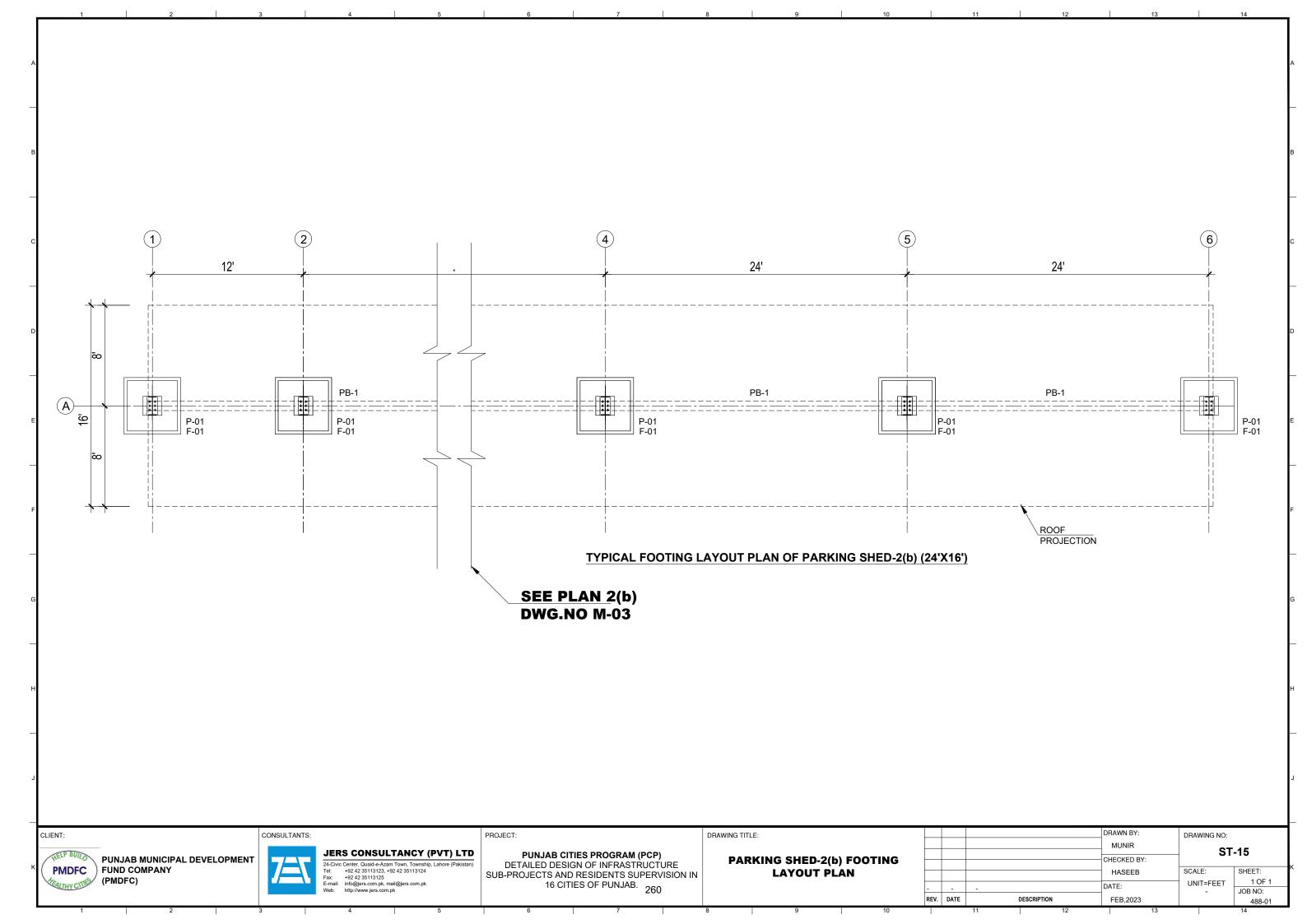
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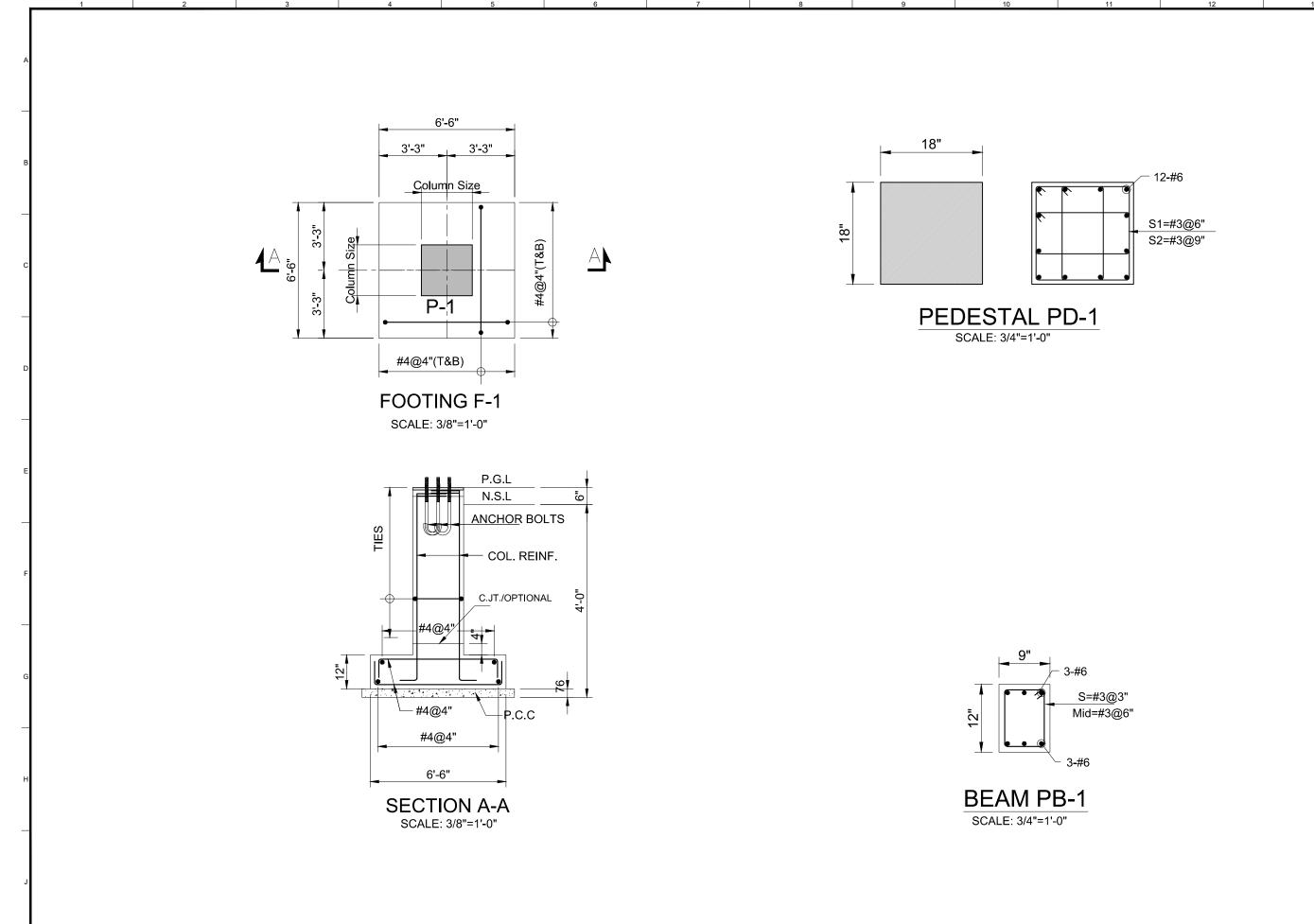






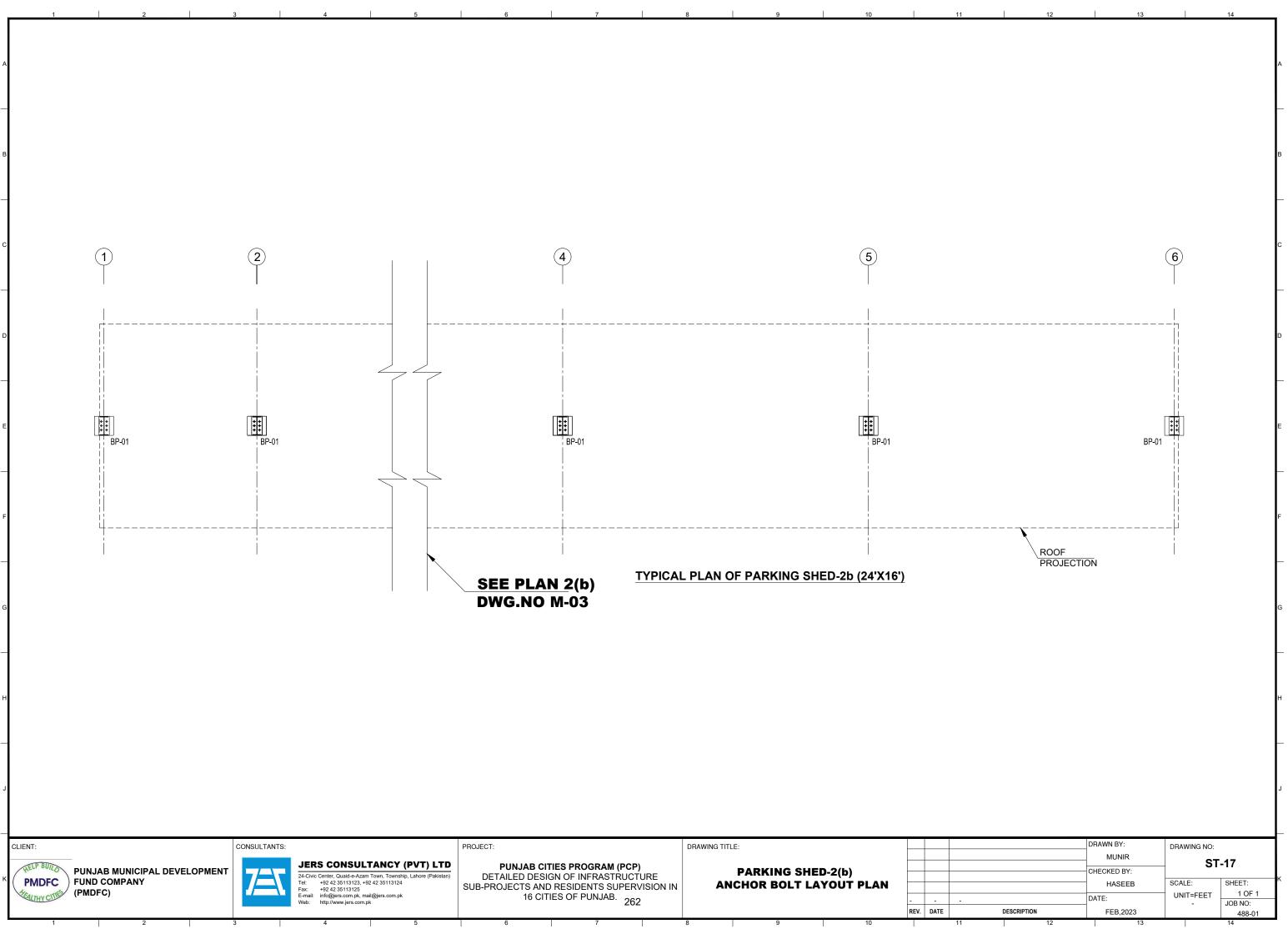




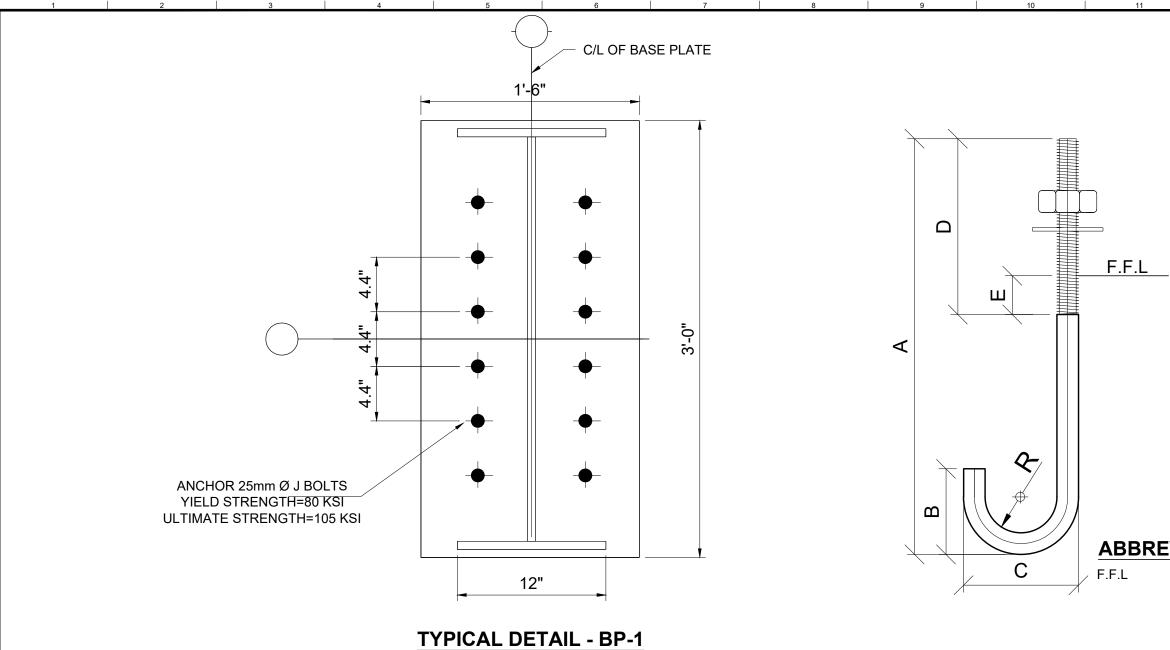


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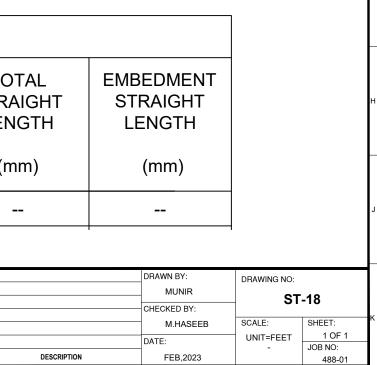


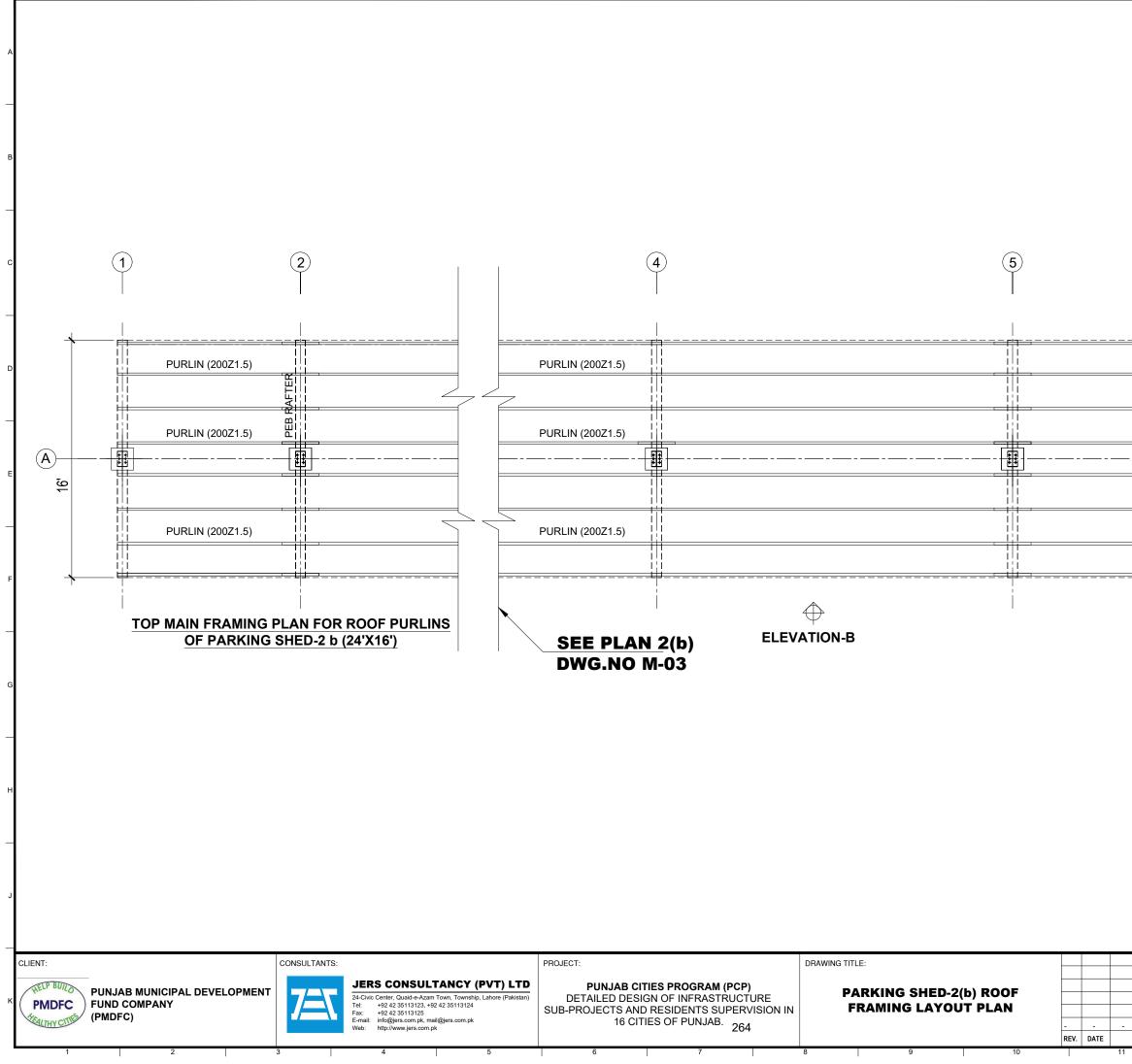
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к	PMDFC (PMDFC)	24-Civic Center, Quaid-e-Azam Town, Township, Lahore (Pakistan)	DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN					
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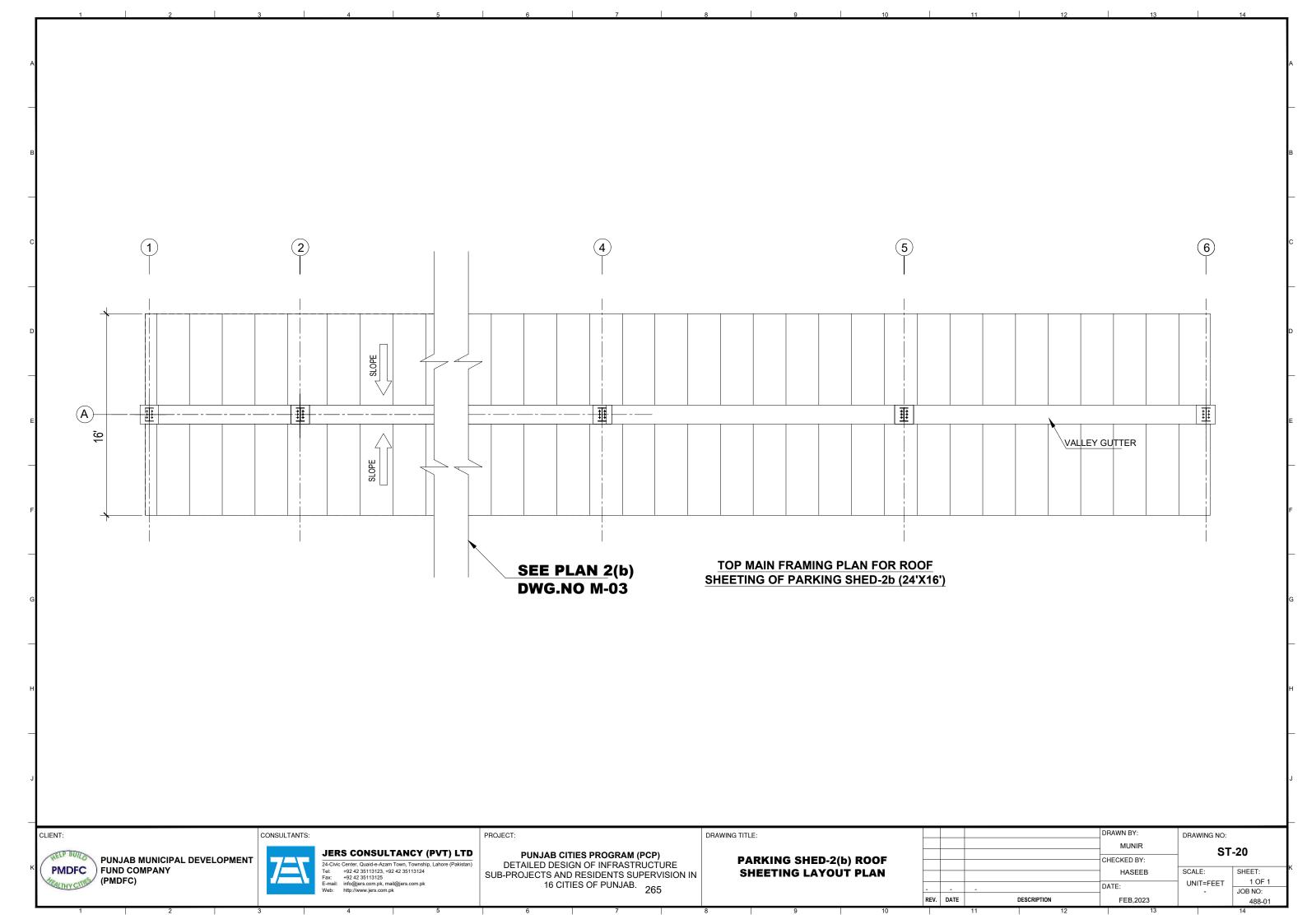
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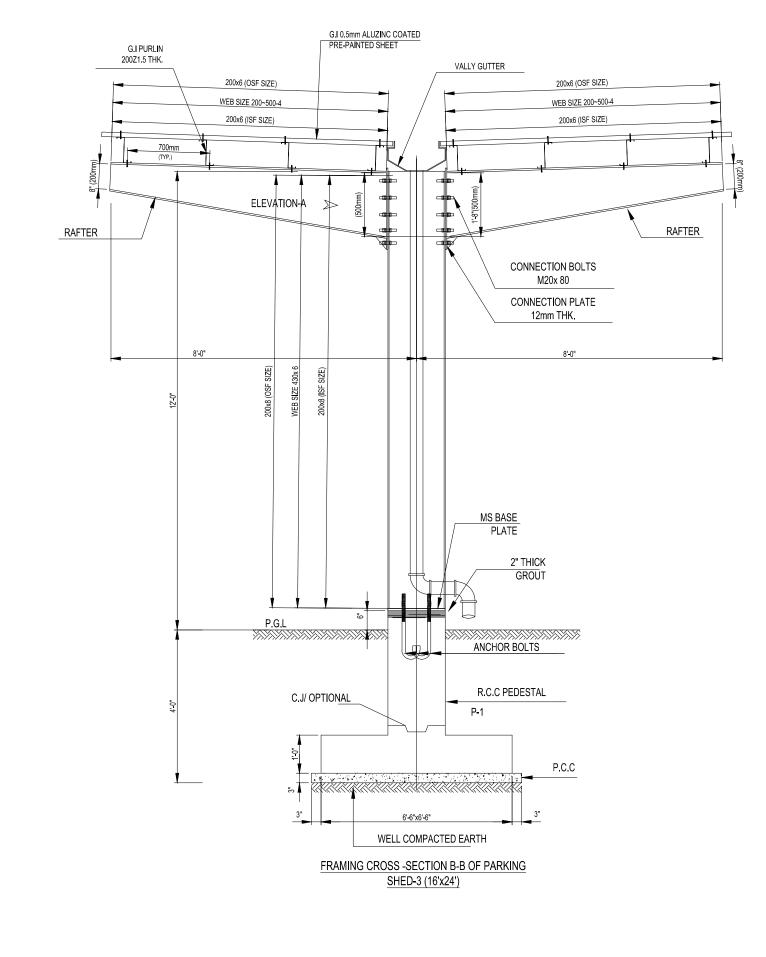
- FINISH FLOOR LEVEL





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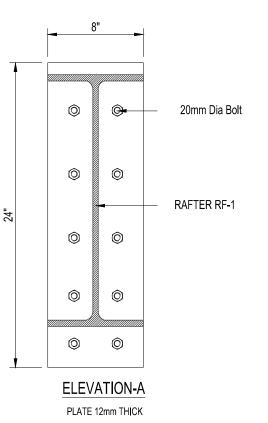
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 24-Civic Center, Quaid-e-Azam Town, Township, Lahore (Pakistan)

 Tel:
 +92 42 35113123, +92 42 35113124

 Fax:
 +92 42 35113125

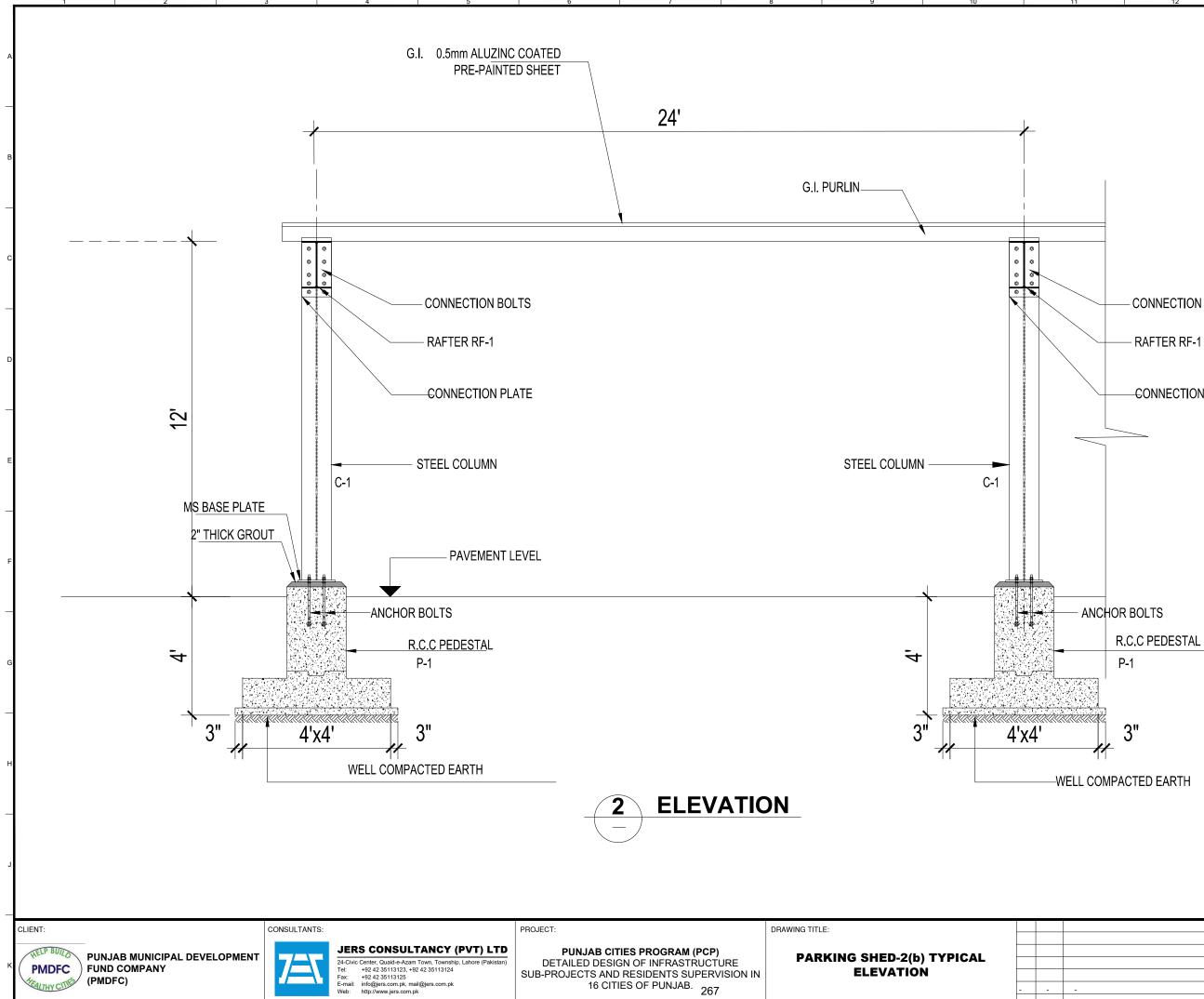
 E-mail:
 Info@jers.com.pk, mail@jers.com.pk

 Web:
 http://www.jers.com.pk
 PMDFC ) FUND COMPANY **CROSS SECTION** SUB-PROJECTS AND RESIDENTS SUPERVISION IN (PMDFC) 16 CITIES OF PUNJAB. 266 -REV. DATE 3 4



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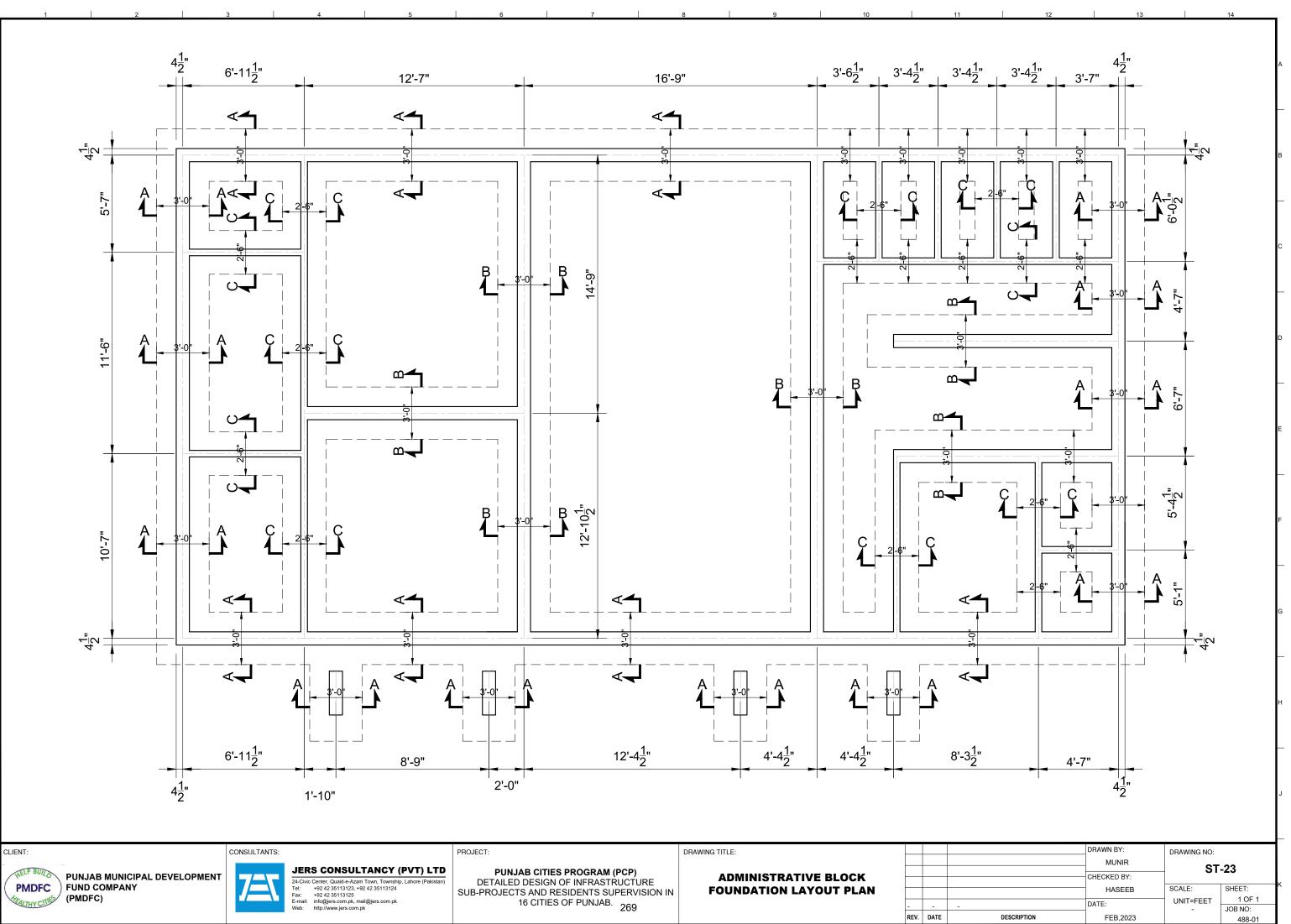
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CONNECTION BOLTS
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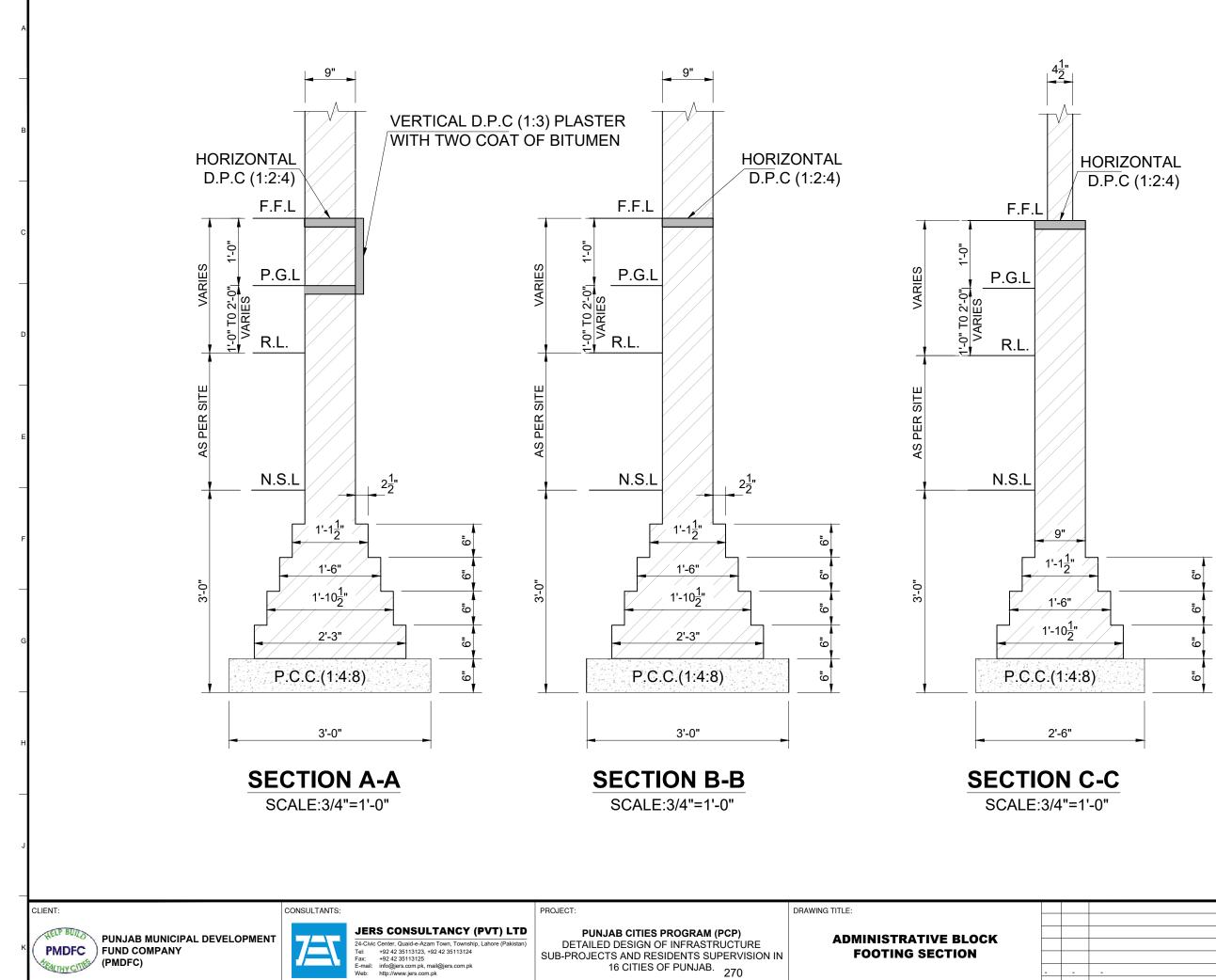
## **ADMINISTRATIVE BLOCK STRUCTURE**





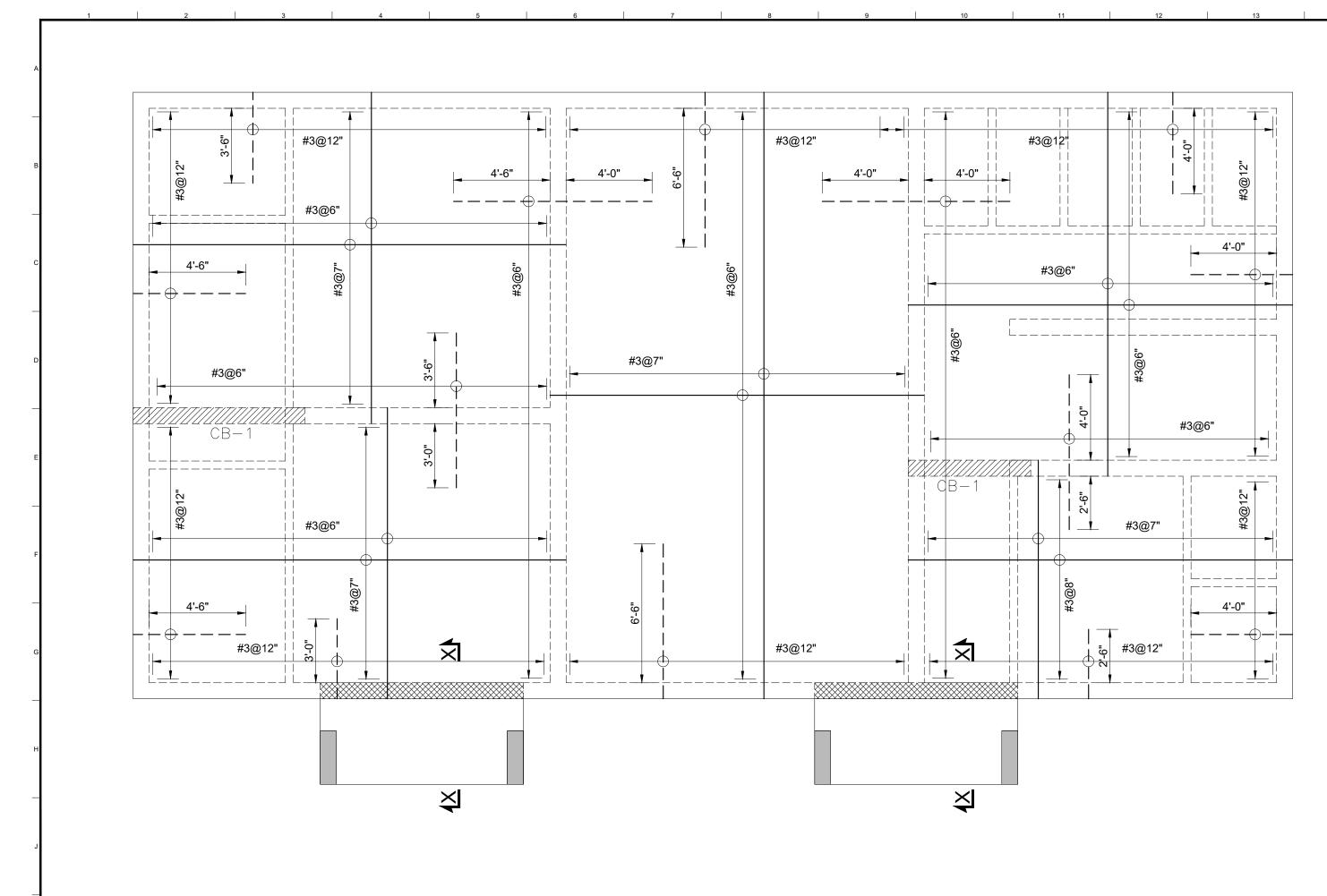


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CLIENT: CONSULTANTS: PROJECT: DRAWING TITLE: PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB. 271 HELP BUILD JERS CONSULTANCY (PVT) LTD PUNJAB MUNICIPAL DEVELOPMENT PMDFC FUND COMPANY **REINFORCEMENT SLAB LAYOUT**  
 24-Clvic Center, Quaid-e-Azam Town, Township, Lahore (Pakistan)

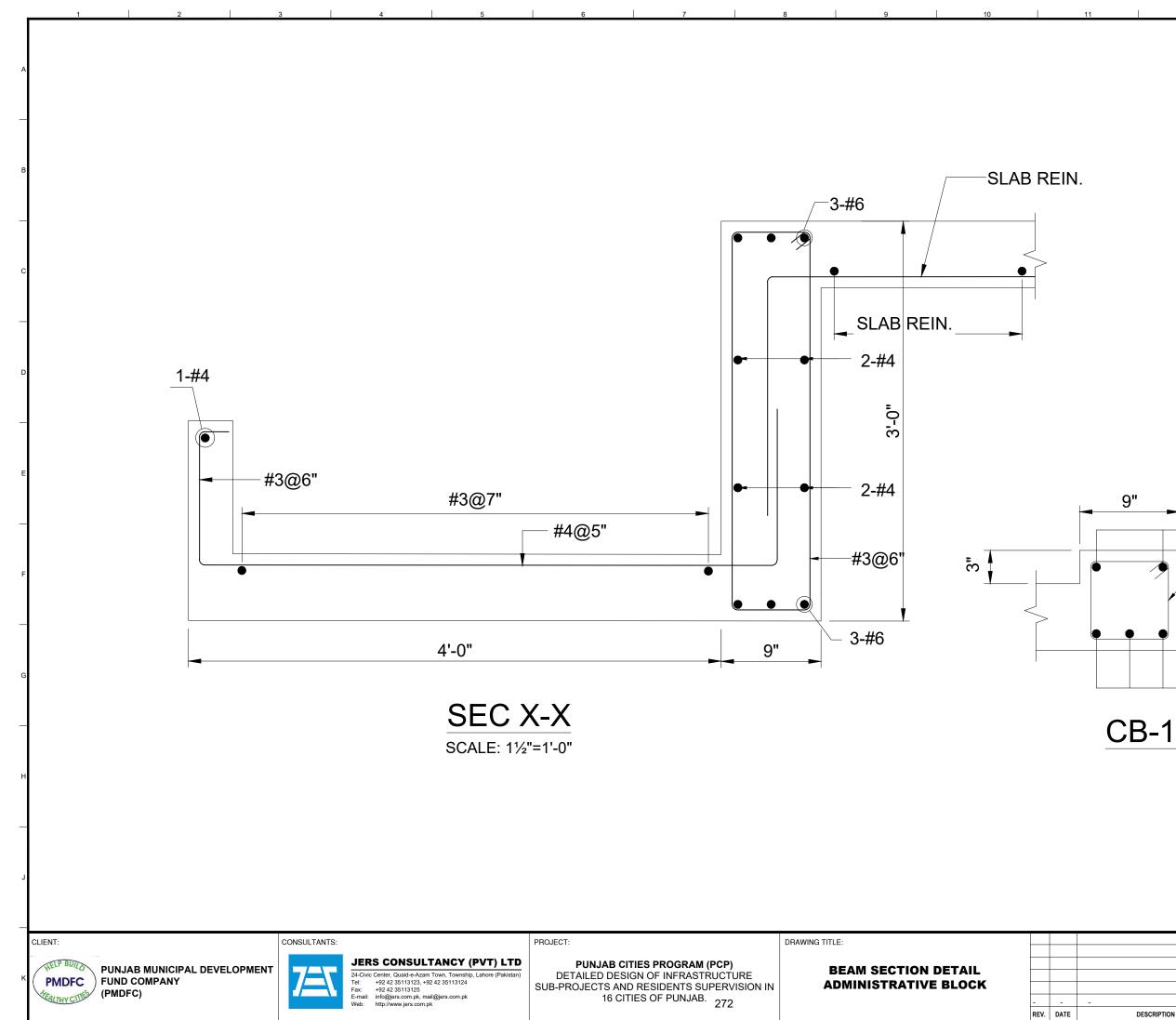
 Tel:
 +92.42 35113123, +92.42 35113124

 Fax:
 +92.42 35113125

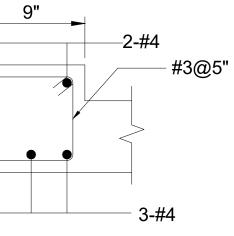
 E-mail:
 info@jers.com.pk, mail@jers.com.pk

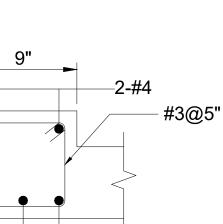
 Web:
 http://www.jers.com.pk
 ADMINISTRATIVE BLOCK (PMDFC) -REV. DATE

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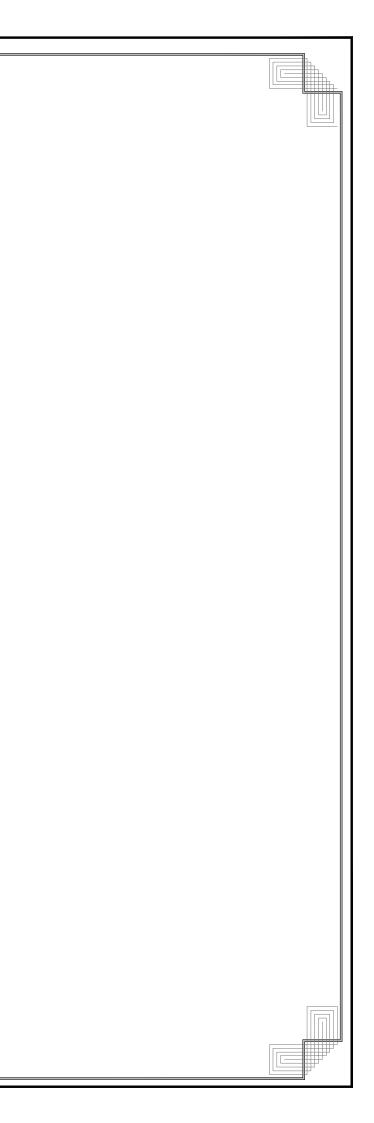


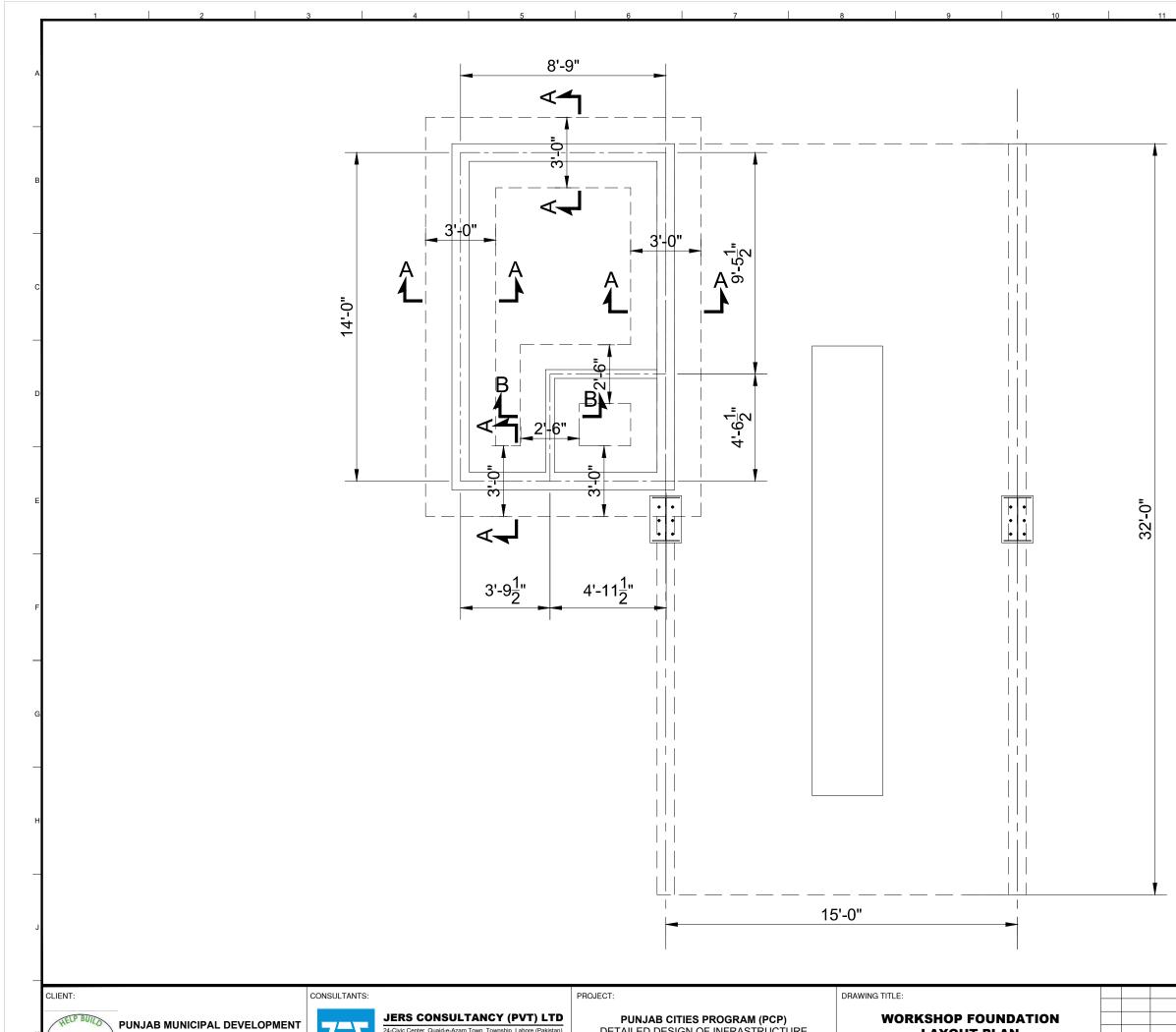
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# **WORKSHOP STRUCTURE**





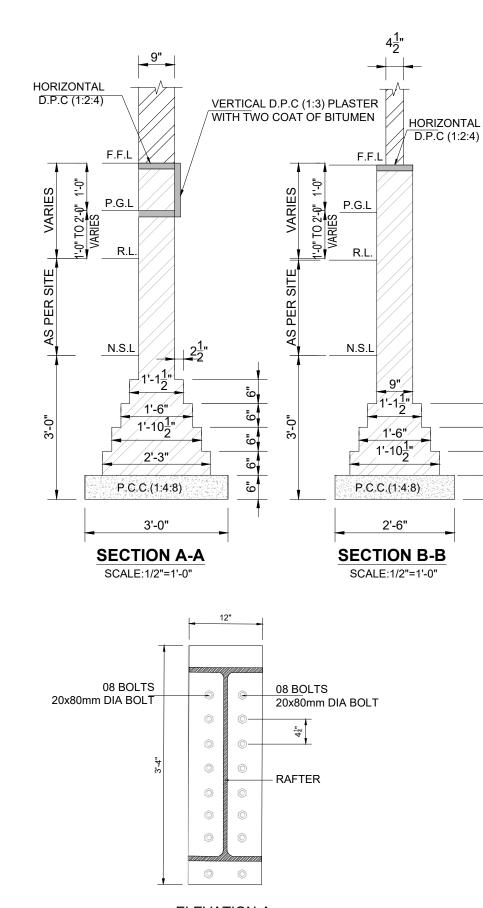
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PUNJAB MUNICIPAL DEVELOPMENT PMDFC FUND COMPANY (PMDFC)	7=1	JERS CONSULTANCY (PVT) LTD 24-Civic Center, Quaid-e-Azam Town, Township, Lahore (Pakistan) Tel: +92 42 35113123, +92 42 35113124 Fax: +92 42 35113125 E-mail: info@jers.com.pk, mail@jers.com.pk Web: http://www.jers.com.pk	PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB. 274	WORKSHOP FOUNDATION LAYOUT PLAN	- REV.	- DATE	

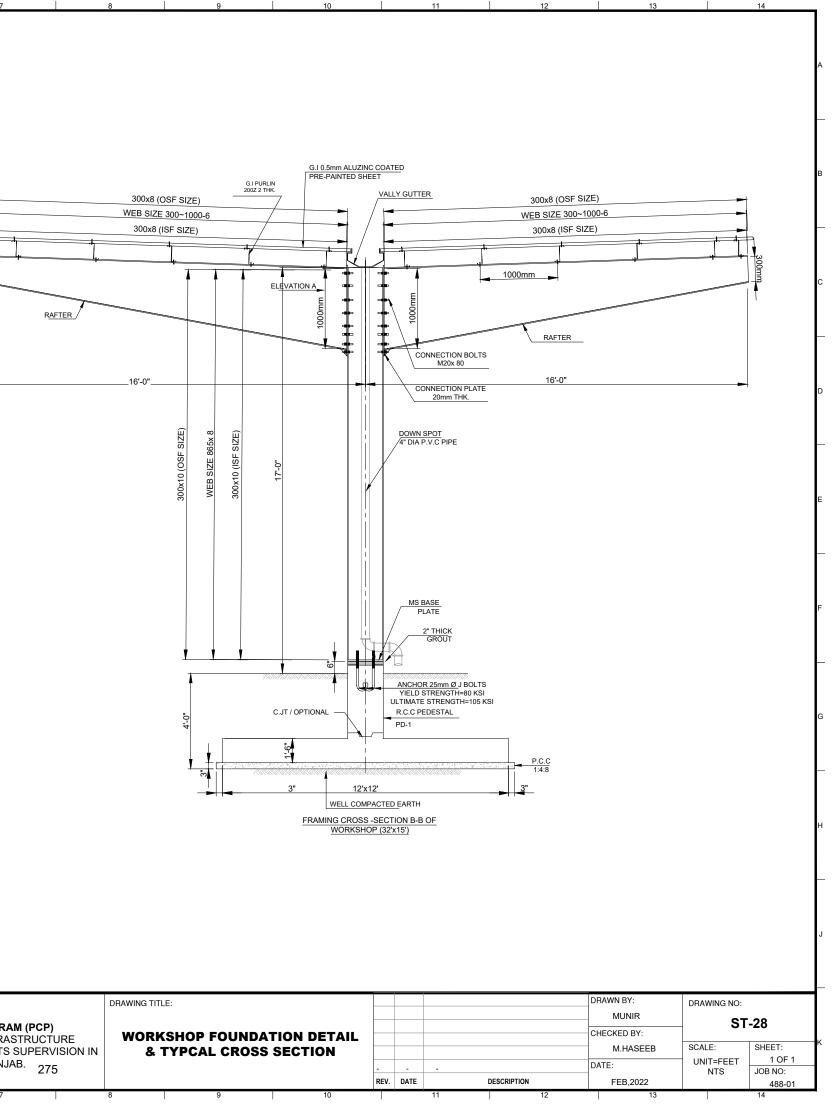
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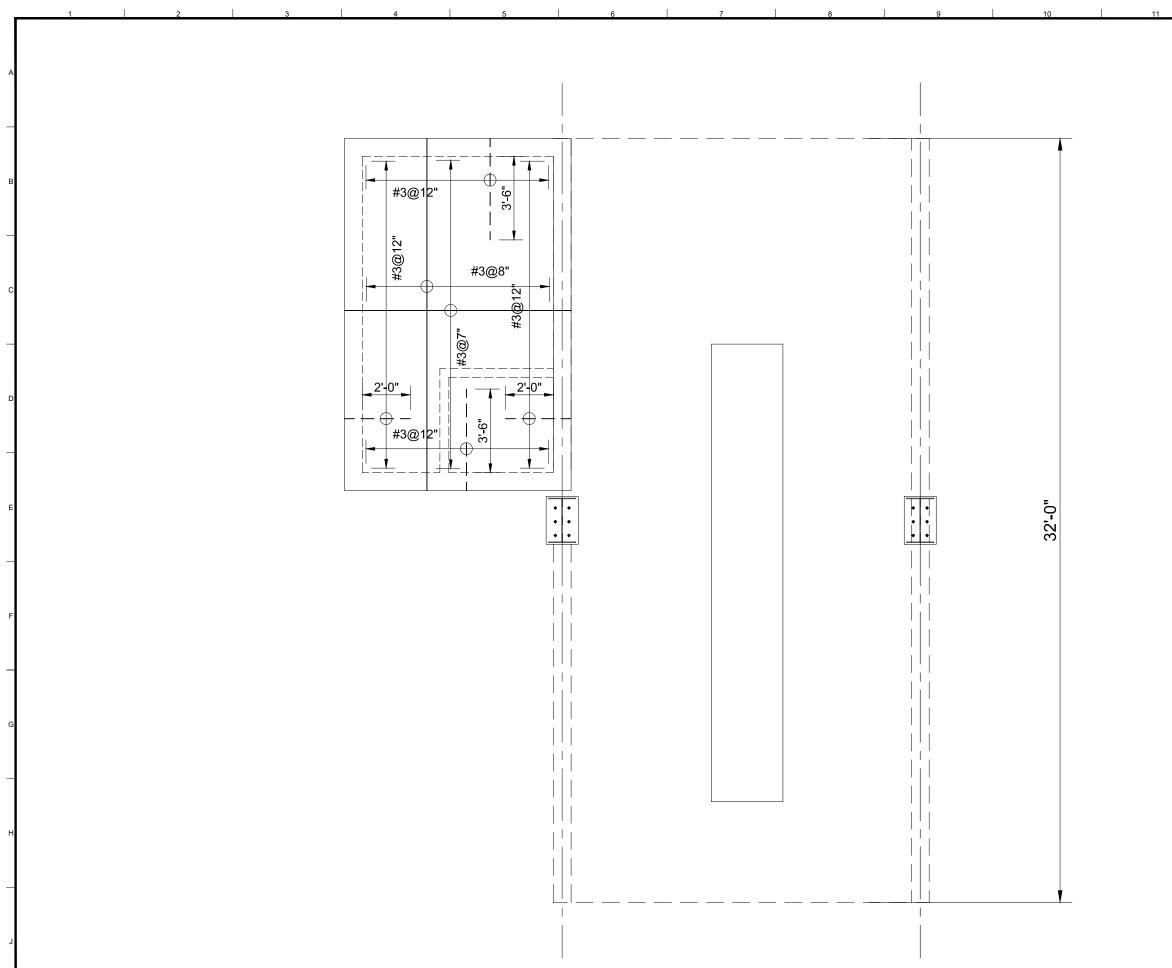
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	CLIENT:	CONSULTANTS:		PROJECT:	DRAWING TITLE:	
к	PUNJAB MUNICIPAL DEVELOPMENT FUND COMPANY (PMDFC)		JERS CONSULTANCY (PVT) LTD 4-Civic Center, Quaid-e-Azam Town, Township, Lahore (Pakistan) fel: +92 42 35113123, +92 42 35113124 ax: +92 42 35113125 -mail: info@jers.com.pk Web: http://www.jers.com.pk	PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB. 275		 REV. DATE
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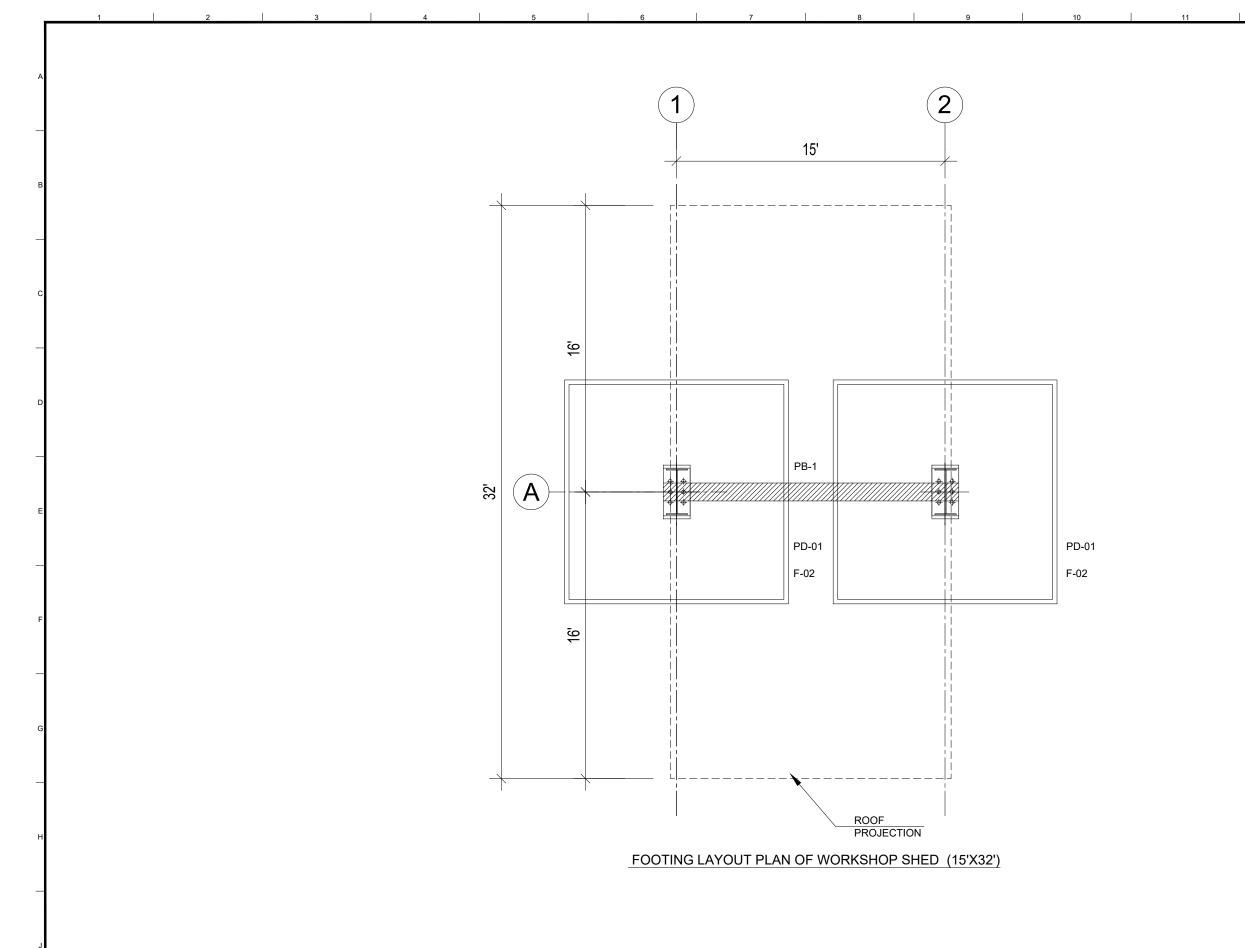
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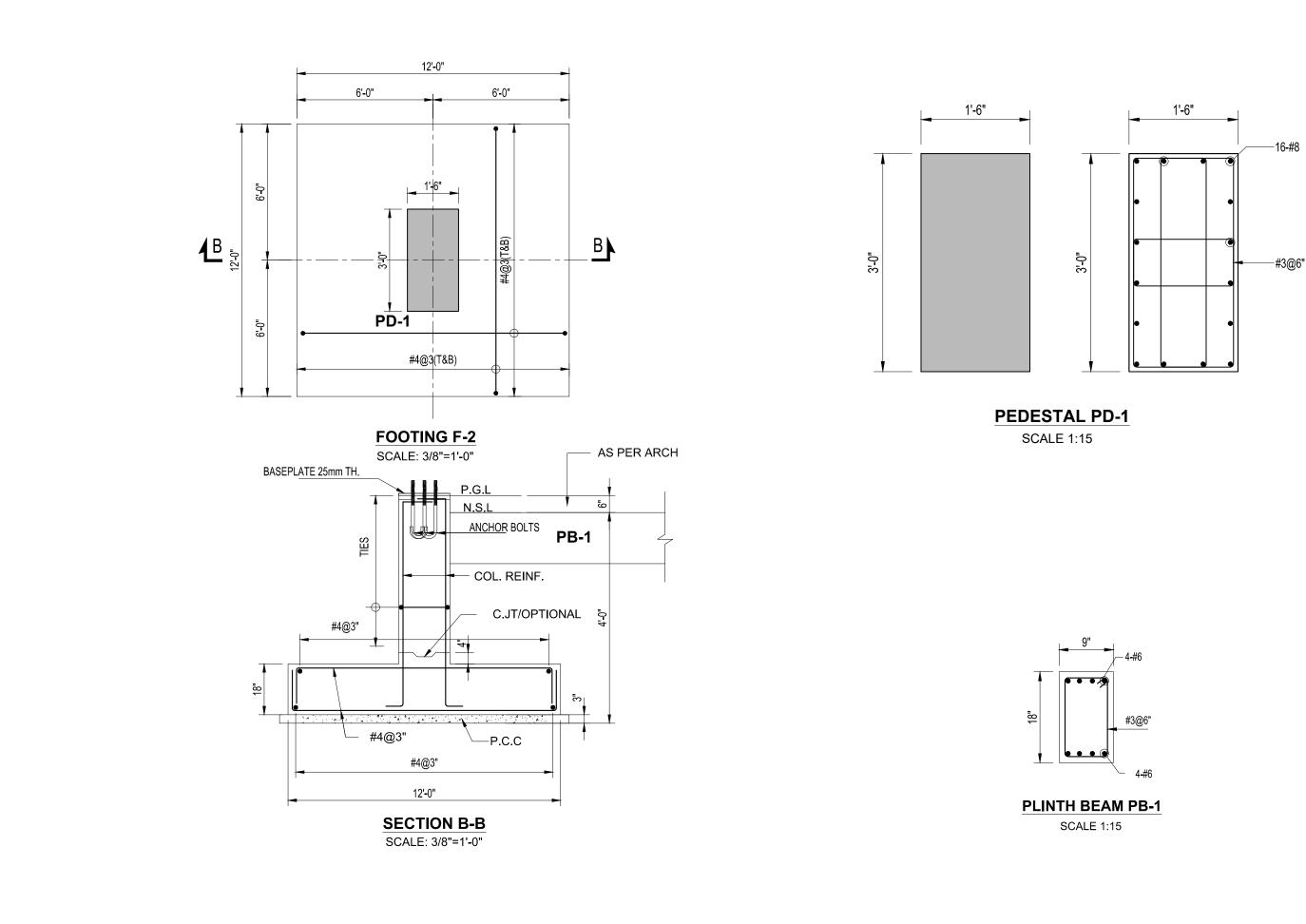
	CLIENT:	CONSULTANTS:	F	PROJECT:	DRAWING TITLE:			
к	PUNJAB MUNICIPAL DEVELOPMENT PMDFC (PMDFC)	24-Civic Center, Q Tel: +92 42 3 Fax: +92 42 3	DNSULTANCY (PVT) LTD Quaid-e-Azam Town, Township, Lahore (Pakistan) 38113123, +92 42 35113124 38113125 rs.com.pk, mail@iers.com.pk	PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN	WORKSHOP REINFORCEMENT LAYOUT PLAN			
	CALTHY CITIE		ww.jers.com.pk	16 CITIES OF PUNJAB. 276		-	-	-
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PUNJAB MUNICIPAL DEVELOPMENT PMDFC (PMDFC)	JERS CONSULTANCY (PVT) LTD 24-Clvic Center, Quaid-e-Azam Town, Township, Lahore (Pakistan) Tel: +92.42 35113123, +92.42 35113124 Fax: +92.42 35113125	DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN	WORKSHOP SHED FOOTING LAYOUT PLAN			
CALTHY CITIES (1 HIET C)	E-mail: info@jers.com.pk, mail@jers.com.pk Web: http://www.jers.com.pk	16 CITIES OF PUNJAB. 277		-	-	-
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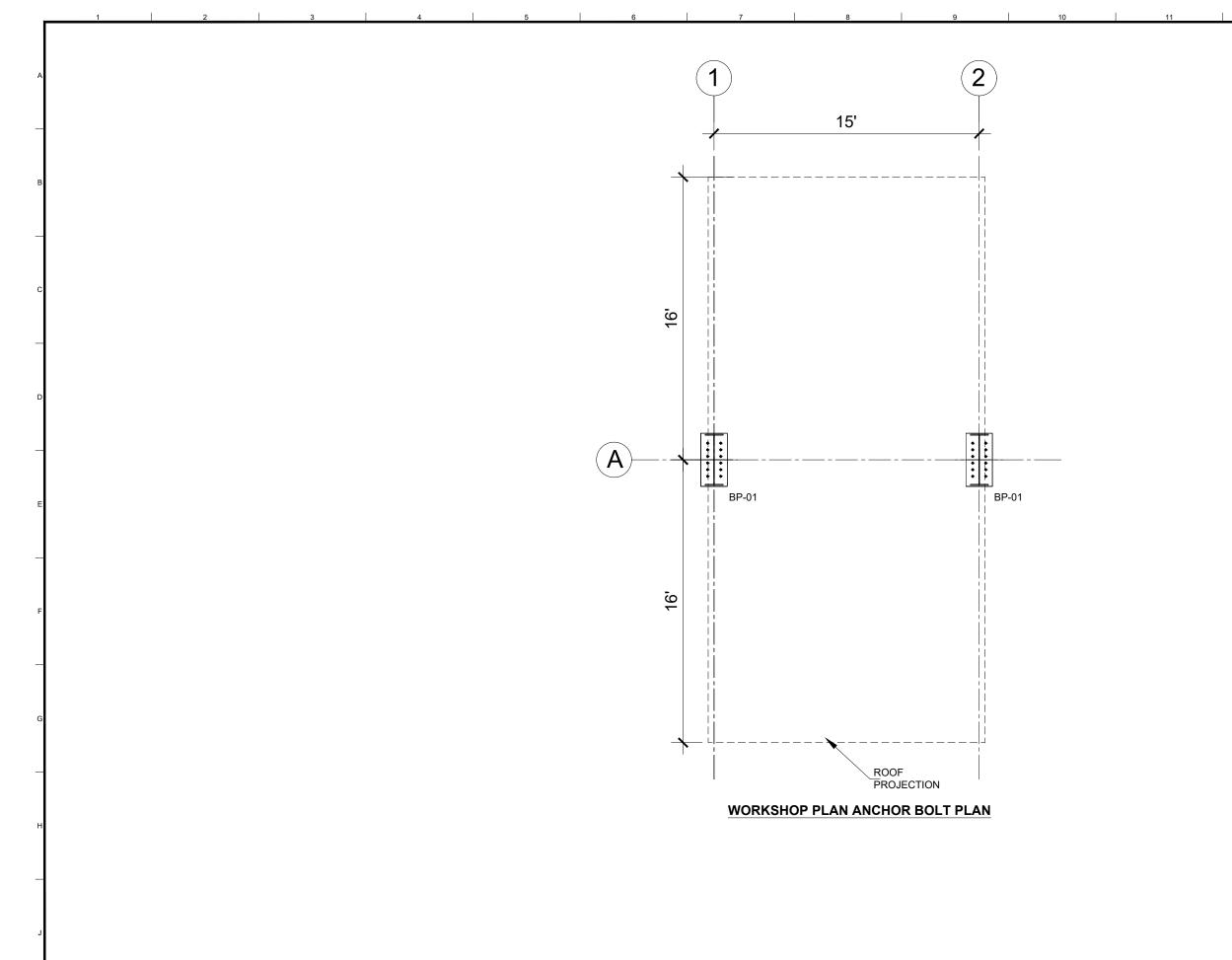
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CLIENT:		CONSULTANTS:			PROJECT:			DRAWING TITLE:					
PMDFC	PUNJAB MUNICIPAL DEVELOPMENT FUND COMPANY (PMDFC)	7=\	24-Civic Center, Quaid-e-Azam Tel: +92 42 35113123, +9 Fax: +92 42 35113125 E-mail: info@jers.com.pk, ma	il@jers.com.pk	DETAILED DES SUB-PROJECTS AN	ITIES PROGRAM SIGN OF INFRASTF ID RESIDENTS SU TIES OF PUNJAB.	RUCTURE	FOC	WORKSHOP S DTING AND PE DETAIL				
			Web: http://www.jers.com.p	k			2/8				-	-	
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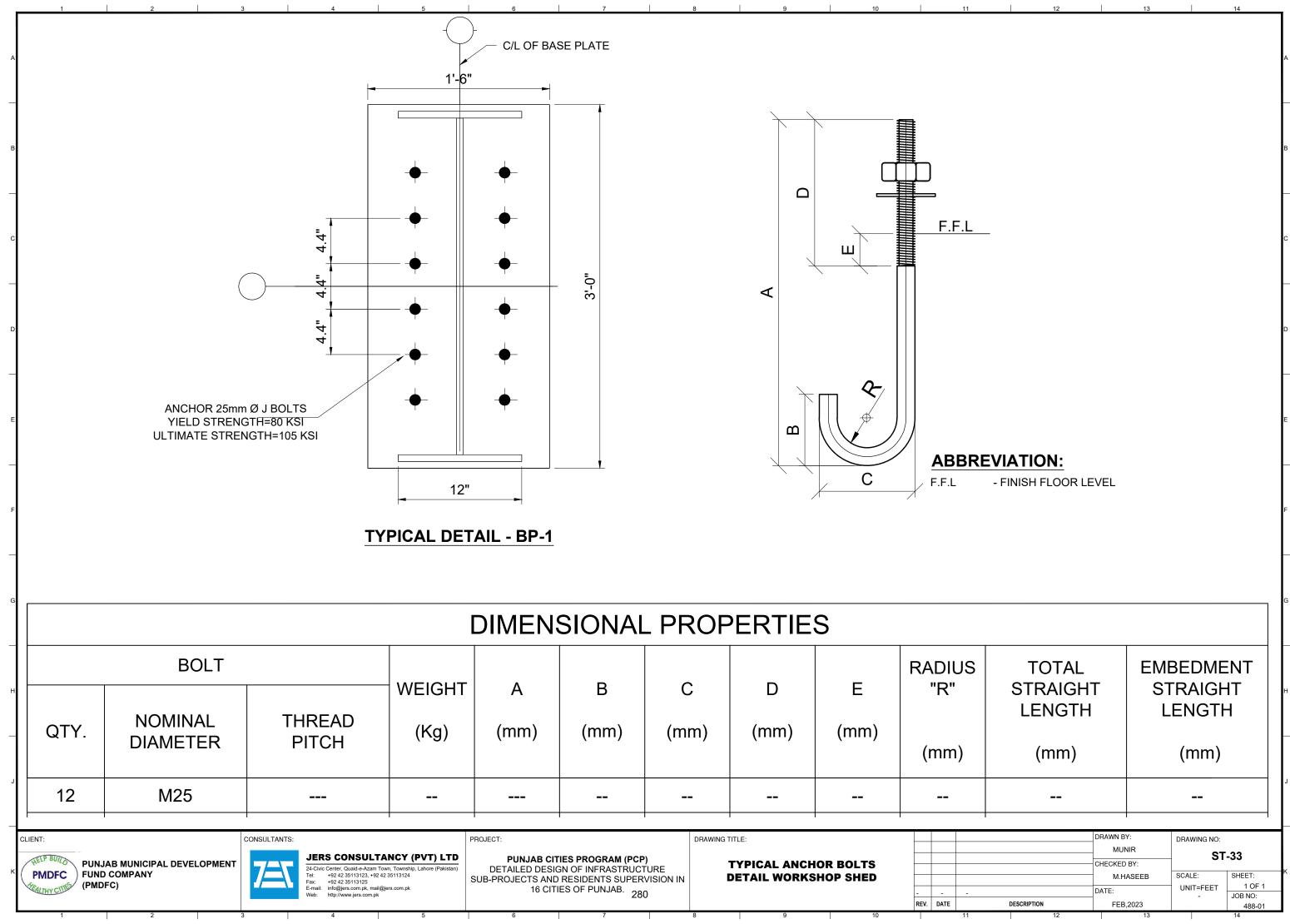
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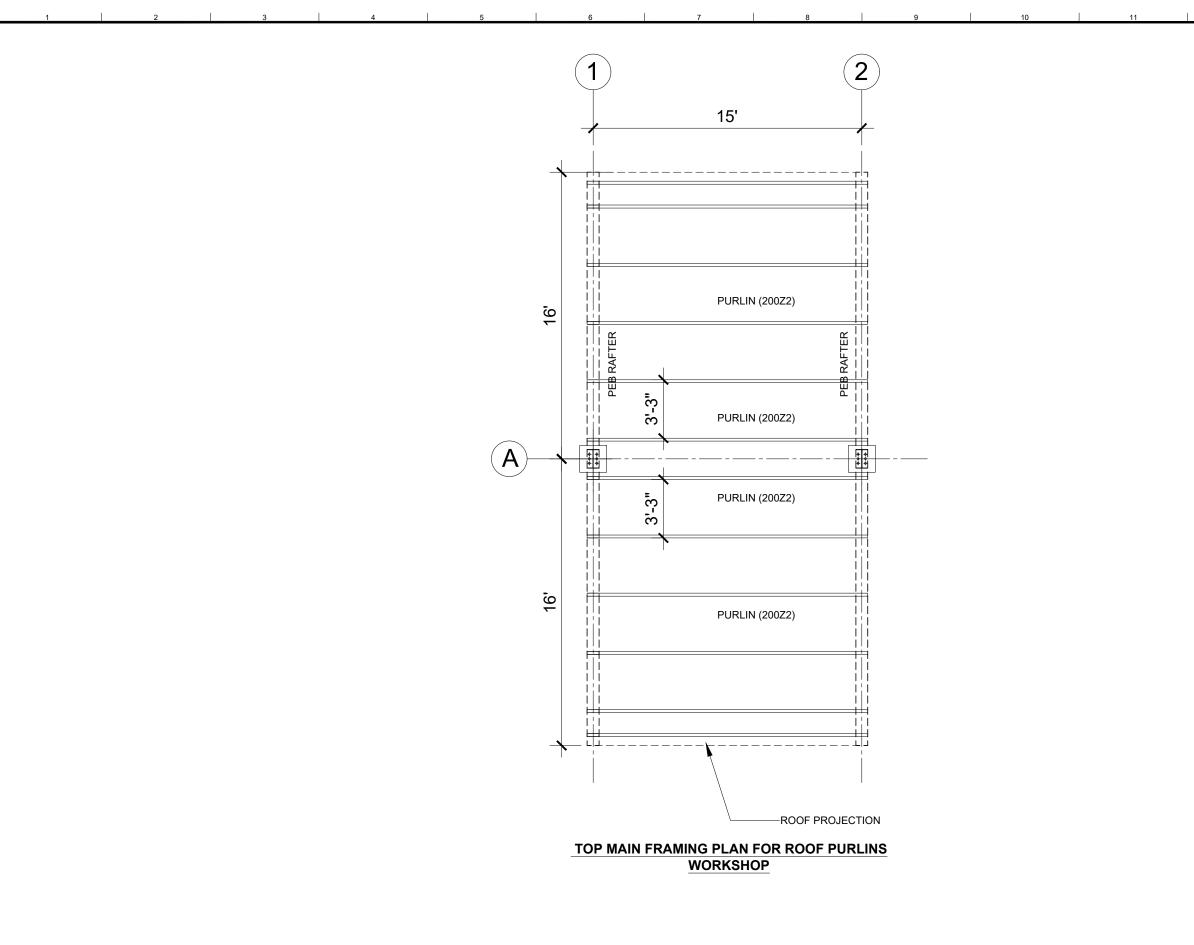
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ſ	CLIENT:	CONSULTANTS:	PROJECT:	DRAWING TITLE:			
к	PUNJAB MUNICIPAL DEVELOPMENT PMDFC (PMDFC)	24-Civic Center, Quaid-e-Azam Town, Township, Lahore (Pakistan) Tel: +92 42 35113123, +92 42 35113124 Fax: +92 42 35113125	DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN	WORKSHOP SHED ANCHOR BOLT PLAN			
	CALTHY CITIES (FINDIC)	E-mail: info@jers.com.pk, mail@jers.com.pk Web: http://www.jers.com.pk	16 CITIES OF PUNJAB. 279		-	-	-
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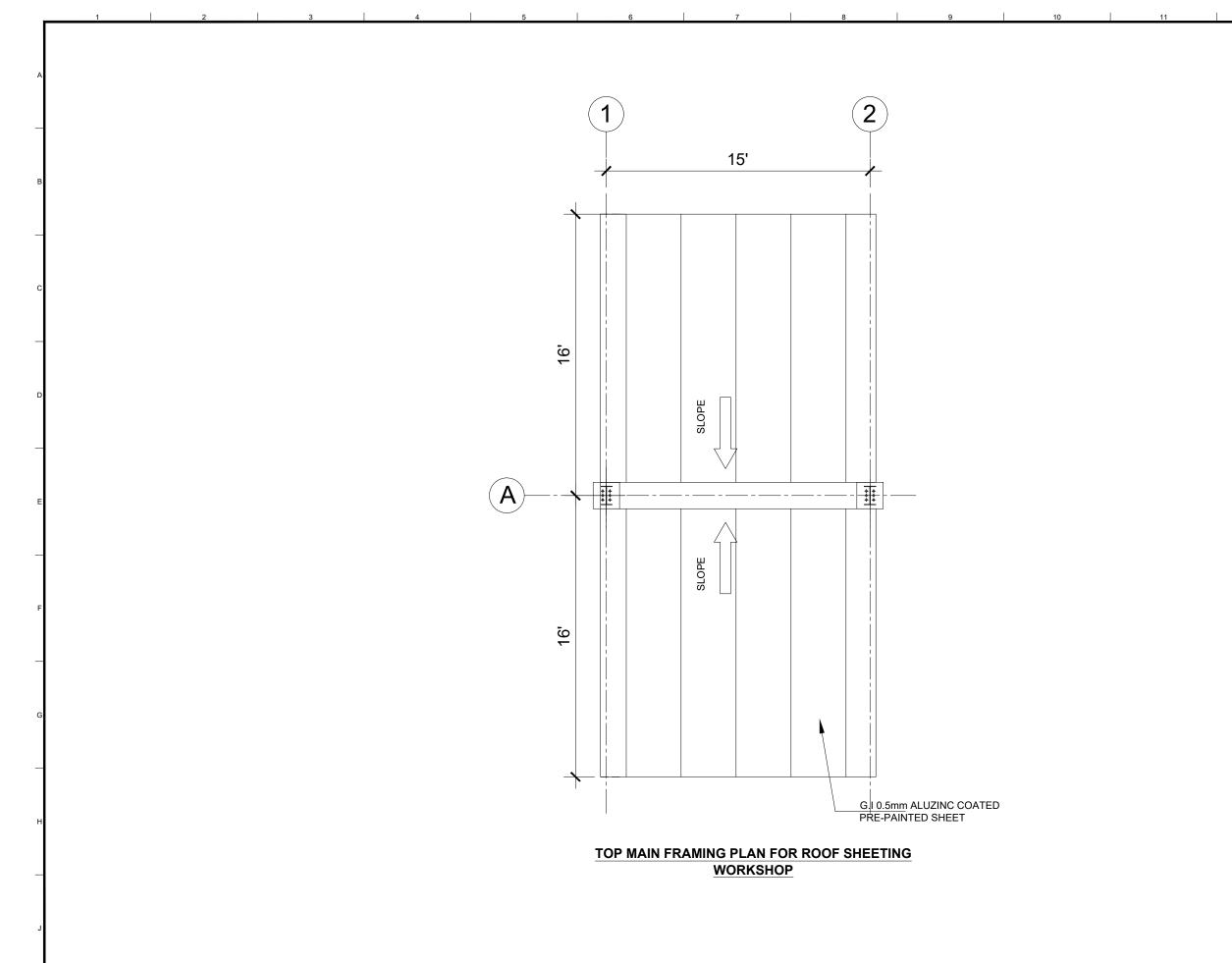
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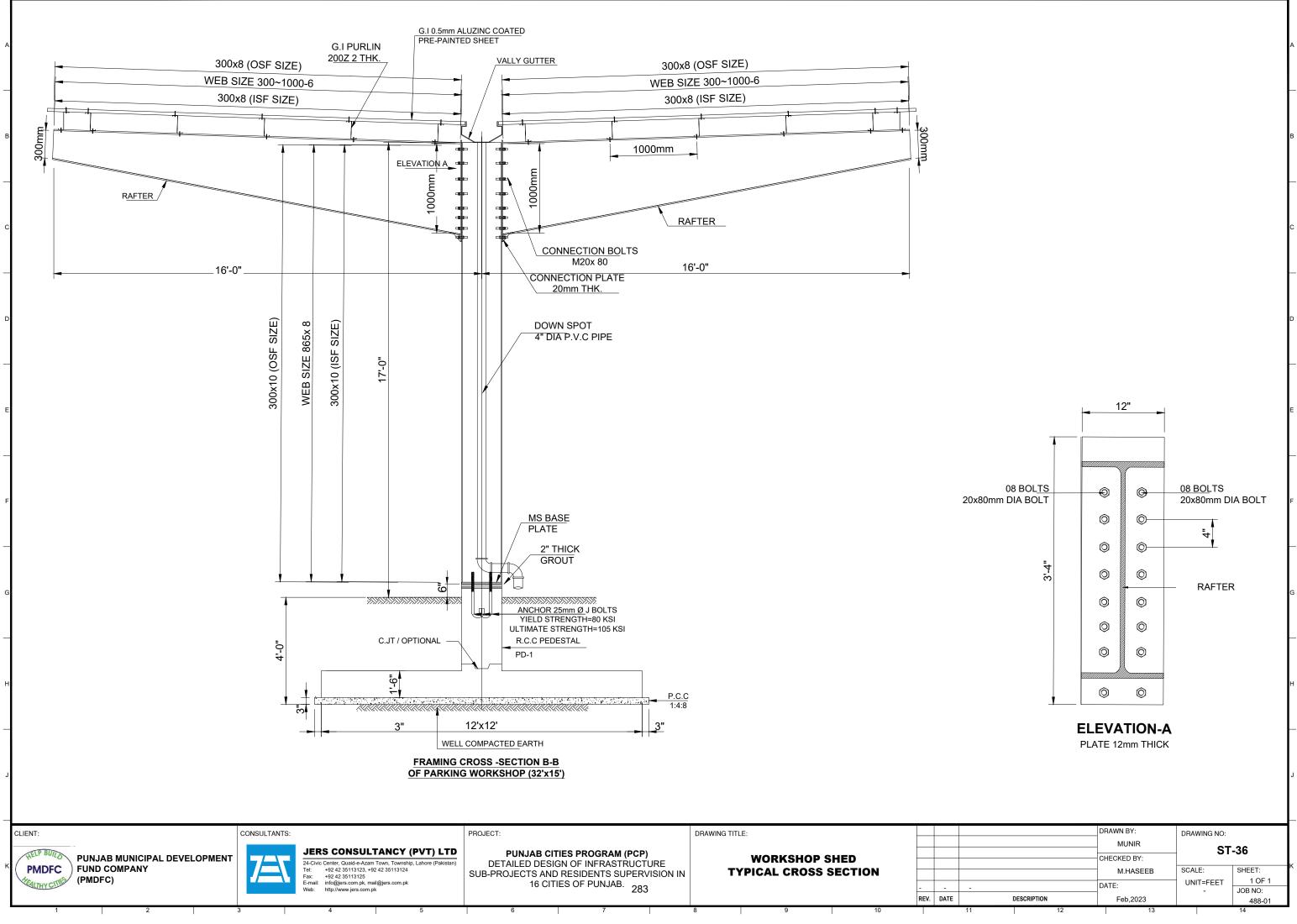
	CLIENT:	CONSULTANTS:	PROJECT:		DRAWING TITLE:			
	HELP BUILD PUNJAB MUNICIPAL DEVELOPMENT	JERS CONSULTAN	ICY (PVT) LTD PUNJAB CI	TIES PROGRAM (PCP)	WORKSHOP SHED			L
<	(PMDFC) FUND COMPANY	24-Civic Center, Quaid-e-Azam Town, T Tel: +92 42 35113123, +92 42 351	112124	IGN OF INFRASTRUCTURE				
1	(PMDFC)	Fax: +92 42 35113125	SUB-PROJECTS ANI	D RESIDENTS SUPERVISION IN	ROOF FRAMING LAYOUT PLAN			
	CALTHY CITIES (I MIDI O)	E-mail: info@jers.com.pk, mail@jers.c Web: http://www.jers.com.pk	.com.pk 16 CI7	TIES OF PUNJAB. 281		-	-	-
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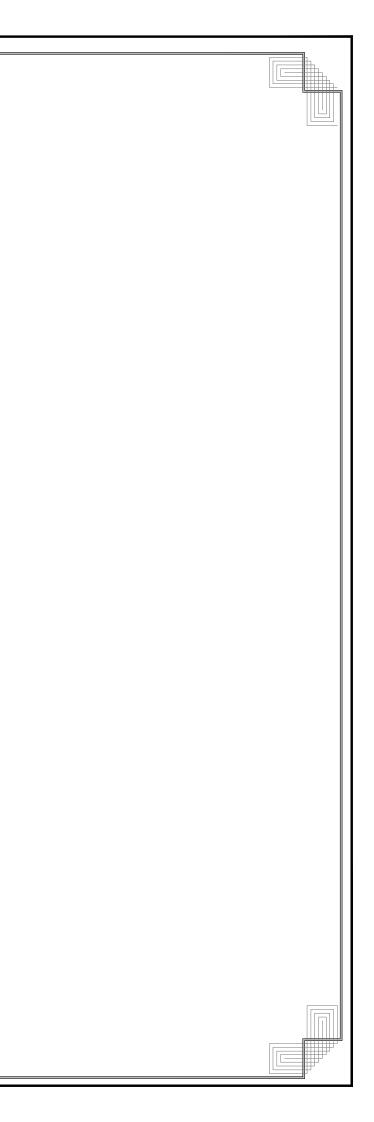


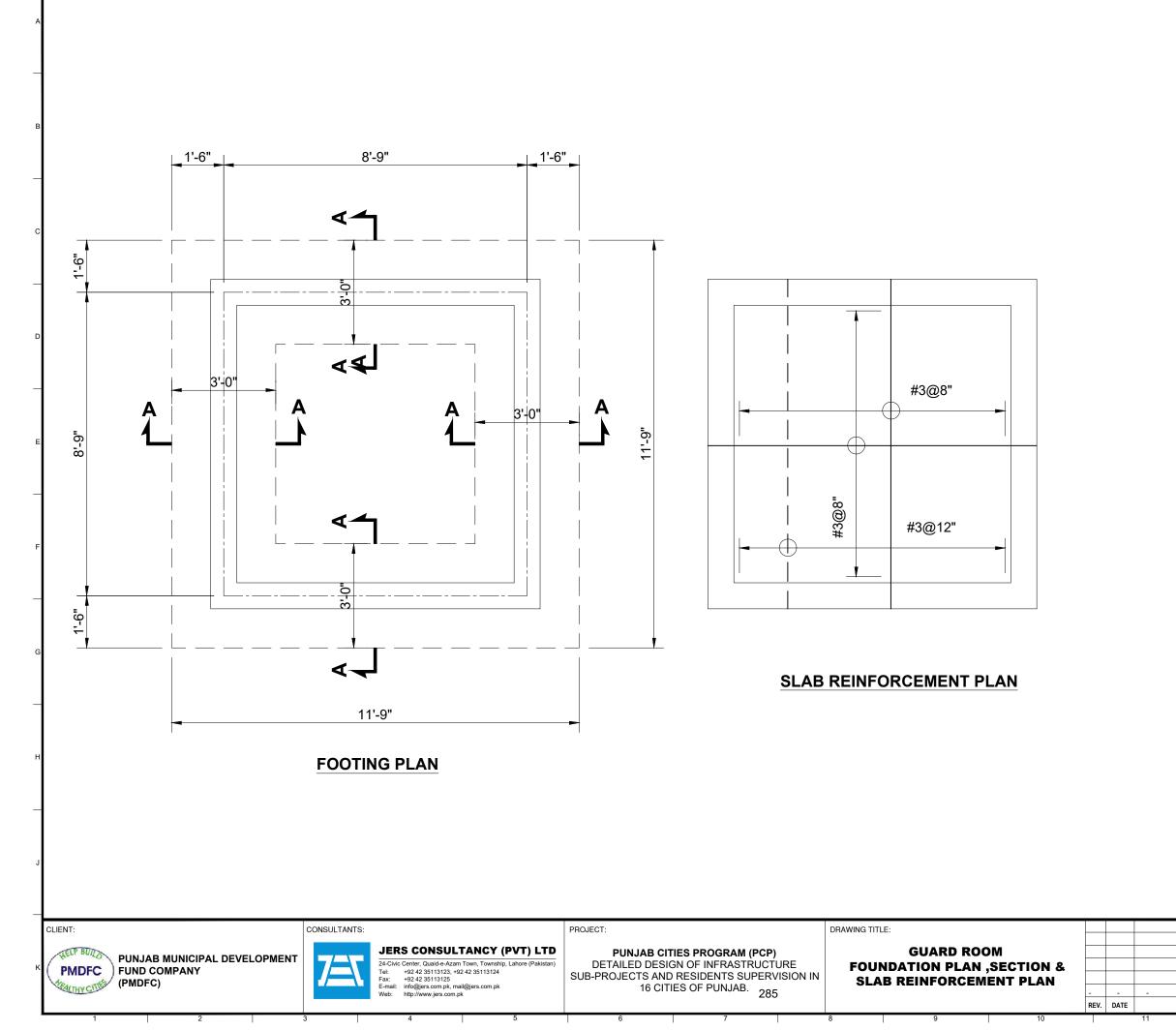
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ſ			Tel: +92 42 35113123, +92 42 35113124 Fax: +92 42 35113125	SUB-PROJECTS ANI	D RESIDENTS SUPERVISION IN	ROOF SH	IEETING LA	YOUT PLAN				HASEEB	SCALE:
	(PMDFC)		E-mail: info@jers.com.pk, mail@jers.com.pk Web: http://www.jers.com.pk	16 CI	TIES OF PUNJAB. 282					-		DATE:	UNIT=FE
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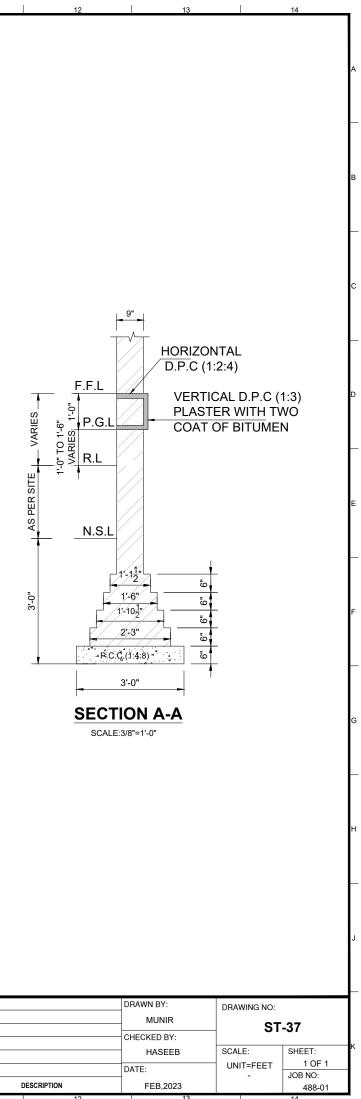
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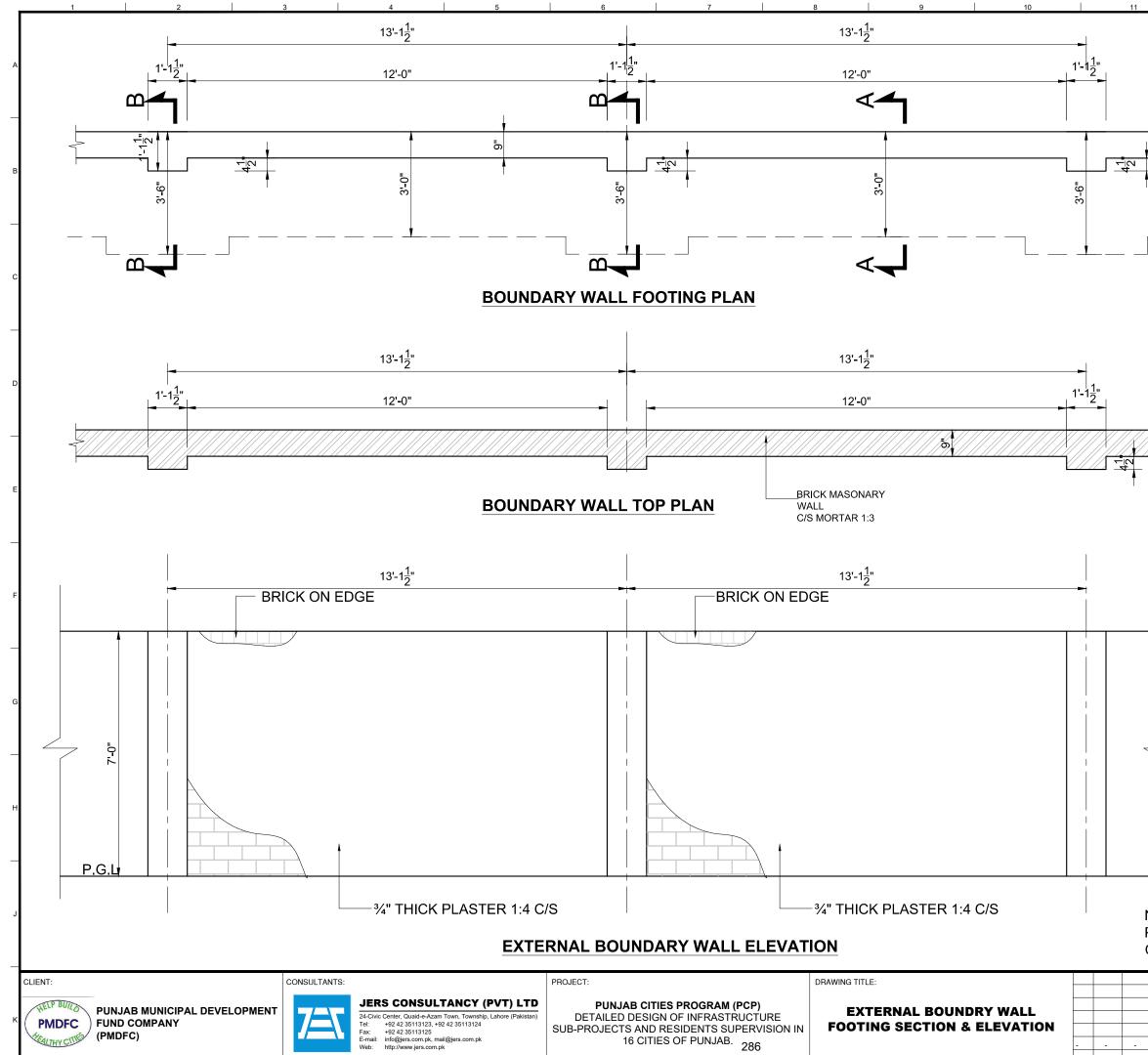


# **GUARD ROOM STRUCTURE**



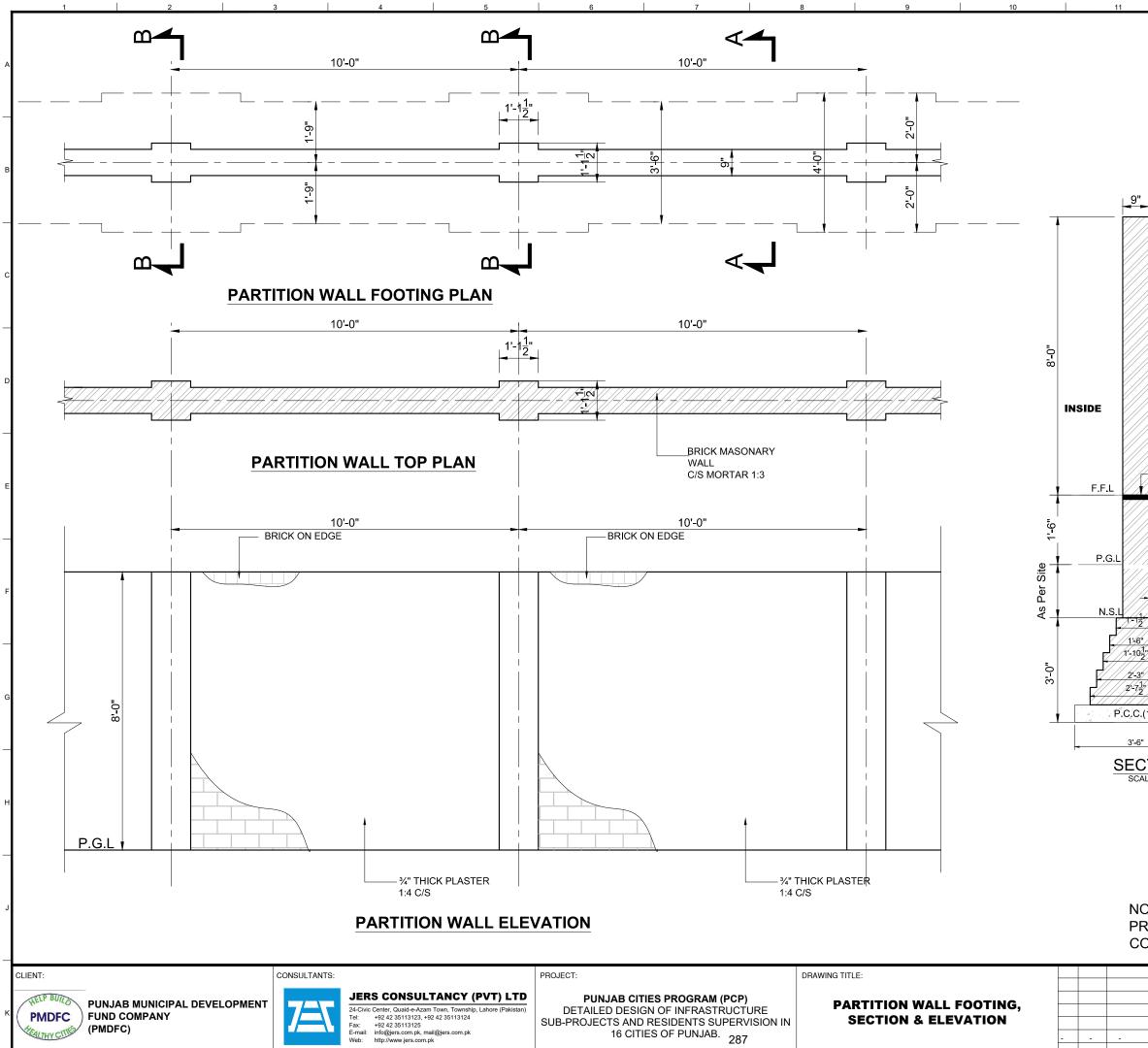






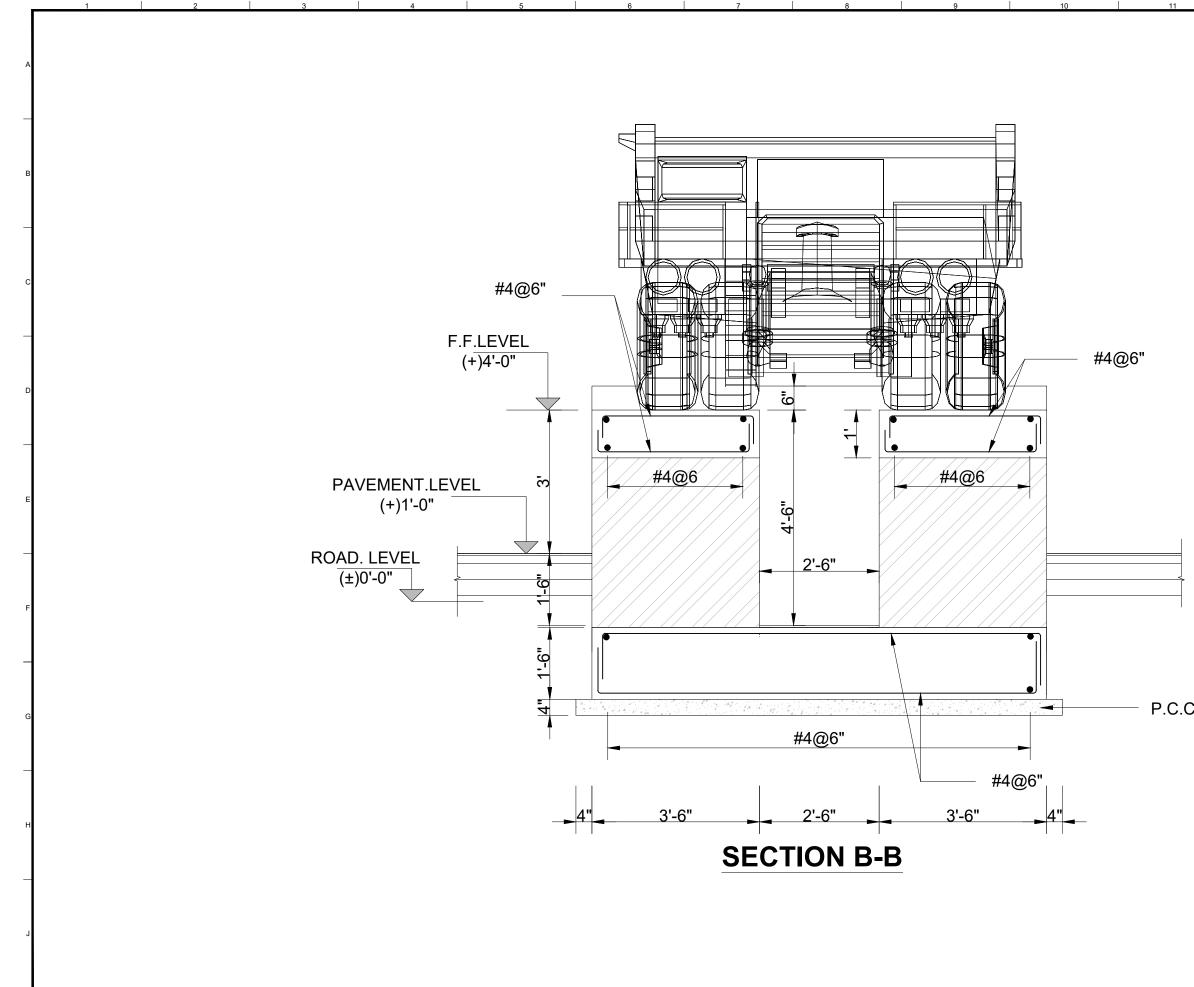
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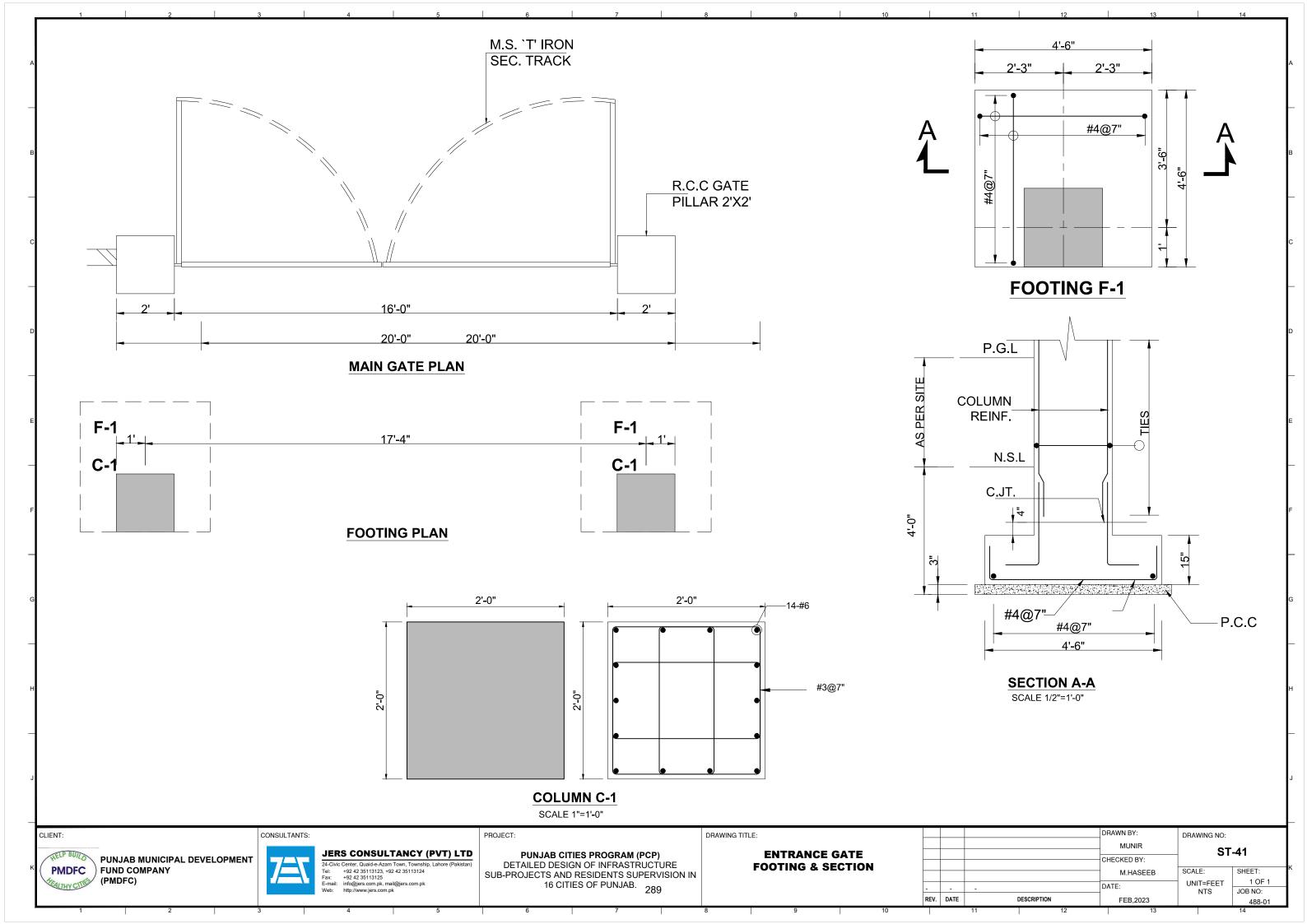
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2-3 ¹ 2-7 ¹ / ₂ 2.7.1 ¹ / ₂ C.C.(1:4:8) to	3'-0"		2-3"/ 2-7 <u>1</u> " 3-0" P.C.C 1:4	:8)		G
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				d-e-Azam Town, To	nship, Lahore (Pakistan)		OPEN SERVICE STATION		ON						CHECKED BY:								
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# PLUMBING DRAWING

### **LEGEND & NOTES:**

### WATER SUPPLY

#### LEGEND

NOTES

2.

3.

5.

6.

8.

SPECIFIED

COLD WATER PIPE (C.W)	

1. ALL WATER SUPPLY PIPE DIAMETERS MENTIONED

WATER SUPPLY LINES AT THE INLET TO

ACCESSIBLE LOCATIONS

ALL WATER SUPPLY PIPES ARE

UNLESS OTHERWISE MENTIONED

UNLESS OTHERWISE MENTIONED

CEILING OR CONCEALED IN WALLS.

TO BE PROVIDED WITH T STOP COCKS

7. ALL WCs, WASH BASINS AND SINKS

PROVIDE ISOLATION (GATE) VALVE ON ALL COLD

EACH TOILET. VALVES SHALL BE INSTALLED AT

POLYPROPYLENE RANDOM PIPE (PPR-PN 20)

4. ALL WATER SUPPLY PIPES FITTINGS SUCH AS

BENDS, TEES, SOCKETS, ARE PPR (PN 25)

ALL WATER SUPPLY PIPES ARE SUSPENDED ALONG

ALL WATER SUPPLY PIPES WITHIN THE BUILDING

SHALL RUN AT HIGH LEVEL UNLESS OTHERWISE

CONTRACTOR SHALL VERIFY THE PUMPING FOR ALL

PUMPS AS PER THE SITE CONDITION AND SHALL INFORM TO THE ENGINEER FOR ANY VARIATION

9. ALL PUMP SHALL BE PROVIDED WITH FLEXIBLE

CONNECTOR AT SUCTION AND DISCHARGE

ARE EXTERNAL DIAMETERS UNLESS OTHERWISE MENTIONED

**ISOLATION VAVLE** 

### 

### SEWERAGE SYSTEM

#### LEGEND

WASTE WATER PIPE	
SOIL PIPE	
SEWER PIPE	<i>→</i>
4"Ø FLOOR DAIN WITH P- TRAP	FD
GULLY TRAP	GT
MANHOLE (2'x2')	MH

#### NOTES

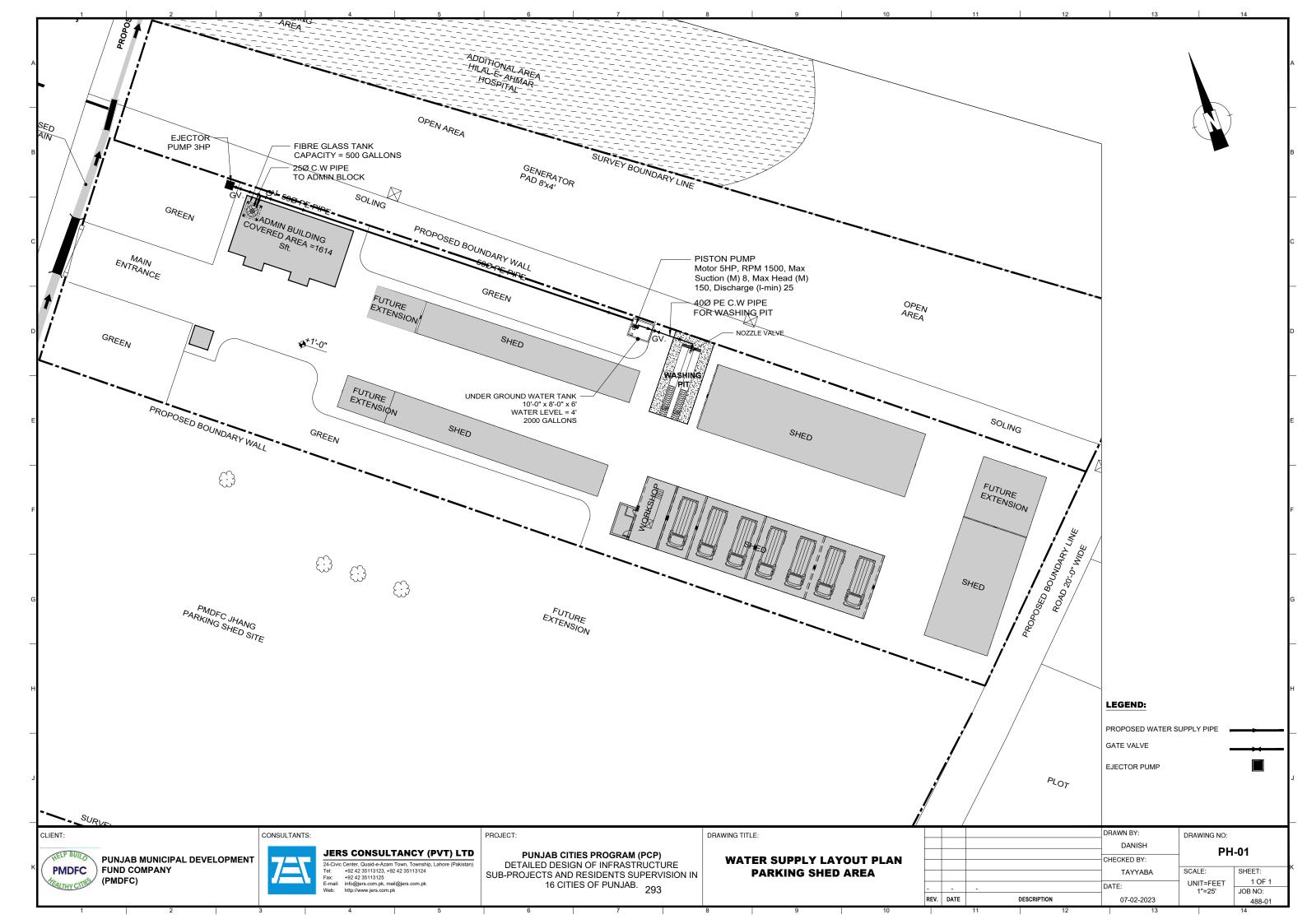
- ALL SOIL, WASTE, VENT & DRAINAGE PIPES DIAMETERS 1. MENTIONED ARE NOMINAL DIAMETERS UNLESS OTHERWISE MENTIONED
- 2. ALL SOIL, WASTE AND VENT PIPES ARE uPVC (UNPLASTICSED POLYVINYL CHLORIDE) CLASS B UNLESS OTHERWISE MENTIONED
- ALL MANHOLE COVERS SHALL BE OF 3. HEAVY DUTY CAST IRON
- INVERT LEVELS WILL BE ADJUSTED 4. AS PER SITE CONDITION
- ALL DIAMETERS MENTIONED ARE NOMINAL DIAMETERS 5.
- 6. ALL VERTICAL WC'S & URINALS WILL BE PROVIDED WITH MUSLIM SHOWER
- 7. ALL RAIN WATER DISPOSAL PIPES SHALL BE OF uPVC CLASS-B
- THIS DRAWING SHOULD BE READ IN 8. CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS
- 9. ALL SEWEAGE PIPING FROM FIXTURES TO MANHOLES AND GULLY TRAPS SHALL BE OF uPVC
- 10. ALL CLEAN OUTS & FLOOR DRAINS SHALL BE COORDINATE WITH INTERIOR
- 11. MINIMUM SLOPE OF SOIL AND WASTE PIPES ARE AS UNDER

PIPE DIA.	<u>SLOPE</u>
3"	1:50
4"	1:100
6"	1:150
9"	1:200

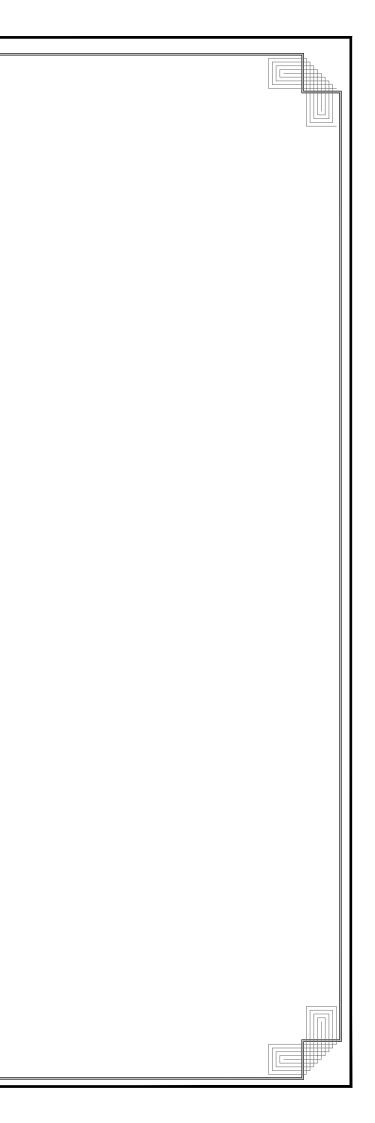
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PUNJAB MUNICIPAL DEVELOPMENT FUND COMPANY (PMDFC)		MENT	JERS CONSULTANCY           24-Civic Center, Quald-e-Azam Town, Towns           Tel:         +92 42 35113124           Fax:         +92 42 35113125           Famall:         info@res.com.pk		<u> </u>	DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN			LEGEND & NOTES		-		<u> </u>		
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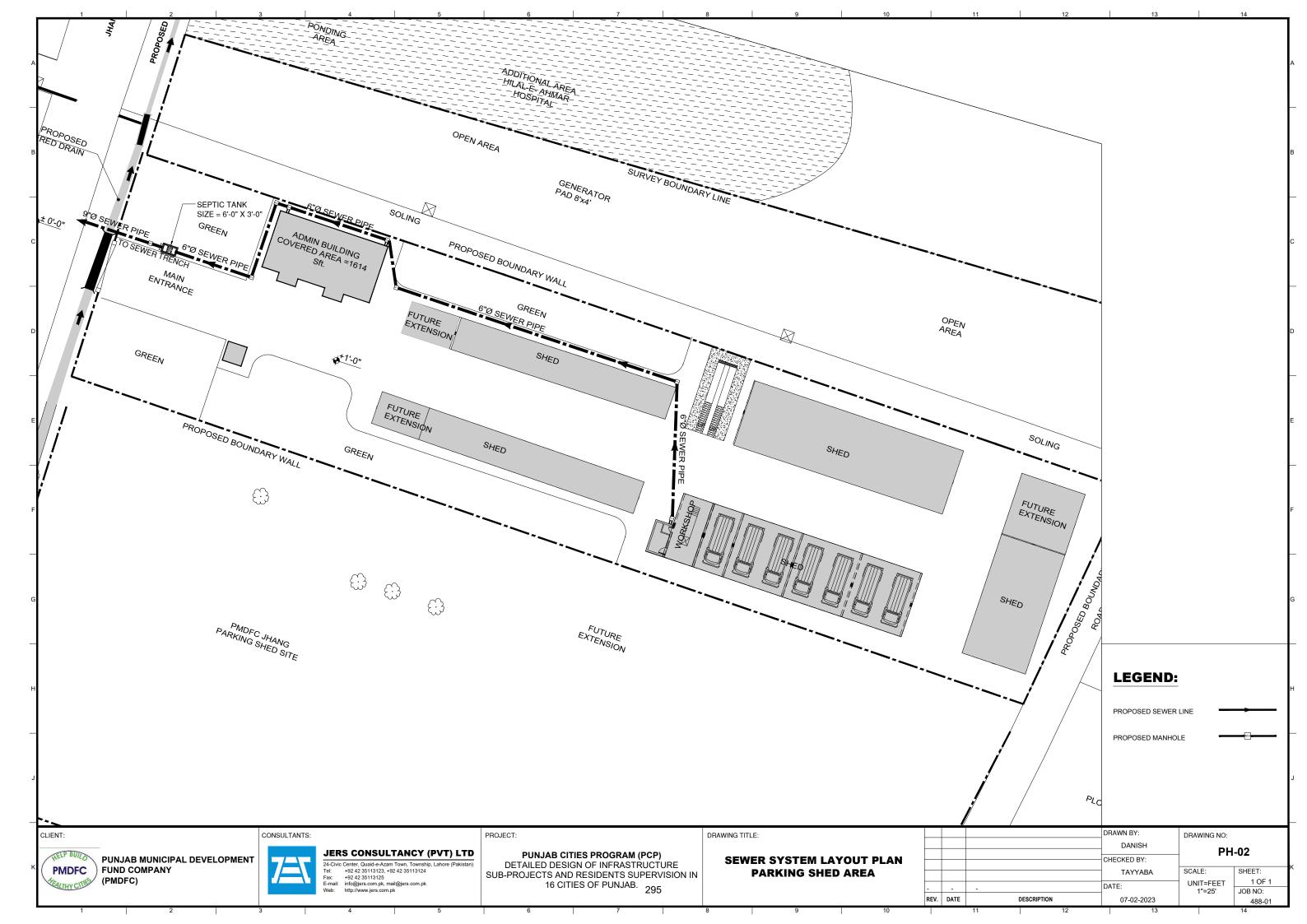
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# WATER SUPPLY DRAWING

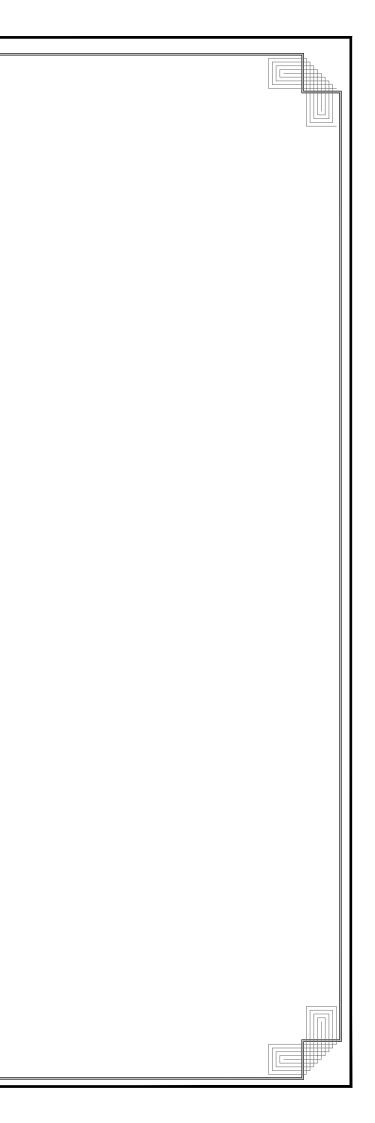


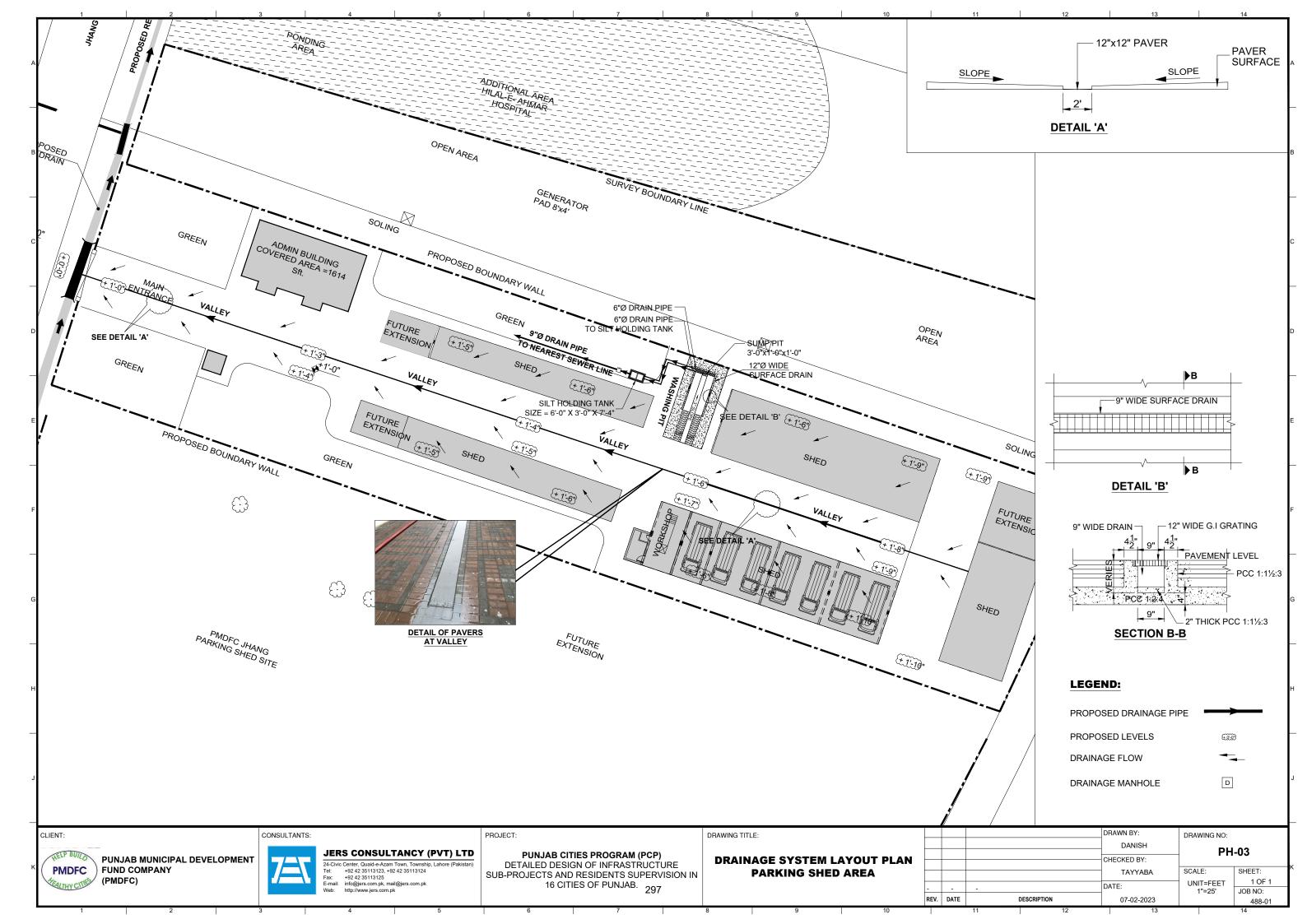
### **SEWERAGE DRAWING**

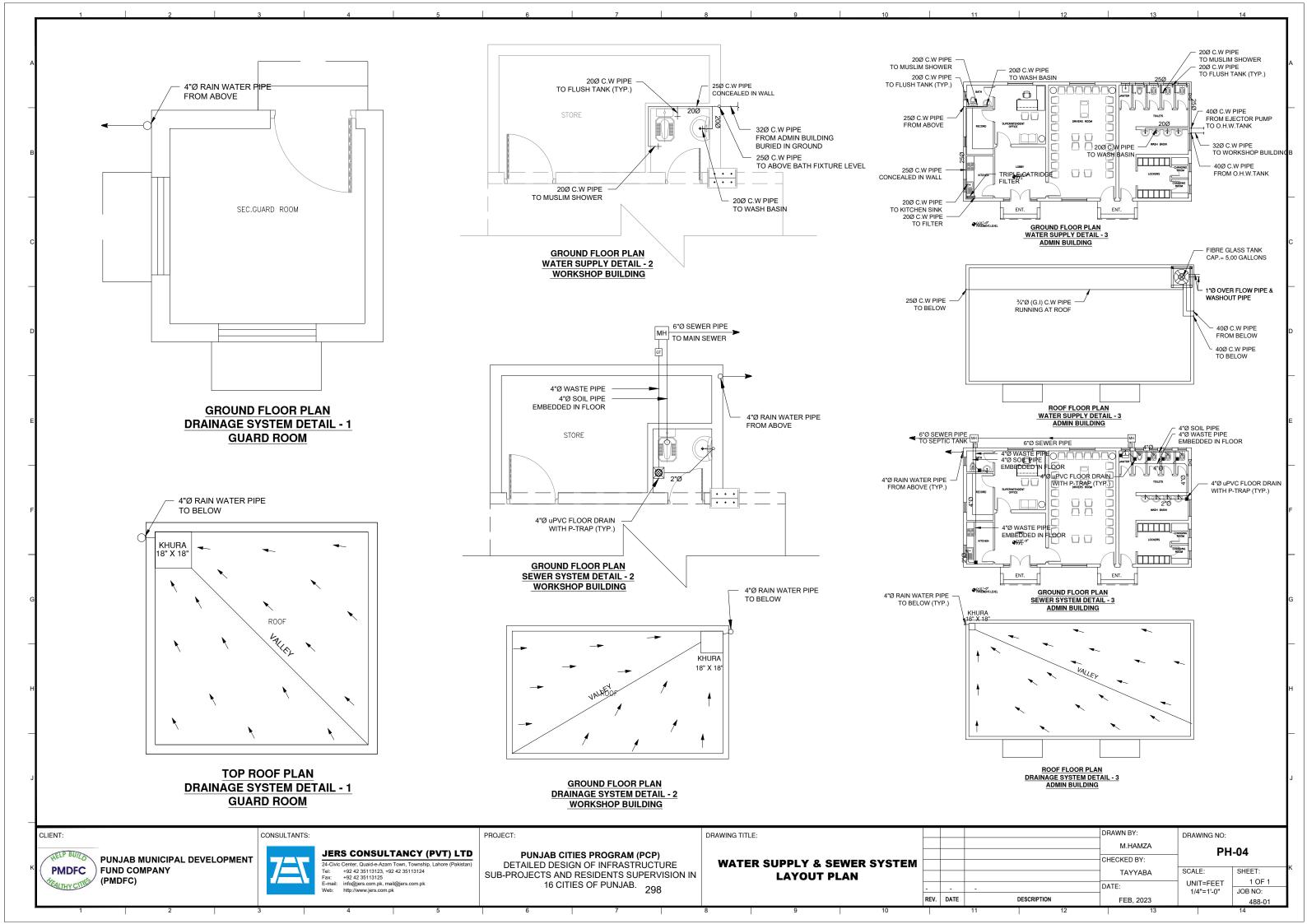


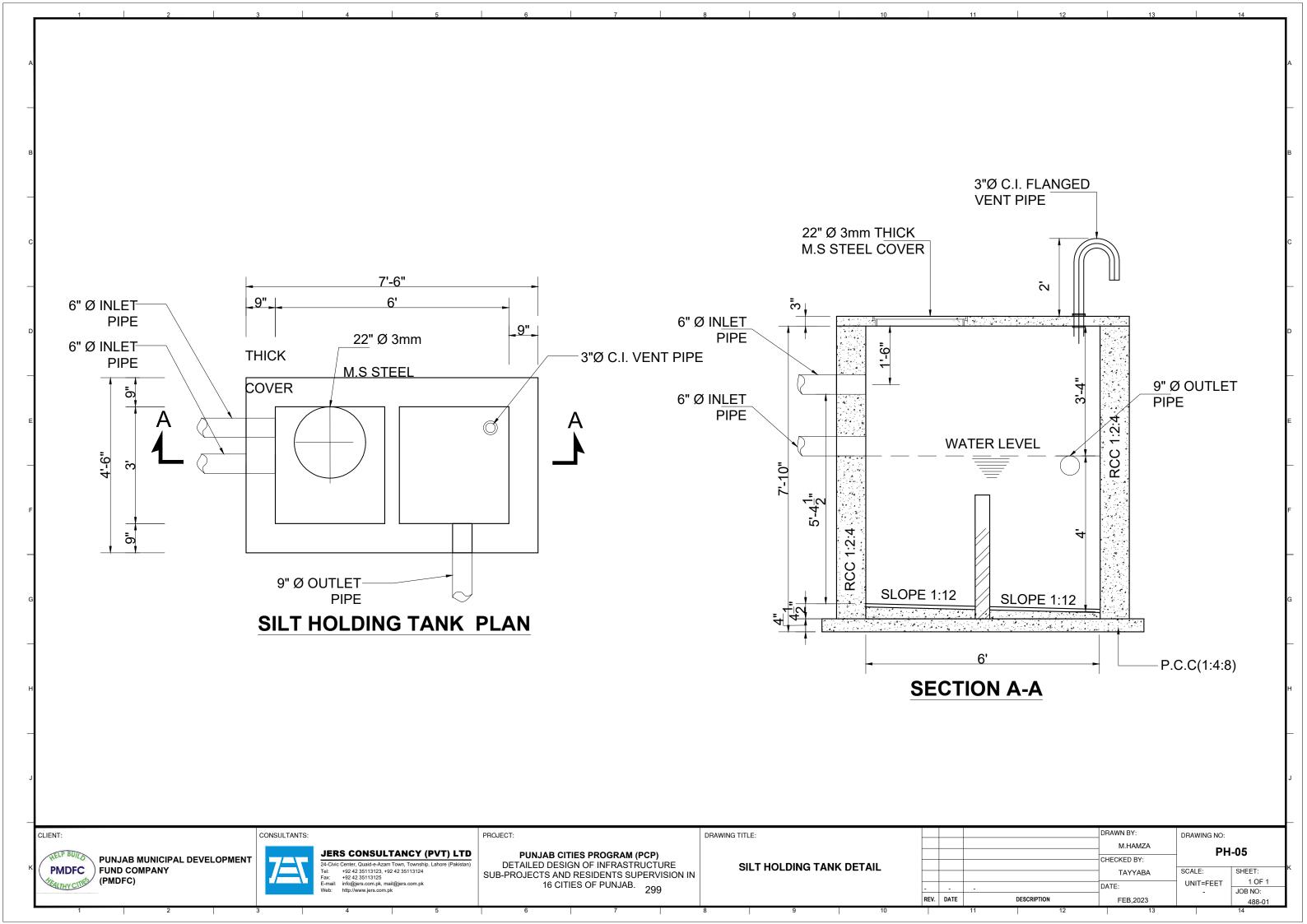


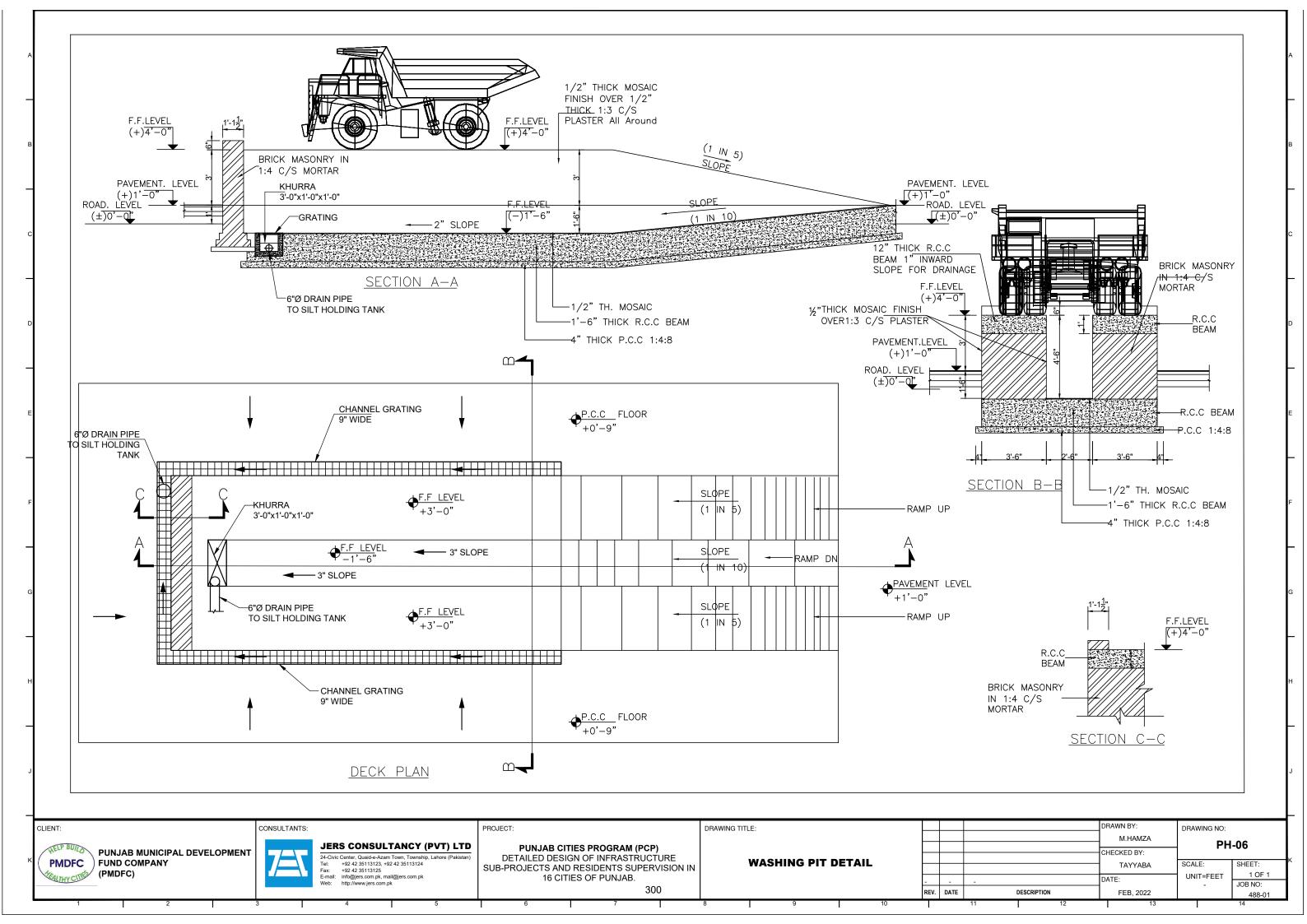
## SURFACE DRAINAGE

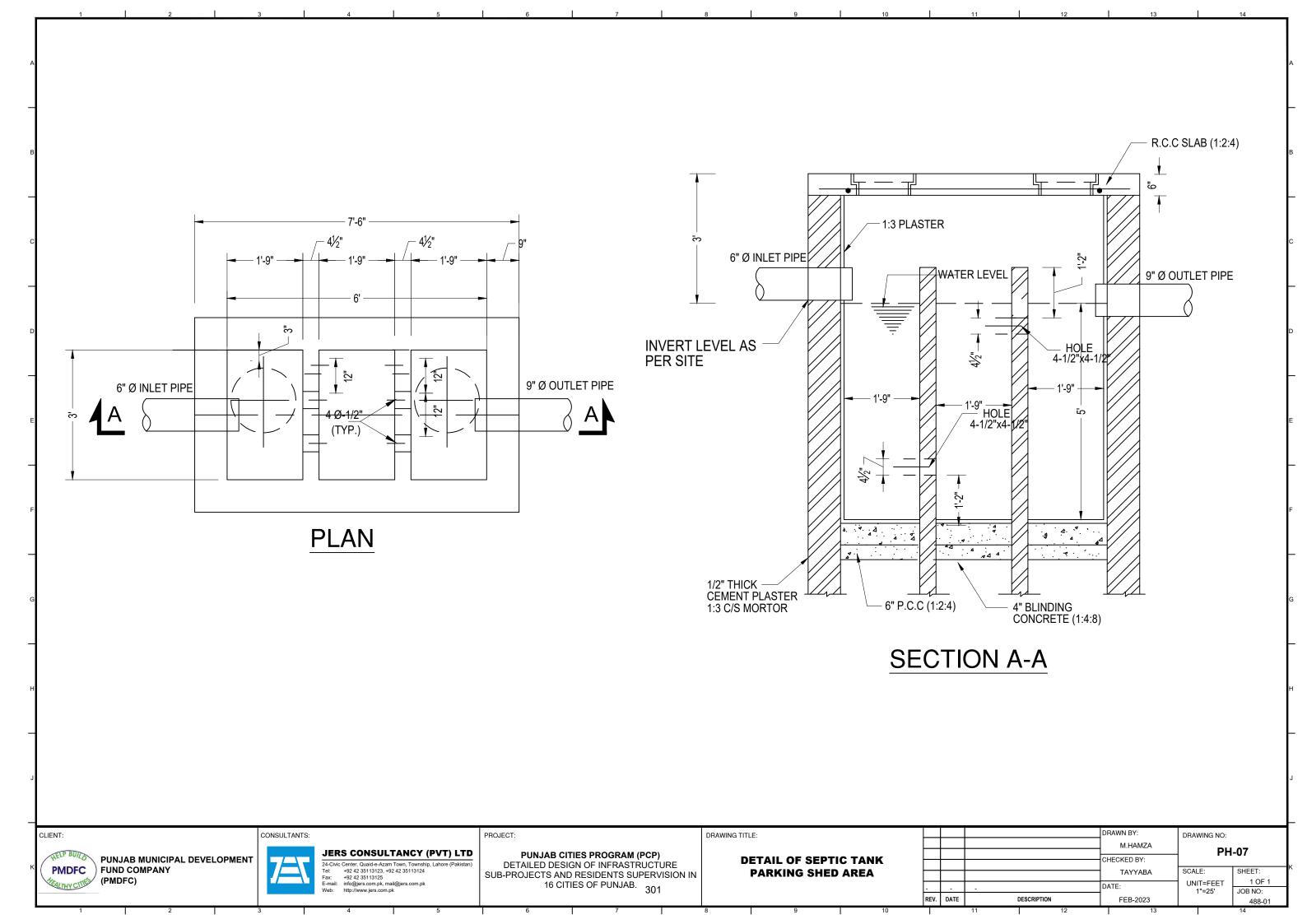












# **ELECTRICAL DRAWING**

-								
	LIGHT FITTINGS & FIXTURES							
S.NO	SYMBOLS	DESCRIPTION	MOUNTING HEIGHT					
1		WASHROOM MIRROR LIGHT 9 WATTS LED	STARSKE					
2	<b>—</b>	SURFACE MOUNTED TUBE LIGHT double rod (80 watts) with two chokes and 2 starters	AKUKAGE					
3	Θ	DOWN round tube LED LAMP	SKURAGE					
4	F.L	FLOOD LIGHT TEMPO LED WITH PHILIPS BYP151 LEDGOW 220240V 50W	ASPECT					
5	ė	100 watts led BRP381Led145/nw 105w 220-220 105w 220-240 DM PSR Light on 10m high M.S Pole with Foundation	GRÔÙND					
6	5	EXHAUST FAN	7'-0 ABOVE					
7	X	DISTRIBUTION BOARD	4'-0" FROM FFC					
8		SURFACE MOUNTED TUBE LIGHT WITH single 1x40 WATTS LED ROD single rod (40 watts) with	SKOKAGE					

_				
		2 WIRING ACCESSORIES		
S.NO	SYMBOLS	DESCRIPTION	MAKE	MOUNTING HEIGHT
1	•	GANG TYPE SWITCH 10AMPS, INDICATES NUMBER OF SWITCHES ON GANG PLATE		AT WALL +3'-6" FROM F.F.L
2	ASAC:1	16 AMP SWITCH SOCKET FOR SPLIT AC ON GANG PLATE		7'-8" FROM F.F.L NEAR AC
3	A	3 PIN COMBINED SWITCH SOCKET 15 AMPS ON M.S JUNCTION BOX		AT WALL +0'-9" FROM F.F.L
4	₼	3 PIN COMBINED SWITCH SOCKET UNIVERSAL 13 AMP SOCKET ON MLS JUNCTION BOX		AT WALL +0'-9" FROM F.F.L
5	4	CELING FAN POINT WITH 5/8"# M.S HOOK		ROOF SUSPENDED
	<u>4</u> 24	2x3 PIN COMBINED SWITCH SOCKET UNIVERSAL 13AMP SOCKET		AT WALL +0'-9" FROM F.F.L

	CAPACITY OF CONDUITS										
S.NO	CAP	ACITY OF COND	UITS	MAXIMUM NUMBER OF CABLES IN PVC CONDUITS SIZES							
1	NOMINAL CONDUCTOR SIZE-mmSq	NP & PLA	OVER ALL DAMETER	3/4" DIA (20mm DIA)	1" DIA (25mm DIA)	1-1/4" DIA (32mm DIA)					
2	1.5	1/1.38	3.1	10	18	30					
3	2.5	1/1.78	3.5	8	14	23					
4	2.5	7/0.67	3.8	7	12	20					
5	4	7/0.85	4.3	5	9	15					
6	10	7/1.04	4.9	4	7	12					
7	16	7/1.35	6.2	2	4	7					
8	16	7/1.78	7.3	-	3	5					
9	25	7/2.14	9.0	-	2	3					
10	35	19/1.53	10.3	-	-	2					

CONCRETE COVER 18"218"

CONVER EARTH TEST LINK 6"112"11/2" WITH HOLES, BRASS MUTS, FIDED ON WA OF WAN HOLE

Z[®] DIA GL PIPE

DIA GJ PHPE

COPPER SPIR

1/2"DIA HOLE

SHE DETAIL OF

TX10mm ag STRWEDED COPPER * THEX CONDUCTOR PURITY: 00% IN GJ PPE FOR EXITING LEVD BIRRY UP TO ATS/NFB _____

50mm (31), GJ (92

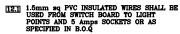
2"DIA 6J 500

16

#### GENERAL NOTES:-

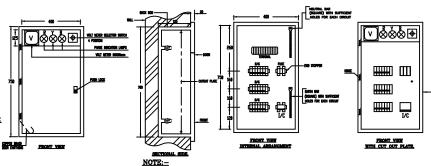
- LEGEND.
- REFER TO LEGEND FOR THOSE SYMBOLS ONLY MENTIONED ON ALL LAYOUT PLANS. OTHER SYMBOLS SHOWN IN LEGEND BUT NOT ACTUALLY SHOWN ON LAYOUT DRAWINGS MAY 1
- B ELECTRICAL WORKS.
- THE FOLLOWING NOTES SHALL IN GENERAL APPLY TO ALL ELECTRICAL DRAWINGS. THE INSTRUCTIONS IN THESE NOTES SHALL BE FOLLOWED UNLESS ALL ELECTRICAL WORKS PERTAINING TO WIRING OF ELECTRICAL SYSTEMS SHALL STRICTLY CONFORM TO LEE LATEST EDITION OF RULES & REGULATIONS.
- **ELECTRICAL DRAWINGS** ALL ELECTRICAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH BOQ, TECHNICAL SPECIFICATIONS AND IN CO-ORDINATION WITH ARCHITECTURAL, STRUCTURAL, PLUMBING AND HVAC DRAWINGS.
- DIMENSIONS ON ELECTRICAL 3 LAYOUT PLANS
- LAYOUT PLANS ALL DIMENSIONS IF SHOWN ON THE ELECTRICAL LAYOUT PLANS ARE APPROXIMATE. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE DO ALL INCESSARY CALCULATIONS TO ARRIVE AT THE ACTUAL DMENSIONS/MEASUREMENTS IN CO-ORDINATION WITH ALL OTHER RELEVANT DRAWINGS OF OTHER SERVICES.
- SHOP DRAWINGS 4 THE ELECTRICAL CONTRACTOR SHALL PREPARE ELECTRICAL SHOP DRAWINGS WITH ALL NECESSARY RELEVANT DETAILS. THE SHOP DRAWINGS SHALL BE SUBMITTED TO ENGINEER TENDER DRAWING BEFORE THE COMMENCEMENT OF ANY WORKS AT SITE.
- 5 <u>CO-ORDINATION</u> THE ELECTRICAL CONTRACTOR SHALL DO ALL NECASSARY CO-ORDINATION OF ELECTRICAL WORKS AND ALLED SYSTEMS WITH ALL OTHER SERVICES AT
- BALANCING OF ELECTRICAL LOADS
- ELECTRICAL LOADS ON ALL 3 PHASES SHALL BE BALANCED ON THE ELECTRICAL WORKS AT THE TIME OF TESTING AND COMMISSIONING OF THE ELECTRICAL INSTALLATIONS. **ELECTRICAL WIRING.**
- ALL WIRING SHALL BE DONE IN PVC CONDUIT TO BE CONCEALED IN WALLS, SLABS, COLUMNS AND FLOORS OR AS SHOWN ON DRAWINGS.
- [8] THE WIRING SHOULD BE STARTED ONLY AFTER THE CONDUT SYSTEM HAS BEEN COMPLETED AND ALL OUTLET BOXES ARE FIXED AT THEIR RESPECTIVE POSITIONS. PVC CONDUITS.
- ALL PVC CONJUNCTION DIA (DEPENDING UPON NUMBER OF %/4" OR 1" DIA (DEPENDING UPON NUMBER OF WIRES) FROM SWITCH BOARD TO LIGHT POINTS & 1" DIA FROM DB+ TO SWITCH BOARDS AND POWER SOCKETS OR AS SHOWN ON DRAWINGS.
- LUBRICATION. NO LUBRICATION EXCEPT AS RECOMMENDED BY MANUFACTURER SHALL BE USED FOR PULLING OF WIRES IN PVC CONDUTS. NO OIL OF ANY KIND SHALL BE USED.
- COLOUR CODING COLOUR CODING FOR WIRING SHALL BE AS FOLLOWS: RED.YELLOW AND BLUE FOR PHASES, BLACK FOR NEUTRAL AND GREEN / YELLOW FOR CPC (EARTH).
- SIZE OF WIRES FOLLOWING SIZES OF PVC INSULATED WIRES WITH COPPER CONDUCTORS SHALL BE USED FOR INTERNAL WIRING, UNLESS
- STATED OTHERWIS

DRAWING TITLE:



- SPECIFIED IN BO.C. SPECIFIED IN BO.C. IZ:22 2.5mm sq PVC INSULATED WIRES SHALL BE USED FROM DB TO SWITCH BOARDS FOR LIGHTING CIRCUTS. IZ:31 mm sq OR 6mm sq PVC INSULATED WIRES IZ:32 OR AS SHOWN ON DRAWING/BOQ SHALL BE USED FOR WIRING FROM DB TO POWER SOCKETS. IZ:32 BACK BOXES ALL BACK BOXES FOR SWITCHES & SOCKETS SHALL MADE OF POLYECARBUNATE SHEET 168WG OR AS SPECIFICD IN BOQ WITH EARTH TERMINAL SIZE OF BACK BOX SHALL CORRESPOND TO THE SIZE OF SWITCHES/SOCKETS. FIN EARTHING OF POINTS.
- **EARTHING OF POINTS.** ALL ELECTRICAL AND POWER SOCKETS SHALL BE PROPERLY EARTHED WITH 2.5mm sq PVC INSULATED WIRES OF COLOUR GREEN-YELLOW.
- A CAPACITY OF CONDUITS. THE NUMBER OF WIRES TO BE PULLED IN ANY CONDUIT FOR WIRING PURPOSES SHALL CONFORM TO LE.E RULES & REGULATIONS
- **15** CONDUIT FOR LIGHT WIRING. WIRING SHALL BE DONE IN 3/4" & 1" DIA PVC CONDUIT FOR LIGHT FOINTS AND CIRCUIT WIRING ON NORMAL/ GENERATOR SUPPLY OR AS SPECIFIED IN BOQ OR AS SHOWN ON DRAWINGS. **DISTRIBUTION BOARDS "LIGHT" & "POWER"**
- THELETHICK CONDUCT SHALL BE 1(25mm) DIA FOR WIRING OF TELEPHONE POINTS, PVC CONDUCT SHALL BE BURIED IN FLOOR /SLAB & WALLS FROM TDBs TO TELEPHONE POINTS, OR AS SHOWN ON DRAWINGS./B.O.Q
   FIRE ALARM WIRING.
- PVC CONDUIT SHALL BE 1^(25mm) DIA FOR WIRING OF FIRE ALARM POINTS, PVC CONDUIT SHALL BE BURIED IN FLOOR /SLAB & WALLS FROM FACF TO FIRE ALARM POINTS, OR AS SHOWN ON DRAWINGS, /B.O.Q 1
- FIRE ALARM JUNCTION BOX (FAJB). G.I JUNCTION BOX 225x150x100mm 16 SWG WITH COVER CONCEALED IN WALL AT 225mmBELOW SLAB TO FACILITATE PULLING OF FIRE ALARM CABLES.
- CLOSE CIRCUIT TV (CCTV) WIRING. PVC CONDUIT SHALL BE 1"(25mm) DIA FOR WIRING OF CCTV SYSTEM.PVC CONDUIT SHALL BE BURIED IN SLAB, WALLS & COLUMNS OR AS SHOWN ON DRAWING/BOQ
- CLOSE CIRCUIT TV JUNCTION BOX (CCJB). G.I JUNCTION BOX 225x150x100mm 16 SWG WITH COVER CONCEALED IN WALL AT 225BELOW SLAB TO FACILITATE PULLING OF CLOSE CIRCUIT TV CABLES. 2
  - OTHER SYSTEMS.
- F 1 25mm DIA PVC CONDUIT SHALL BE USED FOR WIRING OF ALL OTHER SYSTEMS UNLESS OTHERWISE MENTIONED ON PLANS OR AS SPECIFIED IN B.O.Q
- **ELECTRICAL CONSULATANT.** ELECTRICAL CONTRACTOR TO CONSULT ELECTRICAL CONSULTANT/ENGINEER FOR ANY FURTHER CLARIFICATIONS. NO ASSUMPTIONS SHOULD BE MADE.
- **H** ELECTRICAL TESTS. CONTRACTOR SHALL CARRY OUT ALL ELECTRICAL TESTS AT HIS EXPENSE THROUGH LICENSED ELECTRICAL SUPERVISOR IN THE PRESENCE OF ENGINEER INCHARGE OR HIS REPRESENTATIVE.





DIMENSIONS SHOWN ARE INDICATIVE ONLY AND NOT NECESSARILY BE FOLLOWED. HOWEVER ACTUAL DIMENSIONS OF DB SHALL BE GIVEN BY DB MANUFACTURER/SUPPLIER

RELP BURD PUNJAB MUNICIPAL DEVELOPMENT JERS CONSULTANCY (PVT) LTD 24-Civic Center, Quaid-e-Azam Town, Township, Lahore (Pakistan) +92 42 35113123, +92 42 35113124 +92 42 35113125 Tel info@jers.com.pk, mail http://www.jers.com.pk com.pk, mail@jers.com.pl Neb

CONSULTANTS:

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NOTES FOR EARTHING SYSTEM

PHP: SMUL BE BUILED WITH HINDLES, BROSS NUTS, SUNL BE COMPRED WITH BUTLEN 5- CONTRACTOR TO MESURE EVITHING RESISTANCE AT HIS DEPRISE IN THE PRESENCE OF STIE ENGINEER, BOIT THE SITE DEGREEP, MOI CONTRACTOR SHUL SIGN THE SITE DEGREEP, MOI CONTRACTOR SHUL SIGN THE SITE DEGREEP, MOI CONTRACTOR SHUL CLEMT FOR RECORD.

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DETAIL OF EARTHING SPIKE

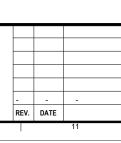
- EARTH BORE SHALL BE MADE AT 6'-0" Away from Foundation.

DISTANCE BETWEEN 2 EARTH BORES SHALL NOT BE LESS THEN 10 ft (3m)

3- COPPER CONDUCTOR AT TOP OF G.I PIPE SHALL BE BOLTED WITH THIMBLES,

PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB. 303

**LEGEND & NOTES** 

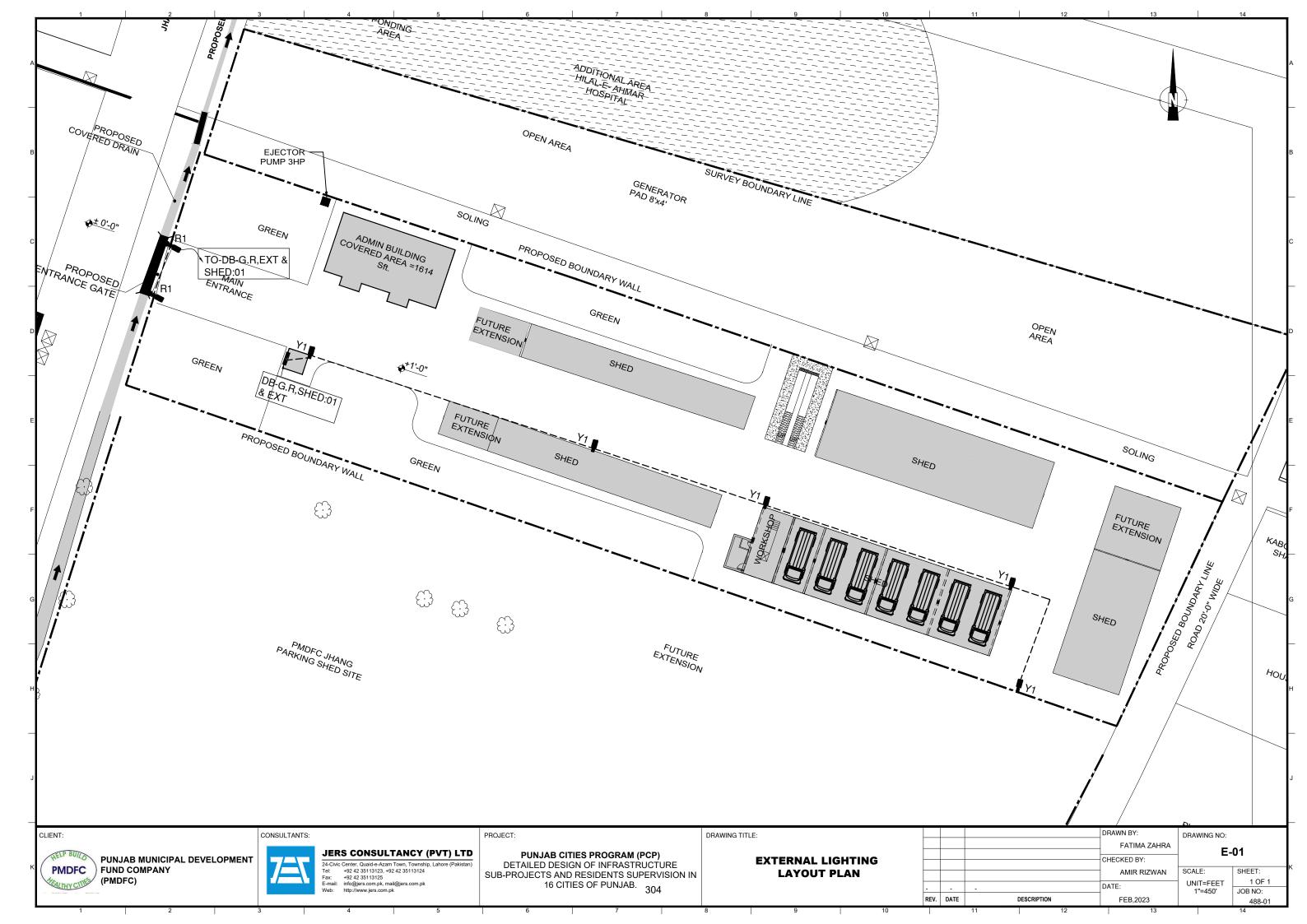


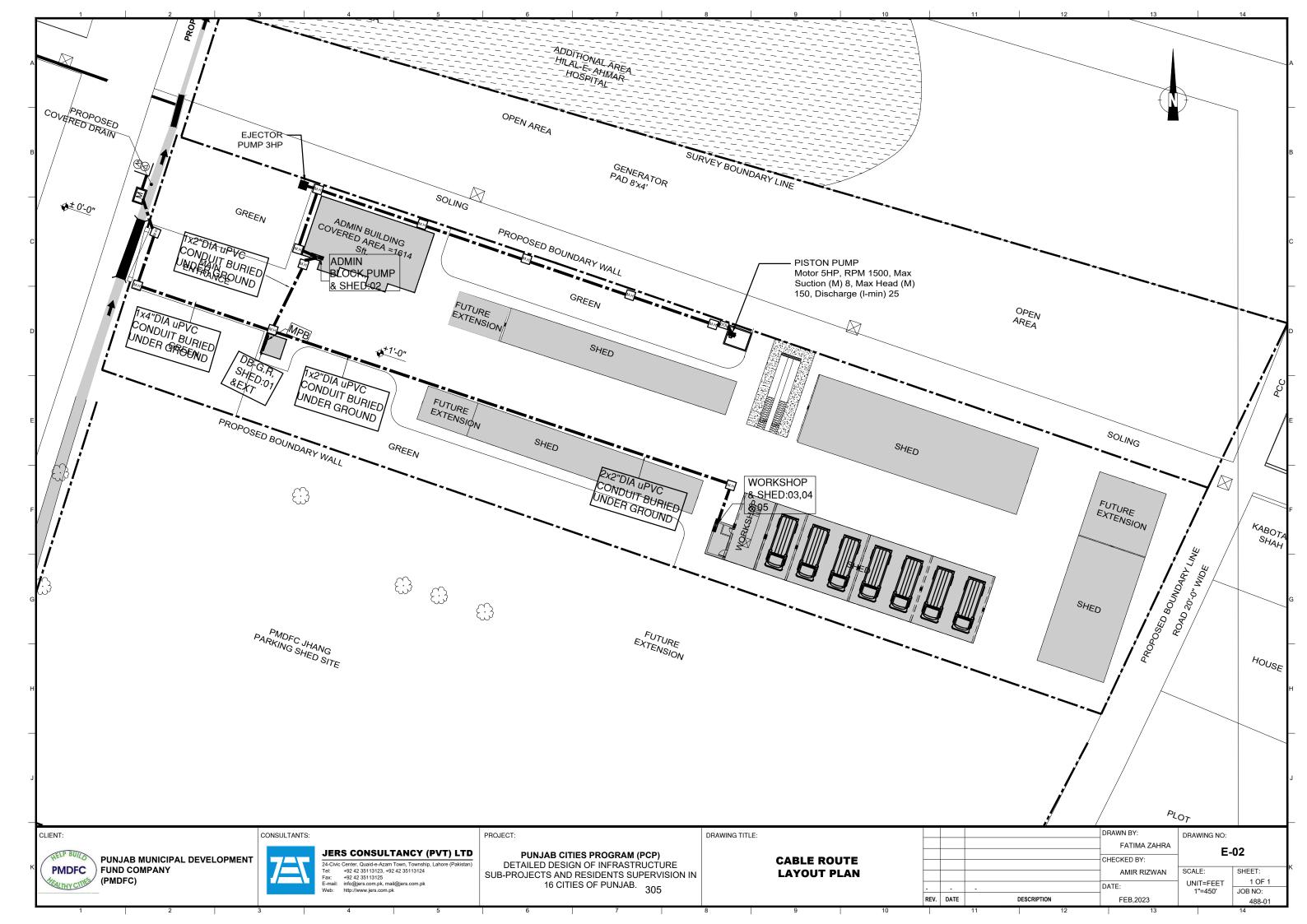
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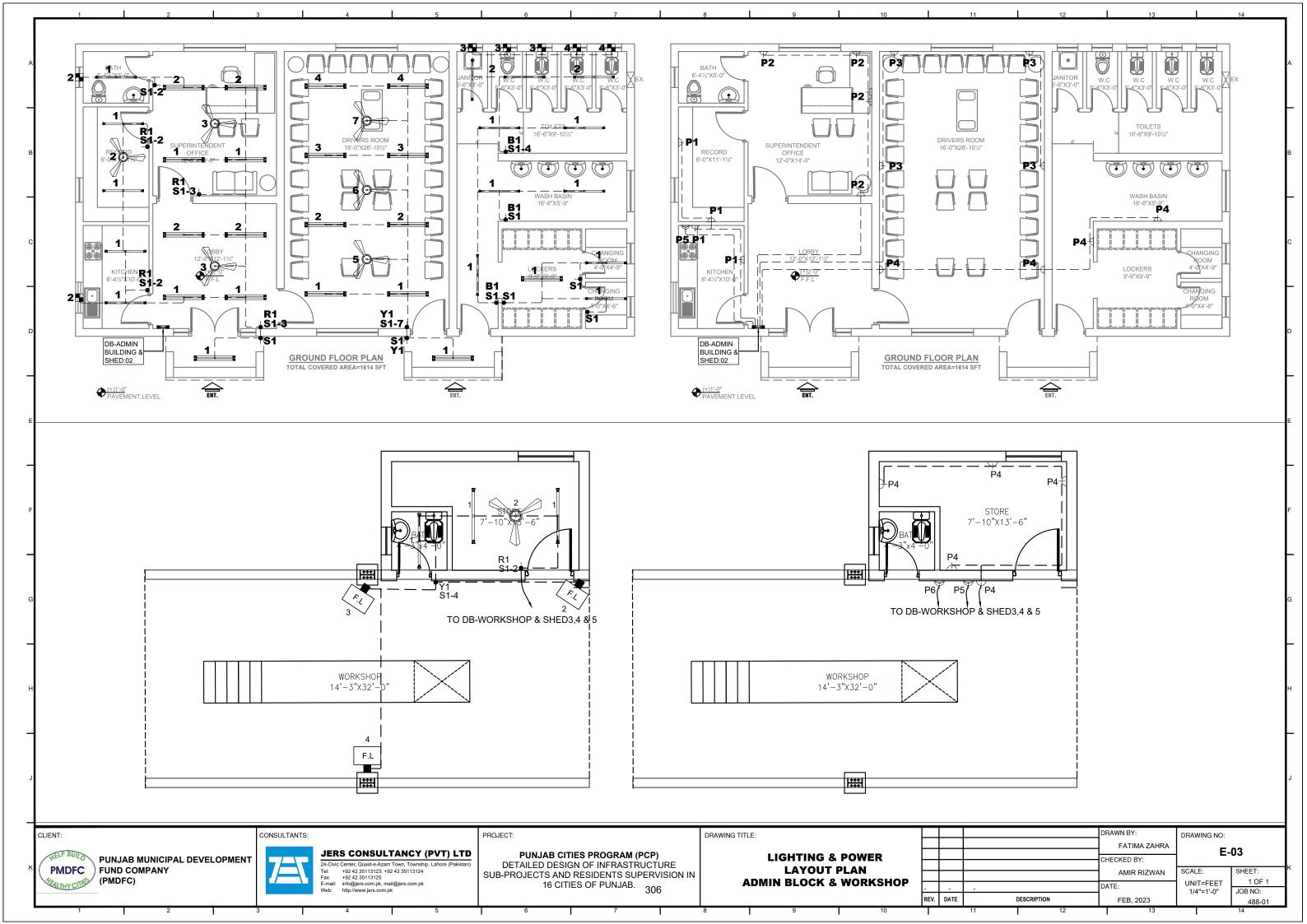
PMDFC ) FUND COMPANY

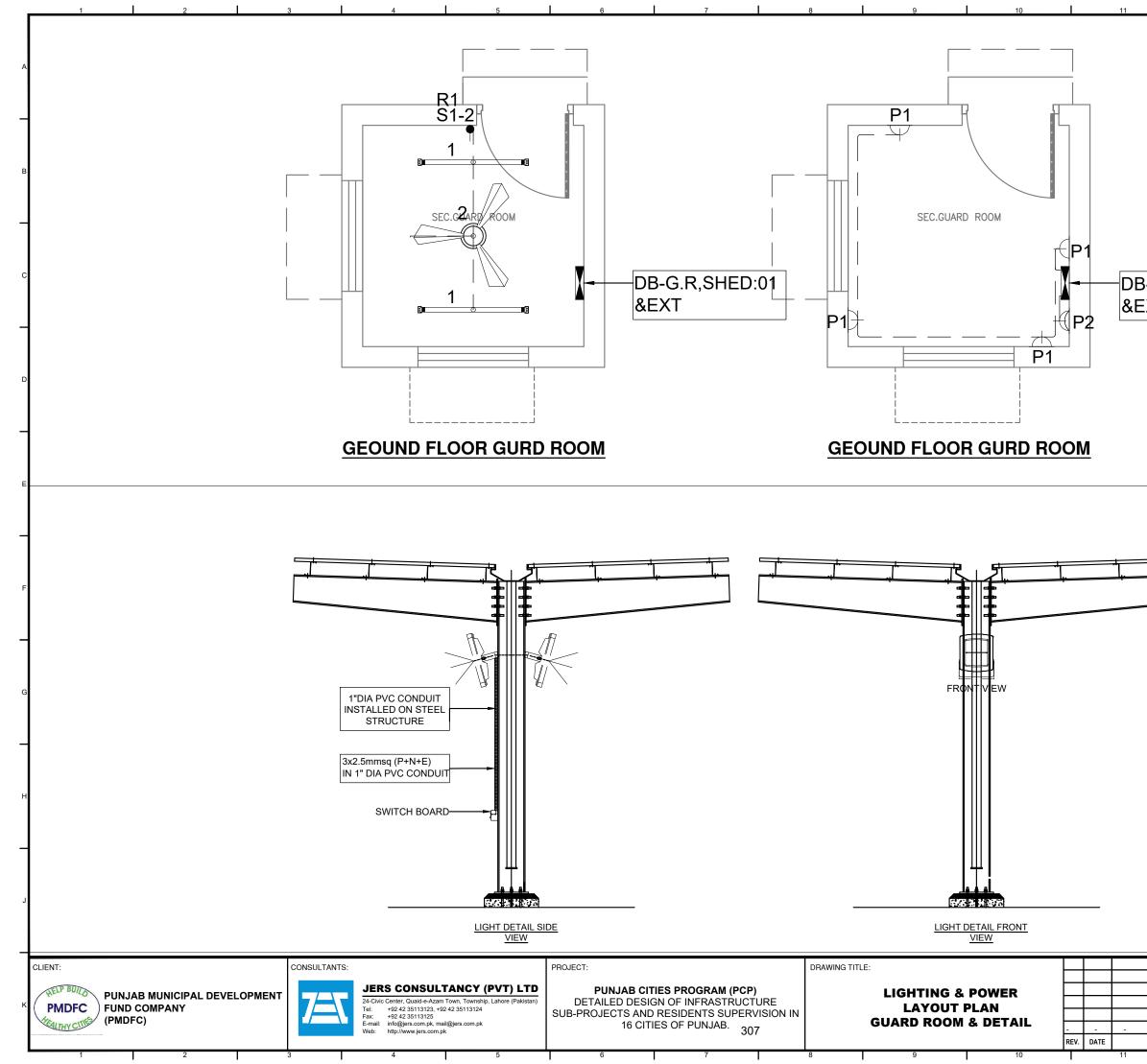
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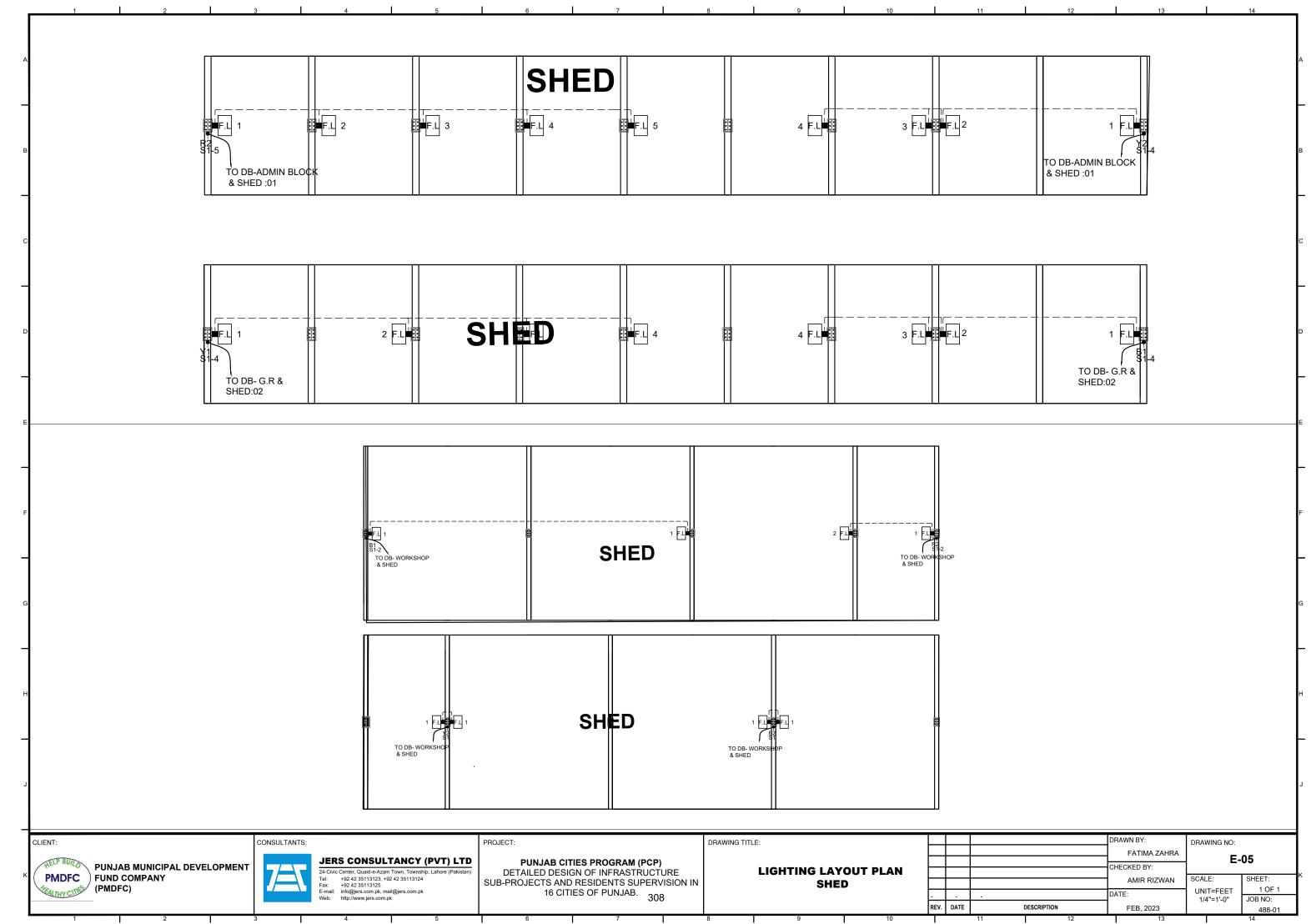




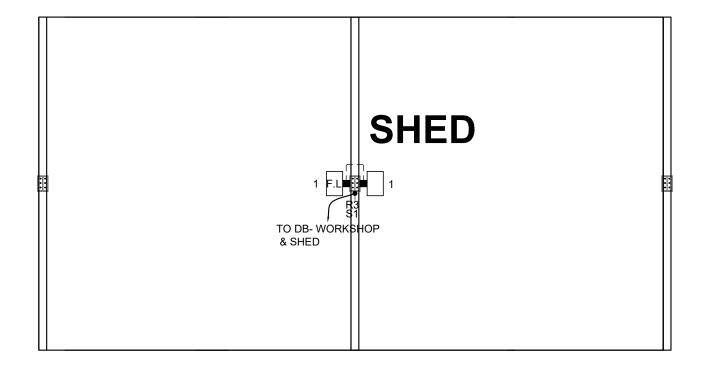




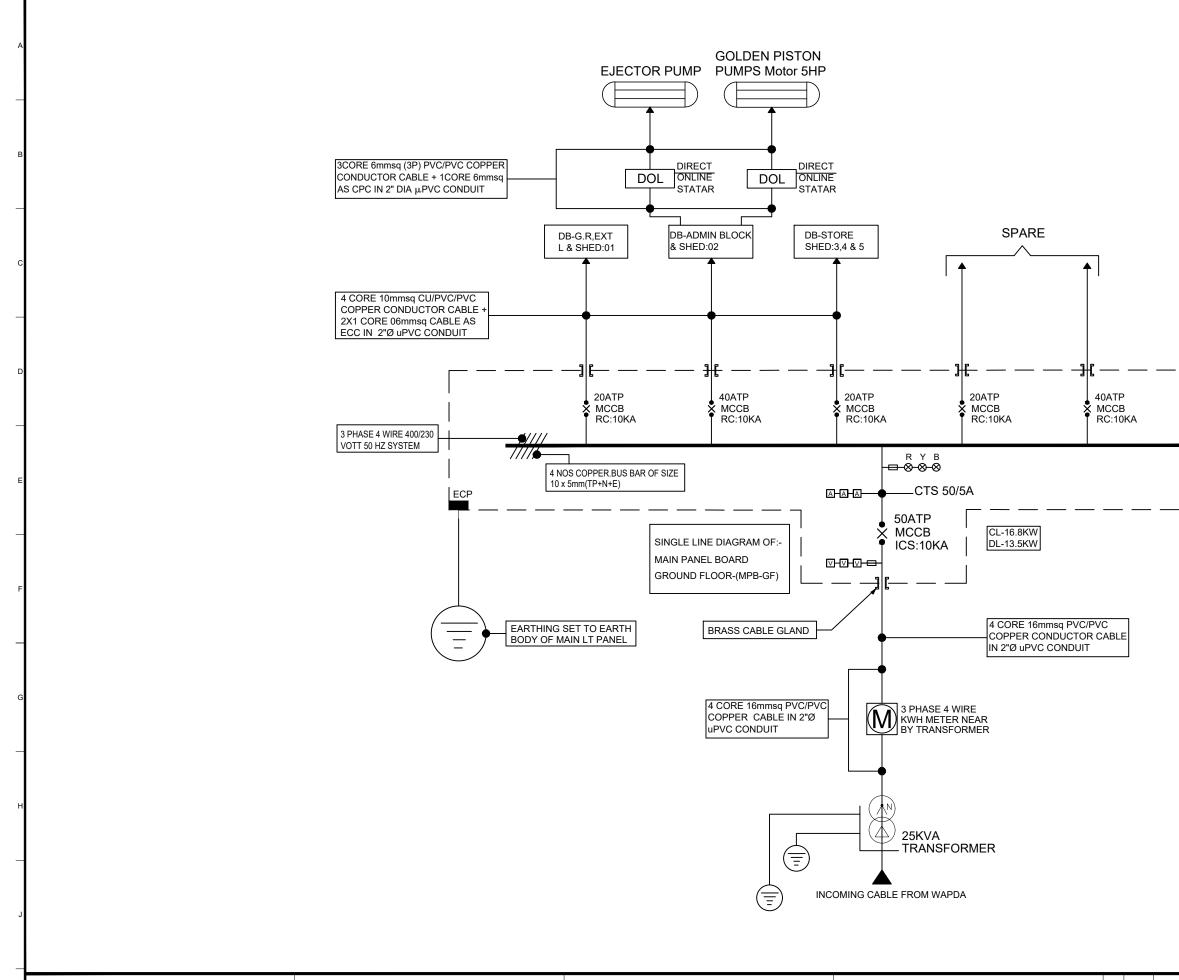
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B MUNICIPAL DEVELOPMENT OMPANY ;)	7433	JERS CONSULTANCY (PVT) LTD           24-Civic Center, Quaid-e-Azam Town, Township, Lahore (Pakistan)           Tel:         +92 42 35113123, +92 42 35113124           Fax:         +92 42 35113125           E-mail:         info@jers.com.pk, mail@jers.com.pk           Web:         http://www.jers.com.pk	PUNJAB CITIES PROGRAM (PCP) DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB. 308	LIGHTING LAYOUT PLAN SHED		

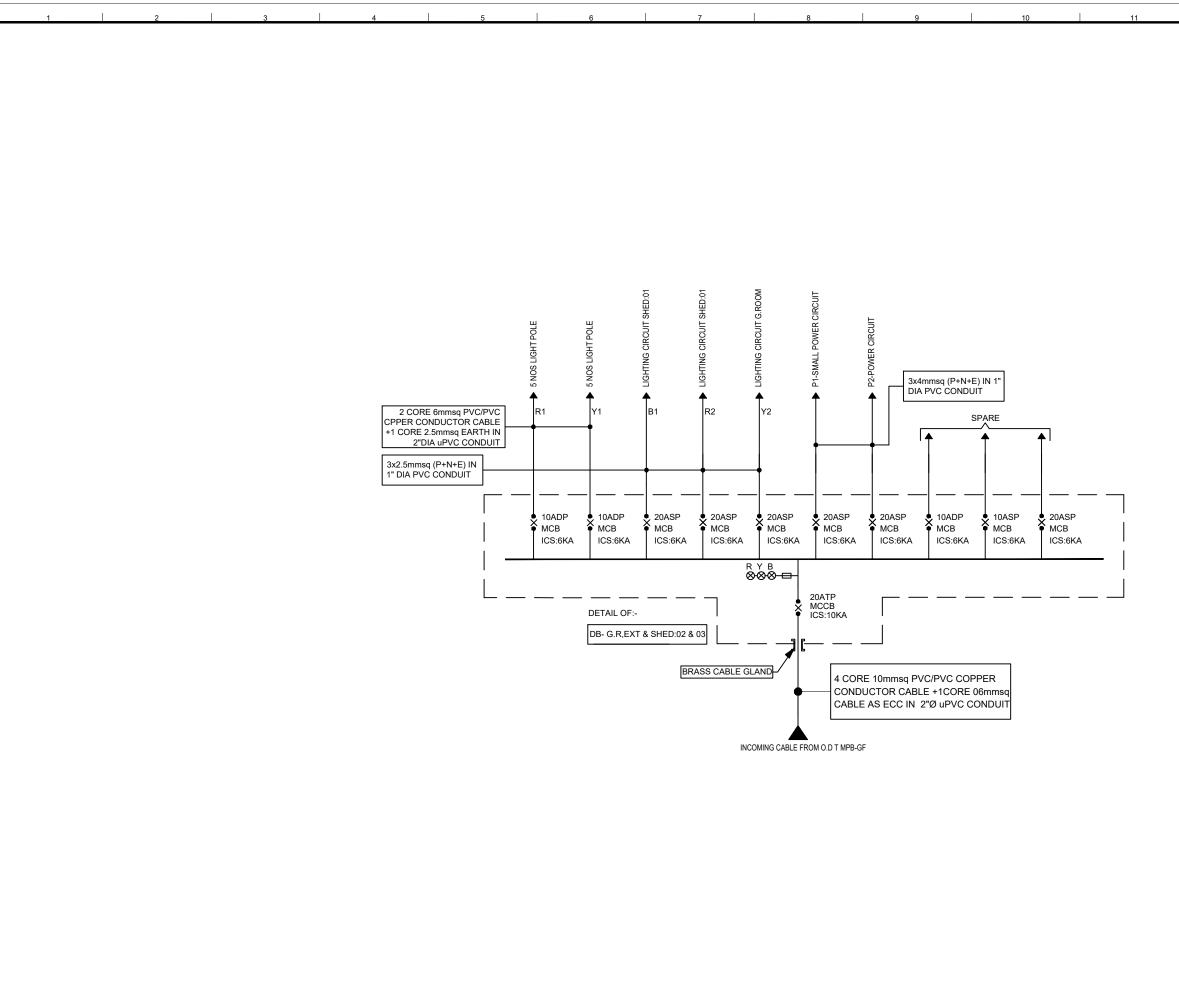


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к	( PMDFC ) FUND COMPANY	24-Civic Center, Quaid-e-Azam Town, Township, Lahore (Pakistan)	DETAILED DESIGN OF INFRASTRUCTURE	LIGHTING LAYOUT PLAN				AMIR RIZWAN	SCALE:	SHEET: K
	(PMDFC)	Fax: +92 42 35113125 E-mail: info@iers.com.pk, mail@iers.com.pk	SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB. 200	SHED	$\vdash$			DATE	UNIT=FEET	1 OF 1
	ALLHI CIT	Web: http://www.jers.com.pk	16 CITIES OF PUNJAB. 309					JATE:	1/4"=1'-0"	JOB NO:
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CLIENT: CONSULTANTS: PROJECT: DRAWING TITLE: RELP BUILD PUNJAB MUNICIPAL DEVELOPMENT JERS CONSULTANCY (PVT) LTD PUNJAB CITIES PROGRAM (PCP) SINGLE LINE DIAGRAM OF:-DETAILED DESIGN OF INFRASTRUCTURE 24-Civic Center, Quaid-e-Azam Town, Township, Lahore (Pakistan) PMDFC ) FUND COMPANY Tel: Fax: E-mail Web: +92 42 35113123, +92 42 35113124 +92 42 35113125 info@jers.com.pk, mail@jers.com.pk SUB-PROJECTS AND RESIDENTS SUPERVISION IN MAIN PENAL BOARD (PMDFC) 16 CITIES OF PUNJAB. 310 -REV. DATE

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