



PAE CONSTRUCTION INDIA (OPC) PVT. LTD.  
(PAL ARCHITECT AND ENGINEER) CONVENT ROAD, NEAR SBI MAIN BRANCH DEHRADUN UK-248001  
palarchitectandengineer@gmail.com, paeconstructionindia@gmail.com  
7895872139, 9412143346



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Date: 14/11/2022  
Case No. 0081  
Tapovan Architectural Signatures RD Ground  
PAE CONSTRUCTION INDIA (OPC) K.  
Mob.: 7895872139, 9412143346

Beldi District Roorkee (Uttarakhand)

## DETAILS PROJECT REPORT



Proposed Pradhan Mantri Awas yojana Beldi Roorkee, Uttarakhand

## INDEX

|    |                                                      |       |
|----|------------------------------------------------------|-------|
| 1  | Abbreviations                                        | 3     |
| 2  | Definitions for the purpose of the mission           | 4     |
| 3  | Background                                           | 5     |
| 4  | Magnitude of Poverty:                                | 6     |
| 5  | Pradhan Mantri Awas Yojana (PMAY)- Housing for all   | 7-8   |
| 6  | Need for Pilot Projects:                             | 9-11  |
| 7  | Location, Geography and Climate                      | 12    |
| 8  | About BELDI                                          | 13    |
| 9  | Background of the Project                            | 14-16 |
| 10 | Project Concept:                                     | 16    |
| 11 | Project Site, Location Google image & Key plan       | 17-18 |
| 12 | Monolithic Concrete Construction Technology:         | 19-22 |
| 13 | Specification for EWS Houses Construction under PMAY | 23-26 |
| 14 | ABSTRACT of Proposed Physical Infrastructure         | 27-28 |
| 15 | Project cost Details                                 | 28    |
| 16 | Land paper                                           |       |
|    | Architectural drawing                                |       |
|    | Structural drawing                                   |       |
|    | Electrical Drawing                                   |       |
|    | 3D drawing                                           |       |
| 17 | Project estimate                                     |       |
| 18 | Project ABSTRACT                                     |       |



*[Handwritten signature]*

PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0081 Date 14/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob: 7895872139, 9412143346  
PMAY of Site Beldi District (Roorkee) Uttarakhand : 247664

### ABBREVIATIONS

|        |                                                                  |        |                                                   |
|--------|------------------------------------------------------------------|--------|---------------------------------------------------|
| AOE    | Administrative and Other Expenses                                | UG     | Low Income Group                                  |
| AHP    | Affordable Housing in Partnership                                | MD     | Mission Directorate                               |
| AIP    | Annual Implementation Plan                                       | MoA    | Memorandum of Agreement                           |
| BMTPC  | Building Materials & Technology Promotion Council                | MoHUPA | Ministry of Housing and Urban Poverty Alleviation |
| CDP    | City Development Plan                                            | MoU    | Memorandum of Understanding                       |
| CLS    | Credit linked subsidy                                            | NA     | Non Agricultural (NA)                             |
| CNA    | Central Nodal Agencies                                           | NBC    | National Building Code                            |
| CPHEEO | Central Public Health and Environmental Engineering Organisation | NHB    | National Housing Bank                             |
| CSMC   | Central Sanctioning and Monitoring Committee                     | NOC    | No Objection Certificate                          |
| DIPP   | Department of Industrial Policy and Promotion                    | NPV    | Net Present Value                                 |
| DPR    | Detailed Project Report                                          | PLI    | Primary Lending Institution                       |
| EMI    | Equated Monthly Instalment                                       | RWA    | Residents' Welfare Association                    |
| EWS    | Economically Weaker Section                                      | SECC   | Socio Economic and Caste Census                   |
| FAR    | Floor Area Ratio                                                 | SFCPOA | Slum Free City Plan of Action                     |
| FSI    | Floor Space Index                                                | SLAC   | State Level Appraisal Committee                   |
| HFA    | Housing for All                                                  | SLNA   | State level Nodal Agencies                        |
| HFAPOA | Housing for All Plan of Action                                   | SLSMC  | State Level Sanctioning and Monitoring Committee  |
| HUDCO  | Housing and Urban Development Corporation                        | TDR    | Transfer of Development Rights                    |
| IEC    | Information Education & Communication                            | TPQMA  | Third Party Quality Monitoring Agency             |
| IFD    | Integrated Finance Division                                      | ULB    | Urban Local Body                                  |
| IIT    | Indian Institute of Technology                                   | UT     | Union Territory                                   |
| IS     | Indian Standard                                                  |        |                                                   |

PMAY of Site Beldi District (Roorkee) Uttarakhand : 247664

PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0081  
Date 14/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob: 7895872139, 9412143346



### Definitions for the purpose of the mission

|                                             |                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Affordable Housing Project</b>           | Housing projects where 35% of the houses are constructed for EWS category                                                                                                                                                                                                                                                           |
| <b>Beneficiary</b>                          | A beneficiary family will comprise husband, wife and unmarried children. The beneficiary family should not own a pucca house (an all weather dwelling unit) either in his/her name or in the name of any member of his/her family in any part of India.                                                                             |
| <b>Carpet Area</b>                          | Area enclosed within the walls, actual area to lay the carpet. This area does not include the thickness of the inner walls.                                                                                                                                                                                                         |
| <b>Central Nodal Agencies</b>               | Nodal Agencies identified by Ministry for the purposes of implementation of Credit linked subsidy component of the mission                                                                                                                                                                                                          |
| <b>Economically Weaker Section (EWS)</b>    | EWS households are defined as households having an annual income up to Rs.3,00,000 (Rupees Three Lakhs). States/UTs shall have the flexibility to re-define the annual income criteria as per local conditions in consultation with the Centre.                                                                                     |
| <b>EWS House</b>                            | An all weather single unit or a unit in a multi-storied super structure having carpet area of upto 30 sq. m. with adequate basic civic services and infrastructure services like toilet, water, electricity etc. States can determine the area of EWS as per their local needs with information to Ministry                         |
| <b>Floor Area Ratio (FAR)/FSI</b>           | The quotient obtained by dividing the total covered area (plinth area) on all the floors by the area of the plot.<br>$FAR = \frac{\text{Total covered area on all the floors} \times 100}{\text{Plot area}}$<br>If States/Cities have some variations in this definition, State/City definitions will be accepted under the mission |
| <b>Implementing Agencies</b>                | Implementing agencies are the agencies such as Urban Local Bodies, Development Authorities, Housing Boards etc. which are selected by State Government/SLSMC for implementing Housing for All Mission.                                                                                                                              |
| <b>Low Income Group (LIG)</b>               | LIG households are defined as households having an annual income between Rs.3,00,001 (Rupees Three Lakhs One) up to Rs.6,00,000 (Rupees Six Lakhs). States/UTs shall have the flexibility to re-define the annual income criteria as per local conditions in consultation with the Centre.                                          |
| <b>Primary Lending Institutions (PLI)</b>   | Scheduled Commercial Banks, Housing Finance Companies, Regional Rural Banks (RRBs), State Cooperative Banks, Urban Cooperative Banks or any other institutions as may be identified by the Ministry                                                                                                                                 |
| <b>Slum</b>                                 | A compact area of at least 300 population or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities.                                                                                             |
| <b>State Land Nodal Agencies (SLNAs)</b>    | Nodal Agency designated by the State Governments for implementing the Mission                                                                                                                                                                                                                                                       |
| <b>Transfer of Development Rights (TDR)</b> | TDR means making available certain amount of additional built up area in lieu of the area relinquished or surrendered by the owner of the land, so that he can use extra built up area himself in some other land.                                                                                                                  |



## Background:

Shelter is a basic human need next only to food and clothing. At the end of the 10th Five Year Plan, the housing short age is estimated to be 24.7 million. However, urban areas in our country are also characterized by severe shortage of basic services like potable water, well laid out drainage system, sewerage network, sanitation facilities, electricity, roads and appropriate solid waste disposal. It is these shortages that constitute the rationale for policy focus on housing and basic services in urban areas. This policy intends to promote sustainable development of habitat in the country with a view to ensuring equitable supply of land, shelter and services at affordable prices to all sections of society. Given the magnitude of the housing shortage and budgetary constraints of both the Central and State Governments, it is amply clear that Public Sector efforts will not suffice in fulfilling the housing demand. In view of this scenario, the National Urban Housing and Habitat Policy, 2007 focuses the spotlight on multiple stake-holders namely, the Private Sector, the Cooperative Sector, the Industrial Sector for labour housing and the Services/Institutional Sector for employee housing. In this manner, the Policy will seek to promote various types of public-private partnerships for realizing the goal of Affordable Housing for All.

## Housing Needs :

The magnitude of housing shortage was estimated by a Technical Group in the context of formulation of the 11th Five Year Plan. The Technical Group estimated the housing shortage at the end of the 10th Plan to be around 24.7 million for 67.4 million households. The Group further estimated that 99% of this shortage pertains To Economical Weaker Section (EWS) & Low Income Group (LIG) sectors. During the 11th Plan, the Group estimated that the total housing requirement (including backlog) will be to the tune of 26.53 million units for 75.01 million households. Whereas more than 23% of the urban population resides in slum (Census: 2001), a much higher proportion of the urban population of metropolitan cities lives in slums; it is estimated that 55% of the population of Mumbai lives in slums. It is of critical importance that the strategy of in-situ slum up gradation is adopted for preponderant proportion of the slum dwellers, since they provide valuable services to residents living close to their own dwelling places.

The Working Group on Urban Housing pertaining to the 11th Plan made different assumptions on unit cost of construction of houses in million plus cities and other urban areas for estimating the investment required for overcoming the housing shortage. The total estimated investment for meeting the housing requirement upto 2012 was estimated to be of the order of Rs.3,61,318.10 crores consisting of Rs.1,47,195 crores for mitigating housing shortage at the beginning of 11th Plan and Rs.2,14,123.10 crores for new additions to be made during the 11th Plan period (this includes construction of pucca houses & upgradation of semi-pucca and kutcha housing units).



### Magnitude of Poverty:

Non-affordability of housing by economically weaker sections of society and low income families in urban areas is directly linked with the magnitude of urban poverty. Poverty in India has declined from 320.3 million in 1993-94 to 301.7 million in 2004-05. While there has been a decline of 18 million persons in the total numbers of the poor in India, the National Sample Survey Organization (NSSO) reports that the number of the urban poor has risen by 4.4 million persons during the same period. One fourth of the country's total urban population, numbering 80.7 million persons is below the poverty line. The urban poor constitute 26.7% of the total poor in the country. The fact that the number of urban poor has risen is in stark contrast with rural poverty, where both the total number of rural poor and its incidence vis-a-vis the rural population has fallen. The urban poor have limited access to basic services. According to the 2001 census, there is a 9% deficiency in drinking water, 26% in toilets and 23% in drainage. It is quite understandable that most of this shortage pertains to slums.

### Scope of RAY RAY:

will provide the support to enable states to redevelop all existing slums in a holistic and integrated way and to create new affordable housing stock. The existing schemes of Affordable Housing in Partnership, and Interest Subsidy for Housing the Urban Poor (ISHUP), would be dovetailed into this scheme. No new projects under the BSUP and IHSDP scheme of the Jawaharal Nehru National Urban Renewal Mission (JNNURM) will be sanctioned once implementation of RAY scheme is taken up except to consume existing 11th Plan allocations that may be left uncommitted. However, projects sanctioned under the two schemes will continue to receive Central assistance as per the sanctions and the existing provision of the schemes.



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0081 Date 14/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob: 7895872139, 9412143346



### Pradhan Mantri Awas Yojana (PMAY)- Housing for all

The Hon'ble President of India has announced "By the time the Nation completes 75 years of its Independence, every family will have a pucca house with water connection, toilet facilities, 24x7 electricity supply and access.

"Hon'ble Prime Minister envisioned Housing for All by 2022 when the Nation completes 75 years of its Independence. In order to achieve this objective, Central Government has launched a comprehensive mission "Pradhan Mantri Awas Yojana - Housing for All (Urban)". Mission for urban area will be implemented during 2015-2022 and this Mission will provide central assistance to implementing agencies through States and UTs for providing houses to all eligible families/ beneficiaries by 2022.

The mission seeks to address the housing requirement of urban poor including slum dwellers through following programme verticals:

- Slum rehabilitation of Slum Dwellers with participation of private developers using land as a resource
- Promotion of Affordable Housing for weaker section through credit linked subsidy

- Affordable Housing in Partnership with Public & Private sectors

- Subsidy for beneficiary-led individual house construction /enhancement.

The Mission will support construction of EWS (Economically Weaker Section) houses upto 30 square meter carpet area. As per **PMAY EWS households** are defined as households having an annual income up to Rs. 3,00,000 (Rupees Three Lakhs). States/UTs will have flexibility in terms of determining the size of house and other facilities at the state level in consultation with the Ministry but without any enhanced financial assistance from Centre. According to PMAY guidelines, the minimum numbers of about 35% of the houses are constructed for EWS Category in such Affordable Housing project.

The PMAY mission will be implemented as **Centrally Sponsored Scheme (CSS)** except for the component of credit linked subsidy which will be implemented as a Central Sector Scheme. A beneficiary family will comprise husband, wife, unmarried sons and/or unmarried daughters. The beneficiary family should not own a pucca house either in his/her name or in the name of any member of his/her family in any part of India to be eligible to receive central assistance under the mission. The houses constructed/acquired with central assistance under the mission should be in the name



PMAY Beldi Roorkee (Roorkee) Uttarakhand : 247664



### Mandatory Conditions:

Availability of urban land is the biggest constraint in providing housing to all including weaker sections. Therefore, to ease administrative and regulatory bottlenecks, a set of Mandatory Conditions has been included in the Mission to facilitate growth of housing sector including affordable housing. For participating in the mission and to avail of financial assistance from Central Government, States/ UTs should agree to fulfill following Mandatory Conditions:-

- States/UTs to make suitable changes in the procedure and rules for obviating the need for separate Non Agricultural (NA) Permission if land already falls in the residential zone earmarked in Master Plan of city or area.

- States/UTs shall prepare/amend their Master Plans earmarking land for Affordable Housing.
- A System should be put in place to ensure single-window, time bound clearance for layout approval and building permissions at ULB level.

- States/UTs shall adopt the approach of deemed building permission and layout approval on the basis of pre- approved lay outs and building plans for EWS/LIG housing or exempt approval for houses below certain built up area or plot area.

States/UTs would either legislate or amend existing rental laws on the lines of

- model Tenancy Act being prepared by Ministry. States/UTs shall provide additional FAR/FSI/TDR and relaxed density norms for

- slum redevelopment and low cost housing, if required.



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0081  
Date: 14/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob.: 7895872139, 9412143346

### Need for Pilot Projects:

Given that this is a path breaking approach being taken up by the Central, State and City governments, there is a felt need to embark on a set of pilot projects with the aim of evolving, demonstrating and establishing models that can thereafter be scaled. A key objective of the programme would be to therefore incentivize innovation and encourage new approaches and solutions that can demonstrably improve the quality and quantity of shelter and services for the poor.

### Such innovation could encompass:

Projects with strong community participation i.e. Slum up gradation

- redevelopment projects initiated/spearheaded by the community; or with their demonstrable involvement and participation in design, planning and implementation.

### • Creation of Fresh Housing Stock and Transit Shelters.

- State/UT Government and Implementing Agencies should encourage formation of associations of beneficiaries under the scheme like RWA etc. to take care of maintenance of houses being built under the mission

- New models of public-private partnerships whereby the private sector can be encouraged to take up affordable housing for the EWS/LIG

- Innovations in planning, demonstrating integrated livelihoods, shelter and services or convergence.

- Any other innovation for which the city feels it needs to design models and determine guidelines for larger application

With this intent the Ministry of Housing & Urban Poverty Alleviation, Government of India would encourage proposals and pilot projects from institutions/agencies as below:

The following institutions are eligible to apply for pilot projects under PMAY

- States
- Urban Local Bodies through the State Level Nodal Agencies (SLNA)
- Central Government Departments and Central Public Sector



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 6081  
Date 14/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
b.: 7895872139, 9412143346



The PMAY mission will be implemented through four verticals giving option to beneficiaries, ULBs and State Governments. These four verticals are as below:



#### Application Modalities:

The application should consist of a Proposal containing a brief description of the project, the stage of slum free planning that the state is in. The proposal should clearly delineate the innovations and new models the project will be piloting in terms of its scope, objective, implementation strategies. It should also clearly bring out the envisaged outcomes; and implications for state wide or regional replicability. It is expected that the implementation of the pilot projects would catalyse an innovative and effective approach to the planning and implementation of the city plans for the PMAY scheme.

Pilot Project Detailed Project Report should clearly bring out:

- In-situ development projects, including infrastructure upgrading, replacement of kuccha structures with pucca structures, Incremental Housing, **Affordable Housing Projects, Transit Shelters and Green field projects** integrating shelter, services and livelihoods will be considered for pilots



- Land/dwelling space to be assigned to the all slum households living in the concerned slum which will be in the form of ownership. A project which envisages grant of collective property rights would be eligible.

- Basic services including roads, water supply, sewerage, drainage, waste management and street lighting infrastructure have to be planned.

- Desirable services beyond basic services including: Fire safety plan; community Centre; local shopping complex.

- Pilot projects would need to demonstrate that the building bye laws and planning norms should not be a constraint to the slum upgrading exercise.

- Timelines to complete the project and implications for the Slum free City planning process under the PMAY scheme should be clearly laid out in the Pilot Project DPR to connect it to the Proposal.

- The DPR would be prepared as per the Delhi Schedule of Rates-2016 and would need to be submitted after approval of State Level Sanction and Monitoring Committee. For proposals pertaining to Central Government and Undertakings, DPR would be based on their respective schedule of rates.

- In view of the above considerations Urban Housing & Urban Development Authority (UHDA), a "Development Authority or the Authority" in relation to the whole of the State Area shall be as the State Authority and in relation to any development area shall be the Local Development Authority (hereinafter referred to as the Local Authority) constituted and notified under section 4 of the Act : may be called the Uttarakhand Urban and Country Planning and Development (Amendment) Act, 2013 has prepared



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0081  
Date: 14/11/22  
Near by IDBI Bank, Dehradun (U.K.)  
Tapovan Road Infront of PRD Ground  
Mob: 7895872139, 9412143346



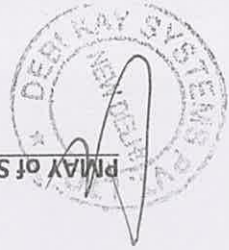


## Location, Geography and Climate

Uttarakhand was formed on the 9th November 2000 as the 27th State of India, when it was carved out of northern Uttar Pradesh. Located at the foothills of the Himalayan mountain ranges, it is largely a hilly State, having international boundaries with China (Tibet) in the north and Nepal in the east. On its north-west lies Himachal Pradesh, while on

The south is Uttar Pradesh. It is rich in natural resources especially water and forests with many glaciers, rivers, dense forests and snow-clad mountain peaks. Char-dhams, the four most sacred and revered Hindu temples of Badrinath, Kedarnath , Gangotri and Yamunotri are nestled in the mighty mountains. It's truly God's Land (Dev Bhoomi). Dehradun is the Capital of Uttarakhand. It is one of the most beautiful resorts in the sub mountain tracts of India, known for its scenic surroundings. The town lies in the Dun Valley, on the watershed

of the Ganga and Yamuna rivers. It is blessed with a rare bio-diversity, inter-alia, 175 rare species of aromatic & medicinal plants are found in the State. It has almost all major climatic zones, making it amenable to a variety of commercial opportunities in horticulture, floriculture and agriculture. It has a vast tourism potential in adventure, leisure, and eco-tourism.



PMAY of Site Beldi District (Roorkhee) Uttarakhand : 247664

PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Date: 14/11/22  
Case No. 0081  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.T.)  
Mob.: 7895872139, 9412143340

## About BELDI

According to Census 2011 information the location code or village code of Beldisalhapur village is 056436. Beldisalhapur village is located in Roorkee tehsil of Hardwar district in Uttarakhand, India. It is situated 5km away from sub-district headquarter Roorkee (tehsildar office) and 25km away from district headquarter Hardwar.

As per 2009 stats, Beladi Salhapur is the gram panchayat of Beldisalhapur village. The total geographical area of village is 248.77 hectares. Beldisalhapur has a total population of 1,860 peoples, out of which male population is 1,001 while female population is 859. Literacy rate of beldisalhapur village is 60.16% out of which 68.03% males and 50.99% females are literate. There are about 340 houses in beldisalhapur village.

|                  |                 |                  |         |            |         |         |             |           |        |        |                 |              |       |              |     |                         |              |                           |         |                |                |
|------------------|-----------------|------------------|---------|------------|---------|---------|-------------|-----------|--------|--------|-----------------|--------------|-------|--------------|-----|-------------------------|--------------|---------------------------|---------|----------------|----------------|
| Gram Panchayat : | Beladi Salhapur | Block / Tehsil : | Roorkee | District : | Hardwar | State : | Uttarakhand | Pincode : | 248197 | Area : | 248.77 hectares | Population : | 1,860 | Households : | 340 | Assembly Constituency : | Pirankaliyar | Parliament Constituency : | Hardwar | Nearest Town : | Roorkee (5 km) |
|------------------|-----------------|------------------|---------|------------|---------|---------|-------------|-----------|--------|--------|-----------------|--------------|-------|--------------|-----|-------------------------|--------------|---------------------------|---------|----------------|----------------|

Pincode of beldisalhapur village locality is 248197.

When it comes to administration, Beldisalhapur village is administered by a sarpanch who is elected representative of the village by the local elections. As per 2019 stats, Beldisalhapur village comes under Pirankaliyar assembly constituency & Hardwar parliamentary constituency. Roorkee is nearest town to beldisalhapur for all major economic activities, which is approximately 5km away.



PAT ARCHITECT AND ENGINEER  
Uttarakhand No. CA/2018/96244  
Date: 11/11/2020  
To: The District Engineer, PWD, Dehradun (U.K.)  
Mobile: 9890872139, 9412143346



## Background of the Project

Shelter is a basic human need next only to food and clothing. However, urban areas in our country are also characterized by severe shortage of basic services like potable water, well laid out drainage system, sewerage network, sanitation facilities, electricity, roads and appropriate solid waste disposal. It is these shortages that constitute the rationale for policy focus on housing and basic services in urban areas. This policy intends to promote sustainable development of habitat in the country with a view to ensuring equitable supply of land, shelter and services at affordable prices to all sections of society. Given the magnitude of the housing shortage and budgetary constraints of both the Central and State Governments, it is amply clear that Public Sector efforts will not suffice in fulfilling the housing demand. In view of this scenario, Uttarakhand State government launched a scheme "Jan Awas Yojana" and Central Government has also launched a comprehensive mission "Pradhan Mantri Awas Yojana - Housing for All (Urban)". And in this connection, The Hon'ble President of India has also announced "By the time the Nation completes 75 years of its Independence, every family will have a pucca house with water connection, toilet facilities, 24x7 electricity supply and access."

Hon'ble Prime Minister envisioned Housing for All by 2022 when the Nation completes 75 years of its Independence. In order to achieve this objective, Central Government has launched a comprehensive mission "Pradhan Mantri Awas Yojana - Housing for All (Urban)". Mission for urban area will be implemented during 2015-2022 and this Mission will provide central assistance to implementing agencies through States and UTs for providing houses to all eligible families/ beneficiaries by 2022.

The mission seeks to address the housing requirement of urban poor including slum dwellers through following programme verticals:

- Slum rehabilitation of Slum Dwellers with participation of private developers using land as a resource

- Promotion of Affordable Housing for weaker section through credit linked subsidy

- Affordable Housing in Partnership with Public or Private Sectors.

- Subsidy for beneficiary-led individual house construction /enhancement.



PMAY of Site Beldi District (Roorkee) Uttarakhand : 247664

PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0081  
Date. 17/11/22  
Tapovan Road Infront of PRB Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob.: 7895872139, 9412143346

Defined as households having an annual income up to Rs. 3,00,000 (Rupees Three Lakhs). Uttarakhand state will have flexibility in terms of determining the size of house and other facilities at the state level in consultation with the Ministry but without any enhanced financial assistance from Centre. According to PMAY guidelines, the minimum numbers of about 35% of the houses are constructed for EWS Category as covered in the programme verticals mentioned above of such Affordable Housing project

The PMAY mission will be implemented as Centrally Sponsored Scheme (CSS) except for the component of credit linked subsidy which will be implemented as a Central Sector Scheme. A beneficiary family will comprise husband, wife, unmarried sons and/or unmarried daughters. The beneficiary family should not own a pucca house either in his/her name or in the name of any member of his/her family in any part of India to be eligible to receive central assistance under the mission. The houses constructed/acquired with central assistance under the mission should be in the name of the female head of the household or in the joint name of the male head of the household and his wife, and only in cases when there is no adult female member in the family, the house can be in the name of male member of the household.

#### Mandatory Conditions:

Availability of urban land is the biggest constraint in providing housing to all including weaker sections. Therefore, to ease administrative and regulatory bottlenecks, a set of Mandatory Conditions has been included in the Mission to facilitate growth of housing sector including affordable housing. For participating in the mission and to avail of financial assistance from Central Government, Uttarakhand State should agree to fulfil following Mandatory Conditions:-

- Uttarakhand state to make suitable changes in the procedure and rules for obviating the need for separate Non Agricultural (NA) Permission if land already falls in the residential zone earmarked in Master Plan of city or area.

- Uttarakhand state shall prepare/amend their Master Plans earmarking land for

- Affordable Housing.

- lines of model Tenancy Act being prepared by Ministry.



PMAY of Site Beldi District (Roorkee) Uttarakhand : 247664

PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0021 Date 14/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob: 7895872139, 9412143346



## Objectives:

The objectives of this project are:

- To provide affordable and liveable Shelter solution to Industrial Workers and – workers engaged in Construction projects/activities.
- To reduce temporary/permanent establishment of new slums lacking basic physical & social infrastructure.
- To provide alternative shelter to the slum dwellers who are not eligible for relocation houses and are likely to be displaced.
- To prevent unorganized growth in housing sector.

## Project Concept:

It is proposed to construct Ground + Three storied building blocks along with civic amenities like Community Facilities, Open Spaces, Park/Garden, Local Shopping, Crèche, etc. with well-developed Infrastructure networks such as Roads, Drainage, Water Supply, Sewerage, Electrification, Rain Water Harvesting, Horticulture/Site Development, Street Light, Parking, Over Head Tank, Sewerage Treatment Plant, Substation, as well as planned circulation and other features. One such building will provide 8 units & 16 units at one floor and to provide 1088 Tower of such type of buildings need to be built up.

The main concept behind the formulation of this scheme is to provide not just shelter for the Economical weaker Section /Lower Income Group /migrating population but also a healthy and enabling urban environment, to help them to come out of their poverty level and

- To integrate the residential areas with social network of the entire complex.
- Sustainable improvement in overall quality of life of Weaker Class / Lower income Group/industrial labours/migrating population.
- Sustainable improvement in standards of health, education and community life and increased income-earning potential of Weaker Class / Lower income Group/ migrating population by providing a livelihood training centre.
- Strong, committed and broad-based formal and informal community-based groups, which participate actively in sustainable development activities established and functioning.



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Date: 19/11/2022  
Tapovan Road in front of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
PMAY of Site Beldi District (Roorkee) Uttarakhand : 247664895872139, 9412143346

Digitized by Google



PROPOSED SITE  
29°52'58.2"N, 77°56'45.8"E

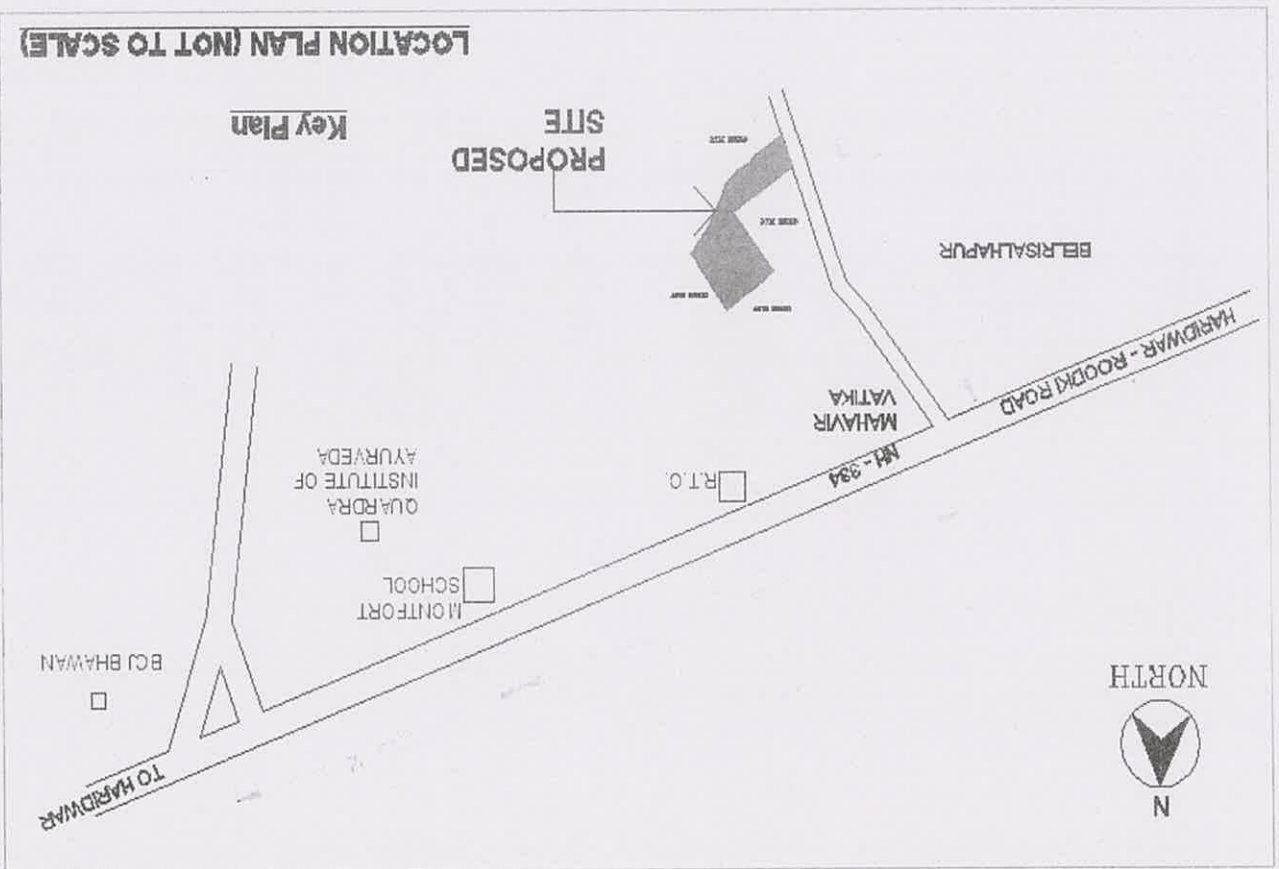
### SITE LOCATION IN GOOGLE MAP



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 6081 Date: 14/11/22  
Tapovan Road Infront of PWD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob: 7895872139, 9412143346



## Key Plan



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 6081  
Date 19/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob.: 7895872139, 9412143346

### Monolithic Concrete Construction Technology:

Monolithic - The term is derived from Imposing in size, bulk or solidity. Characterized by massiveness and rigidity and total uniformity. The synonyms of Monolithic are Massive or Monumental.

In MCC beams, columns and filler brick walls are eliminated and instead walls made from concrete are used to take loads of the building. Here walls and slabs are cast in one operation in specially designed light weight forms / moulds. Concrete is poured in the forms and forms are removed after the setting of the concrete takes place, resulting in box like cubical structure of required architectural design.

The entire operation essentially comprises fitting and erecting the portion of shuttering / forms as already determined and then carrying out concreting of the walls and slabs. Props are so designed that they stay in position while de-shuttering of slabs takes place. The dimensional accuracy of the formwork is of high order. Therefore any possibility of errors does not rise. These forms enable rapid construction of multiple units of repetitive types.

The pre-designed form work also acts some sort of assembly line production and require few semi-skilled workers / labour.

As bricks are not used in this type of construction walls are just rendered with cement slurry to give even shed thus eliminating need of plastering resulting in saving in time and cost of plastering. After removal of form work finishing activities like fixing of doors and windows, flooring works, fixing of plumbing, sanitary and electrical services etc can be carried out as per the current / local practice.

In this system, in place of traditional RCC framed construction of columns and beams; all walls, floors, slabs, columns, beams, stairs, together with door and window openings are cast-in-place monolithically using appropriate grade of concrete in one operation. The especially custom designed modular formwork made up of Aluminium is easy to handle with minimum labour & without use of any equipment. Being modular formwork system, it facilitates in rapid construction of multiple / mass unit scale



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0081 Date 12/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob.: 7895872139, 9412143346



### Highlights of the MCC Technology :

- In the Monolithic concrete construction with Aluminum / Plastic / Steel / Composite forms system, Concrete walls and slabs are cast monolithically at one pour.

- The system allows reduction in thickness of concrete members below the minimum value than the conventional construction, thus reducing the consumption of natural resources.
- The technology reduces the cost of repair and maintenance compared to conventional system.

- Walls and slabs are cast in one operation in specially designed light weight form/ moulds in concrete.

- Concrete is poured in the forms & forms are removed after the setting of concrete takes place, resulting in box like cubical structure of required architectural design.

- The pre-designed formwork also acts some sort of assembly line production and enables rapid construction of multiple units of repetitive type.

### Basic Material Requirements

Formwork system

Formwork system is propriety system and designed as per loading requirements of the structure. It has adequate stiffness to weight ratio, yielding minimum deflection under concrete loading. The panel should fix precisely, securely and require no bracing. Being recent advancement in technology, IS-14687:1999 Guidelines for falsework for concrete does not cover requirements of special type of formwork system.

### Concrete

Shall be of appropriate grade based on environment condition as per IS 456:2000

### Reinforcement

Shall conform to IS 1786:2008



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0081  
Date: 14/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob: 7895872139, 9412143346

## Details of Formwork

The formwork systems used are made of lightweight Aluminum. The recommended concrete forms generally use robotics welding system for manufacturing. A soft alloy weld wire is utilized in the concrete form weld process. Fixing of the formwork is done using tie, pin & wedges system. It does not require very skilled labor to do the job.

## Structural Requirements of the Construction

The Monolithic RCC construction is considered as shear wall system. The maximum spacing between cross wall shall be limited to 1.5 times the floor height if supported on two edges and 2.0 times the floor height, when supported on all four edges.

The walls are designed primarily for loading and also for in-plane lateral load (shear) and out of plane (bending) due to wind load and earthquake forces as per relevant Indian Standard Code IS 875(Pt.3):1987 and IS1893(Pt.1):2002 respectively. For out of plane loading, the plate can be assumed to be supported by floor slabs / diaphragm and cross walls and continuity can be assumed, wherever applicable.

The structural design of plain & RCC shall be as per IS 456:2000 while IS 13920:1993 is referred for ductile detailing of reinforced concrete structure. Thickness of wall below plinth level should be minimum 200 mm with double layers reinforcement.

Guidelines on Monolithic Concrete Construction prepared by BMTPC may be referred for material requirements & design aspects of this system.

## Durability

Since concrete is main constituent material in this system, durability of the structure can be achieved by using proper ingredient, Grade of concrete as per IS 456:2000 and mix design in accordance with IS 10262:2009.

Thickness of the wall is generally 100 mm with the centrally placed reinforcement. Therefore, adequate cover is likely to be maintained, as a result high durability is achieved.





## Ease of fixing services

All electric and plumbing fixtures, lines have to be pre-planned and placed appropriately before pouring concrete in RC walls & slabs. Post construction alternation is not desirable.

## ECONOMY OF SCALE

Economy of scale depends upon the volume of work and number of repetition of the formwork. To achieve economy, minimum 100 repetitions are desirable.

For very small project of less than 500 units, this system may not prove to be economical.

## Other features

Pre designed formwork acts as assembly line production and enables rapid construction of multiple/mass scale 1) units of repetitive type.

Varying work cycle is possible, however, for speed and economy 3-4 days cycle are

desirable.2)

It is flexible in design and can form any architectural or structural configuration, such as stairs, windows, etc.3)



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 9081 Date 14/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob.: 7895872139, 9412143346

**SPECIFICATIONS FOR EWS HOUSES - CONSTRUCTED UNDER PMAY**

| Sl. No | ITEM                                              | SPECIFICATION                                                                                                                                                                                                                      |
|--------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.     | Earthwork excavation                              | The earthwork excavation shall be done as per CPWD specification. The foundation shall rest on firm base                                                                                                                           |
|        | Filling in trenches                               | Same excavated good earth soil is to be filled.                                                                                                                                                                                    |
| 2.     | Foundation (monolithic cement concrete structure) | M-20 grade of concrete is used for all the RCC works                                                                                                                                                                               |
|        | Base concrete                                     | 1:4:8 grade, 10 cm thick below building foundations on hard strata.                                                                                                                                                                |
|        | Plinth Filling                                    | If excavated soil or part of excavated soil seems to be good for filling, same shall be refilled as per direction of engineer in charge                                                                                            |
|        | RCC Footing/Raft/Piles                            | M-20 grade of concrete is used for 450mm thick raft using Self Compacting Concrete Design Mix.                                                                                                                                     |
|        | Plinth beam/grade slab                            | M 20 grade of concrete is used for all the works using Self Compacting Concrete Design Mix.                                                                                                                                        |
| 3.     | Super structure                                   | M 20 grade of concrete is used for all the works using Self Compacting Concrete Design Mix.                                                                                                                                        |
|        | a) Slabs                                          | M 20 grade of concrete is used for all the works using Self Compacting Concrete Design Mix.                                                                                                                                        |
|        | b) Projections                                    | M 20 grade of concrete is used for all the works using Self Compacting Concrete Design Mix.                                                                                                                                        |
| 4.     | Flooring                                          | 1. Everywhere in EWS unit is having ordinary Cement flooring including staircase etc. with Colour Pigment. 2. Industrial tiles flooring in parking areas.                                                                          |
| 5.     | Skirting                                          | Skirting in ordinary cement with neat punning in all rooms shall be to the height of 100mm.                                                                                                                                        |
| 6.     | Kitchen platform and sink                         | Ordinary RCC Slab with neat cement punning and with provision for cut-out of Stainless Steel Sink.                                                                                                                                 |
|        | Putty                                             | Putty on inner walls and ceiling.                                                                                                                                                                                                  |
| 7.     | Finishing                                         | Internal:- White washing on internal walls and ceiling External:- Water proofing cement paint                                                                                                                                      |
|        | Painting on Wood/Iron work                        | Painting with synthetic enamel paint of two or more coats.                                                                                                                                                                         |
| 8.     | Waterproofing                                     | Toilets cement slurry mixed with water proofing treatment.                                                                                                                                                                         |
| 9.     | Joinery                                           |                                                                                                                                                                                                                                    |
|        | a) Windows                                        | Angle iron frames and glazed shutters for windows and clerestory windows using 4 mm thick float glass panes with hillock wood.                                                                                                     |
|        | b) Doors                                          | a) Angle Iron Frames and shutters - 25 mm thick flush door shutter, non-decorative type for rooms<br>b) Angle Iron Frames and Steel shutters for block entrance & munity of staircase.<br>c) FRP frame and shutter for Bath and WC |
| 10.    | Doors & Window Fixtures                           | Oxidised MS fittings                                                                                                                                                                                                               |
| 11.    | Railings                                          | MS railings                                                                                                                                                                                                                        |



PMAY of Site Beldi District (Roorkee) Uttarakhand : 247664

FAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0081  
Date: 14/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob.: 7895872139, 9412143346



Public Health & Sanitary Works

| Sl. No | ITEM                                                                                                             | SPECIFICATION                                                                                                                                                                                                                                                                                  |
|--------|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.     | Water Supply                                                                                                     |                                                                                                                                                                                                                                                                                                |
|        | Internal Areas water supply pipe (inside the Block in shafts, terrace and rising main as per drawing and design) | Unplastised-Rigid PVC rain water pipes conforming to IS :13592                                                                                                                                                                                                                                 |
|        | Bib-Cock                                                                                                         | Long body CP Brass Bib-Cock.                                                                                                                                                                                                                                                                   |
|        | Control valves                                                                                                   | CI Wheel Gun Metal Valve.                                                                                                                                                                                                                                                                      |
| 2.     | Sewerage (Sanitary & Rain water)                                                                                 |                                                                                                                                                                                                                                                                                                |
|        | Internal areas sanitary pipe (Inside the flats or inside the block and in all Bath, WC and kitchen)              | Supplying, laying, jointing and testing of 110mm Dia. And 75 mm unplasticized Non-pressure Polyvinyl Chloride (PVC-U) Pipes.                                                                                                                                                                   |
|        | External Area                                                                                                    | Stone Ware Pipes with all around concreting.                                                                                                                                                                                                                                                   |
|        | Rain Water Drainage                                                                                              | Providing UPVC pipes of approved make for                                                                                                                                                                                                                                                      |
|        | Pipe (inside the Block in shafts as per drawing and design)                                                      | 4kg/Sq.Cms. of single socket pipe of ISI standard conforming to ISI 1352 with air tight joints, fixing with clamps and nails etc., complete for (Vent Shaft) WC Connection                                                                                                                     |
| 3.     | Sanitary Fittings                                                                                                |                                                                                                                                                                                                                                                                                                |
|        | in W.C.                                                                                                          | Indian type W.C. pan with 100 mm sand cast Iron P or S trap, 10 liter low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) .                                                                                                          |
|        | Floor Trap                                                                                                       | Providing 76.2mm (3") Dia. NAHANY TRAP with jali for UPVC/SWR for toilets and kitchen                                                                                                                                                                                                          |
|        | Gully Chambers                                                                                                   | Providing and fixing square-mouth S.W. gully trap grade 'A' complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design : |
|        | Internal sanitary and collecting chambers                                                                        | Sewage disposal from Indian type W.C. pan & waste water from kitchen with 100 mm PVC pipe & Bathroom with 75 mm diameter PVC pipe with fittings.                                                                                                                                               |



PMAY of Site Beldi District (Roorkee) Uttarakhand : 247664

PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0021  
Date: 14/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob.: 7895872139, 9412143346

Electrical Works:

| Sl. No | ITEM                         | SPECIFICATION                                                                                                                                                                                                                                                                                                               |
|--------|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|        | For Internal Flat            |                                                                                                                                                                                                                                                                                                                             |
| 1.     | Point Wiring                 | Wiring for light point/ fan point/ exhaust fan point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed PVC conduit, with Piano type switch.                                                                                                                                        |
| 2.     | Wiring for circuit / Submain | Wiring for circuit/ sub main wiring along with earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed PVC conduit as required<br>2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire<br>2 X 4 sq. mm + 1 X 4 sq. mm earth wire<br>2 X 6 sq. mm + 1 X 6 sq. mm earth wire |
| 3.     | PVC conduit                  | Supplying and fixing of following sizes of PVC conduit of along with accessories in surface/ recess or cutting the wall and making good the same in case of recessed conduit as required.<br>20mm & 25mm dia with                                                                                                           |
| 4.     | Switch and socket            | Supplying and fixing following Piano Type switch/ socket on the switch box including connections<br>5/6 amps switch<br>15/16 amp switch<br>3 pin 5/6 amp socket outlet<br>3 pin 15/16 amp socket outlet                                                                                                                     |
| 5      | Fan regulator                | Supplying and fixing stepped type electronic fan regulator                                                                                                                                                                                                                                                                  |
| 6      | Switch box                   | Supplying and fixing of suitable size metal box with phenolic laminated sheet cover in front                                                                                                                                                                                                                                |
| 7      | Angle holder                 | Supplying and fixing brass batten/ angle holder including connection etc. as required.                                                                                                                                                                                                                                      |
| 8      | MCCB                         | Providing and fixing MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, etc. as required.                                                                                                                                                                                  |



PMAY of Site Beldi District (Roorkee) Uttarakhand : 247664

PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0021  
Date 14/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob.: 7895872139, 9412143346



|     |                        |                                                                                                                                                                                                                                                                                             |  |
|-----|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 9.  | MCB Enclosure          | Supplying and fixing SPN Distribution Board with IP43 Protection (Metal Door) as per 13032 for all incoming and outgoing (With MCB/ RCCB/ Isolator)                                                                                                                                         |  |
| 10. | TPN Distribution Board | Following way TPN distribution boards<br>4 way Double door<br>6 way Double door<br>8 way Double door<br>12 way Double door                                                                                                                                                                  |  |
| 11. | MCB                    | Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections,<br>Single pole<br>Single pole and neutral<br>Double pole<br>Triple pole<br>Triple pole and neutral |  |
| 12. | Isolator               | Supplying and fixing following rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.<br>40 amps<br>63 amps                                                                                                 |  |
| 13. | Earthing               | Earthing with G.I. earth plate 600 mm X 600 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc. with charcoal/ coke and salt as required                                                   |  |



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Date 17/11/22  
Case No. 0581  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob.: 7895872139, 9412143346

## ABSTRACT OF PROPOSED PHYSICAL INFRASTRUCTURE

### Buildings

- 1) Total 1088 units are provided under the scheme
- 2) 19 Tower are designed to accommodate 1088 units.
- 3) Ground + 3 storied building
- 4) Each building has 8 units & 16 units on each floor.
- 5) Each unit has 1 Bedroom, Living Room, Kitchen, Bathroom and WC
- 6) Total no. of floors - 4
- 7) Total no of units per tower- 8 X 4 = 32 units & 16 X 4 = 64 units

### Infrastructures

#### I. Storm Water Drainage

- Brick Masonry open Drain is proposed for collection of Rain Water

#### II. Roads and Pavers

- Internal concrete road of 9.0 mtr. and 6 mtr wide are proposed with 12 mtr. wide road as the main entry road.
- 600 mm thick factory made cement concrete inter locking paver blocks are proposed at open areas between buildings and other locations.

#### III. Compound Wall

- Brick Masonry Compound Wall

#### VII. Internal Water Supply and Sanitation Facilities

- WC's, Wash basins, Kitchen Sink, Urinal basins, water taps and all other necessary Water Supply & Sanitation facilities are proposed with proper fitting & fixtures at each floor of every building.

#### VIII. Internal Electrical Installations

- Sufficient nos. of electrical points for fans, Ceiling fans, call bell, light, chargers etc. are proposed in each room/corridors/stairs/baths/toilets/urinal/stores with metal box and proper wiring systems.

#### IX. Parking Facilities

- Sufficient Parking facilities for two Wheeler Vehicles are proposed.



PMAY of Site Beldi District (Roorkee) Uttarakhand : 247664

PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Date: 14/11/22  
Case No. 0081  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob: 7895872139, 9412143346



## PROJECT COST DETAILS

As per the Scheme Guidelines of Pradhan Mantri Awas Yojana Housing for all an single unit or a unit in multi-storied super structure of EWS type Houses with all adequate basic civic services and infrastructure services like Toilet, Water, Electricity etc. So, we have designed the typical EWS dwelling unit of approx. 23.00 square meters carpet area which will have 2 rooms (i.e., living room and one bed room), a kitchen, separate bath and WC and balcony.

| SI No. | Type | Nos. of Dwelling Units | Carpet Area of each unit | Super built up Area of each unit |
|--------|------|------------------------|--------------------------|----------------------------------|
| 1.     | EWS  | 1088                   | 23.24 sq.m               | 25.30 sq.m                       |

| SI No | DESCRIPTION OF WORK                                | AMOUNT      |
|-------|----------------------------------------------------|-------------|
| 1     | Grand Total amount for 15 Tower A, B, F, G, H TO S | 620819842.9 |
| 2     | Grand total amount for tower C, D, E & T           | 80704224.32 |
| 3     | Grand Total other service                          | 122797715   |
|       | Grand total project cost                           | 824321782.2 |



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 891 Date: 11/11/2019  
Near by IDBI Bank, Dehradun (U.K.)  
Tapovan Road Infront of PRD Ground  
Mob: 7895872139, 9412143346

# LAND DOCUMENTS

PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0081 Date. 4/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob.: 7895872139, 9412143346



A handwritten signature in black ink, appearing to be "Pal".

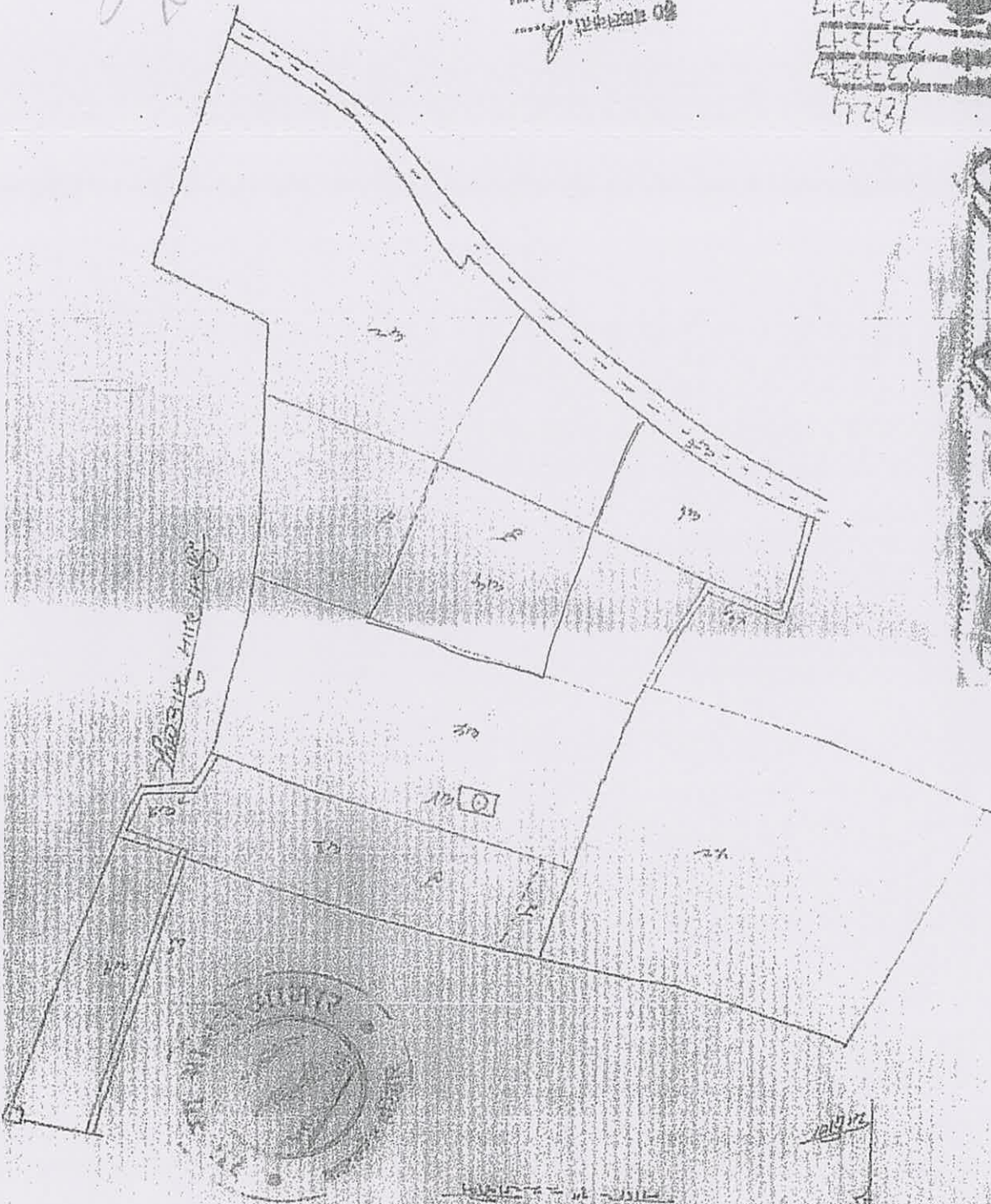


Mob: 7895872139, 9412143346  
 Near by IDBI Bank, Dehradun (U.K.)  
 Apovan Road Infront of PRD Ground  
 Case No. 0081 Date 14/11/22  
 COA No. CA/2018/96244  
 PAL ARCHITECT AND ENGINEER



No. 0081  
 Date 14/11/22  
 Case No. 0081

14-11-22  
 14-11-22  
 14-11-22  
 14-11-22  
 14-11-22



14-11-22  
 14-11-22  
 14-11-22  
 14-11-22  
 14-11-22

14-11-22  
 14-11-22  
 14-11-22



DETAILS OF PROJECT LAND AT VILLAGE BELDI, RORKEE, HARIDWAR



Mob.: 7895872139, 9412143346  
 ear by IDBI Bank, Dehradun (U.K.)  
 povan Road Infront of PRD Ground  
 Date: 14/11/22  
 COA No. CA/2018/96244  
 FAL ARCHITECT AND ENGINEER



दिनांक: 23/02/2019

यह प्रमाण-पत्र श्री देवी काय सिस्टम्स प्राइवेट लिमिटेड के माध्यम से जारी किया गया है।

| क्र.सं. | ग्राम का नाम | विस्थापन स्थिति | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---------|--------------|-----------------|---|---|---|---|---|---|---|---|---|
| 1       | ग्राम का नाम | विस्थापन स्थिति |   |   |   |   |   |   |   |   |   |
| 2       | ग्राम का नाम | विस्थापन स्थिति |   |   |   |   |   |   |   |   |   |
| 3       | ग्राम का नाम | विस्थापन स्थिति |   |   |   |   |   |   |   |   |   |
| 4       | ग्राम का नाम | विस्थापन स्थिति |   |   |   |   |   |   |   |   |   |
| 5       | ग्राम का नाम | विस्थापन स्थिति |   |   |   |   |   |   |   |   |   |
| 6       | ग्राम का नाम | विस्थापन स्थिति |   |   |   |   |   |   |   |   |   |
| 7       | ग्राम का नाम | विस्थापन स्थिति |   |   |   |   |   |   |   |   |   |
| 8       | ग्राम का नाम | विस्थापन स्थिति |   |   |   |   |   |   |   |   |   |
| 9       | ग्राम का नाम | विस्थापन स्थिति |   |   |   |   |   |   |   |   |   |

मौलिक विवरण: 1. ग्राम का नाम: देवी काय सिस्टम्स प्राइवेट लिमिटेड। 2. विस्थापन स्थिति: देवी काय सिस्टम्स प्राइवेट लिमिटेड।

प्रमाण-पत्र जारी करने वाले अधिकारी का नाम: देवी काय सिस्टम्स प्राइवेट लिमिटेड।

हस्ताक्षर: देवी काय सिस्टम्स प्राइवेट लिमिटेड।

9887

22/04/19  
 14/11/22  
 CASE NO. 0021  
 NO. CA/2018/96244  
 PROJECT AND ENGINEER  
 Tapovan Road Inf... RD Ground  
 Near by DBI Bank, Dehradun (U.K.)  
 M.B.D./895872139, 9412143346



दिनांक- 23/02/2019

यह प्रमाण-पत्र श्री सुरेश कुमार (S.S.) को देखावल क्षेत्र में सुरेश कुमार को जांच आदेश पर जारी किया गया।

| क्र.सं. | ग्राम का नाम | विस्तार है। | खाली  | खाली का कुल क्षेत्र | खाली की माप | खाली में विस्तार | विस्तार का क्षेत्र | विस्तार का माप | विवरण |
|---------|--------------|-------------|-------|---------------------|-------------|------------------|--------------------|----------------|-------|
| 1.      | सुरेश कुमार  | 214         | 3.295 | 150.25              | 1/2         | 1.6375           | 75.12              | 8              | 9     |

मापन सुरेश कुमार (S.S.) 40 सुरेश कुमार तहसील-रूढ़की जिला हरिद्वार।

ग्राम का नाम सुरेश कुमार ग्राम सुरेश कुमार निवासी ग्राम सुरेश कुमार

विस्तार प्रमाण-पत्र

25/05





NOTE: डाटा उपलब्ध ना होने पर डिजिटल हस्ताक्षरित होने तक प्रतीक्षा करें।

ख़ाता विवरण (अप्रमाणित प्राति)

ग्राम का नाम : देवडी सान्दपुर परगना : (रुडकी)

तद्वर्णितः रुडकी

जनपद : हरिद्वार

फ़ार्मी वर्ग : 1422-1427

$$\mu_{\text{H}} = 1$$

खाना संख्या : 00214

छातेदार का नाग / भिलां पीते शंकरक का नाग / निवात दयान

भाभिक आधिकार का  
वर्ष

ब्रह्मा संज्ञा

द्वौ नय  
(दि.)

अपेक्षित

१८०५

श्रेणी : 1-क / भूमि जो सजातीय अधिकार वाले भूमिधारों के अधिकारों हो

[illegible]

**Digital India**  
Transform India

**Mechanism:** The scheme is summarized in Figure 2 and can be found in the Supporting Information.

**Date Updated Upo:** Fri Feb 01 14:52:56 IST 2019

**Technical Support By:** National Informatics Center, Uttaranchal State Unit, Dehradun

**Courtesy given by:** Board of Revenue(Uttarakhand)

14.03.2013 (315/0का0) के  
अज्ञात देयता पूरा भया। नै अपनी  
एपि खाता सं० 188 खाता सं० 644 व

Contents owned by Board of Revenue(Uttarakhand)



PAL ARCHITECTS AND ENGINEERS  
 COA No. 14/2018/6244  
 Case No. 1007/2018  
 Tapovan Road Infotech RD Ground  
 Near by IDBI Bank, Dehaddu (M.K.)  
 Mob: 7895872139, 9412143346

ljsp

ख्वाता विवरण (अप्रमाणित प्रति)



Page Updated Uplo: Fri Feb 01 14:52:35 IST 2019

Technical Support By: National Informatics Center, Uttaranchal State Unit, Dehradun.

Contents owned by Board of Revenue (Uttarakhand)



18000  
No. CA/2018  
SYSTEMS PRIVATE LIMITED





### खाता विवरण (अप्रमाणित प्रति)

|                                                                                                                                                                                                                                                                                                                                     |                      |                  |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |         |                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------------------|
| ग्राम का नाम : बेलही खखपुर                                                                                                                                                                                                                                                                                                          | परतना : (स्टडी)      | वर्गीकृत : स्टडी | जनपद : हरियाणा  | फसली वर्ष : 14/22-14/27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | भाग : 1 | खाल संख्या : 00269 |
| खालदार का नाम / पिता या संरक्षक का नाम / निवास स्थान                                                                                                                                                                                                                                                                                | मौलिक अधिकार का वर्ष | खाल संख्या       | क्षेत्रफल (हे.) | अवधि                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | दिप्ती  |                    |
| श्रेणी : 1-क / भूमि जो संकेंपीय अधिकार वाले भूमिप्राप्ति के अधिकारों से                                                                                                                                                                                                                                                             |                      |                  |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |         |                    |
| सुधीर कुमार / विन्ड कुमार / नि-ग्राम<br>नोन्ड / अग्रदास / नि-ग्राम<br>हेन्ड / अग्रदास / नि-ग्राम<br>रेखा नोन्ड / फली राजीव कुमार नोन्ड / नि-5/3 गंगाविहार अग्रदास<br>विकास फालोनी स्टडी                                                                                                                                             | 1385 फुट से          | 68/2             | 1.4340          | नोन्ड ने अपना भाग 1/3 16,000 का नग्न लेन 10/10/2006 के बैंक को<br>बैंक कर दिया है। 10/10/2006/24.09.1986<br><br>14/10/2006 10/10/2006 से सुधीर पुत्र विन्ड निवासी ग्राम ने अपनी भूमि<br>खाल सं 269 को भागद्वारा बैंक कर ₹ 50,000 से बैंक किया<br>है। 10/10/2006/20.02.2003<br><br>10/10/2006 के बैंक पर दिनांक 04.02.2006 के अनुसार<br>सुधीर कुमार पुत्र विन्ड कुमार ने अपनी भूमि खाल सं 269 को बैंक कर<br>₹ 1,00,000 का ऋण लिया है। 10/10/2006/10.03.2006<br><br>10/10/2006 के बैंक पर दिनांक 12.08.2008 के अनुसार<br>सुधीर कुमार पुत्र विन्ड कुमार ने अपनी भूमि खाल सं 269 को बैंक कर<br>₹ 2,60,000 का ऋण लिया है। 10/10/2006/20.08.2008<br><br>10/10/2006 के बैंक पर दिनांक 05.06.2012 के अनुसार<br>सुधीर कुमार पुत्र विन्ड कुमार ने अपनी भूमि खाल सं 269 को बैंक कर<br>₹ 7,50,000 का ऋण लिया है। 10/10/2006/06.06.2012<br><br>10/10/2006 के बैंक पर दिनांक 21.09.2011 के अनुसार |         |                    |
| Disturbance का अर्थ है या अर्थ है। कर्ता का अर्थ है नोन्ड की जानकारी यह कि का अर्थ है।<br>Disturbance का अर्थ है या अर्थ है। कर्ता का अर्थ है नोन्ड की जानकारी यह कि का अर्थ है।<br>Technical Support By National Informatics Center, Uttar Pradesh State Unit, Dehradun<br>Certificates issued by Board of Revenue (Uttar Pradesh) |                      |                  |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |         |                    |



Digital India  
Power To Empower



PAL ARCHITECT AND ENGINEERS  
COA No. CA/2018/962  
Date  
Near by IDBI Bank, Dehradun  
Tapovan Road Infront of PRD  
Mob: 7895872139, 9412143346



PAL ARCHITECTS & ENGINEERS  
 COA No. CA/2018/1234  
 Case No. 0081  
 Date: 12/01/2019  
 Tapovan Road Infront of PRD Ground  
 Near by IDBI Bank, Dehradun (U.K.)  
 Mob.: 7895872139, 94121443346



| ग्राम का नाम : देवली सरखपुर | परामा : (रज्जुकी) | कमीटर : रज्जुकी | चनद : रज्जुकी | खाली वर्ग : 1422-1427 | खाली विवरण (अप्रमाणित प्रति)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------|-------------------|-----------------|---------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             |                   |                 |               |                       | <p>भाग : 1 खाली संख्या : 00269</p> <p>हेतु कुम्हार पुर अस्ताराम ने अपनी भूमि खाली सं0 269 को बेचकर कर र0 3,00,000 का ऋण लिया है। ह0 सं0 21.09.2011</p> <p>श्री0 पं0 श्री0 देवली के बंधक पत्र के अनुसार गेय कुम्हार पुर अस्ताराम ने अपनी भूमि खाली सं0 269 को बेचकर कर र0 2,50,000 का ऋण लिया है। ह0 सं0 19.09.2011</p> <p>1424 सं0 श्री0 पं0 देवली के बंधक पत्र दि0 10.10.2016 (89/0 सं0) के अनुसार श्री0 कुम्हार पुर हितेंद्र ने अपनी भूमि खाली सं0 269 को भागद्वारा बेचकर कर र0 20,00,000 का ऋण लिया है। ह0 सं0 25.10.2016</p> <p>1425 सं0 न्यायालय दखलाना रज्जुकी चार सं0 1265/16-17/16.09.17 को अदालत द्वारा कि जमाना सं0 68/21.4340 सं0 की अपनी कुल भूमि 0.2560 हे0 भू-पट सं0 12.15 से बिक्री हेतु पुर अस्ताराम देवली देवली सरखपुर पट व तह0 रज्जुकी का नाम खारिज करके देवली सरखपुर पुर हितेंद्र</p> <p>कुम्हार देवली देवली सरखपुर पट व तह0 रज्जुकी का नाम दुरा है जमाना रजि0 सं0 4369/14.05.13 अंका 5,00,000/- से बचौर सं0 श्री0 अंकित हो। ह0 सं0 16.09.17</p> |
| योग                         |                   |                 | 1             | 14340                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

On the basis of the above information, the revenue department has been informed that the above land is not in the possession of the owner.

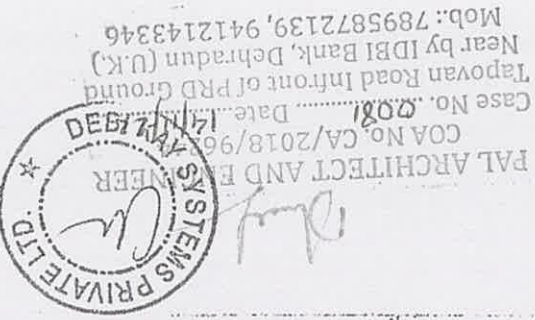
Date: 12/01/2019 14:07:07 IST 2019

Technical Support By: National Informatics Center, Uttaranchal State Unit, Dehradun.

Copyrights owned by Board of Revenue (Uttaranchal)







| ग्राम का नाम : डेलडी सारखपुर | परामा : (रजक्री) | कसीरा : रजक्री | चनसद : डी.डी.डी.     | खता विवरण (अप्रमाणित प्रती)                                                                                                                                                                                                             | शेष |
|------------------------------|------------------|----------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
|                              |                  |                | फरती नं. : 1422-1427 | भाग : 1 खता संख्या : 00269                                                                                                                                                                                                              |     |
|                              |                  |                |                      | हेनर कुमा रू अंतराग ने अपनी भूमि खता सं 269 को बंधक कर रू 3,00,000 का गण लिया है। हरेडोअड/ 21.09.2011                                                                                                                                   |     |
|                              |                  |                |                      | पीएचडी नैरडा के बंधक पर है अंतराग ने रू कुमा रू अंतराग ने अपनी भूमि खता सं 269 को बंधक कर रू 2,50,000 का गण लिया है। हरेडोअड/ 19.09.2011                                                                                                |     |
|                              |                  |                |                      | 1424रू पीएचडी नैरडा के बंधक पर रू 10.10.2016 (89/00कड) के अंतराग रू कुमा रू हरेड ने अपनी भूमि खता सं 269 को भगदर बंधक कर रू 20,00,000 का गण लिया है। हरेडोअड/ 25.10.2016                                                                |     |
|                              |                  |                |                      | 1425रू न्यायलय हरेडोअड रजक्री चार सं 1265/16-17/16.09.17 को अंतराग रू कुमा रू 88/21.434080 की अपनी कुल भूमि 0.256680 गैररू रू 12.15 से बिकेला हेनर रू अंतराग रू डेलडी सारखपुर पीएच व करू रजक्री का नाम खारिज करके डेलडी सारखपुर रू हरेड |     |
|                              |                  |                |                      | कुमा रू डेलडी सारखपुर पीएच व करू रजक्री का नाम रू डेलडी सारखपुर रू 4369/14.05.13 अंतराग रू 5,00,000/- से बंधक सं 0-पीर अंतराग रू हरेडोअड/ 16.09.17                                                                                      |     |
| योग                          |                  |                | 1                    | 1,4340                                                                                                                                                                                                                                  |     |

ध्यान दें : इस दस्तावेज़ में उल्लेखित जानकारी केवल सूचना के लिए है और इस पर किसी भी प्रकार का निर्णय नहीं लेना चाहिए।

Date: Updated Upo. सं सं 01 14574.07 IST 2019

Technical Support by National Informatics Center, Uttaranchal State Unit, Dehradun.

Charter is owned by Board of Revenue/Informatics.



**(Architecture Drawing)**  
**Pradhan Mantri Awas Yojna EWS**  
**Beldi**

**Distt- Roorkee**  
**(Uttarakhand)**

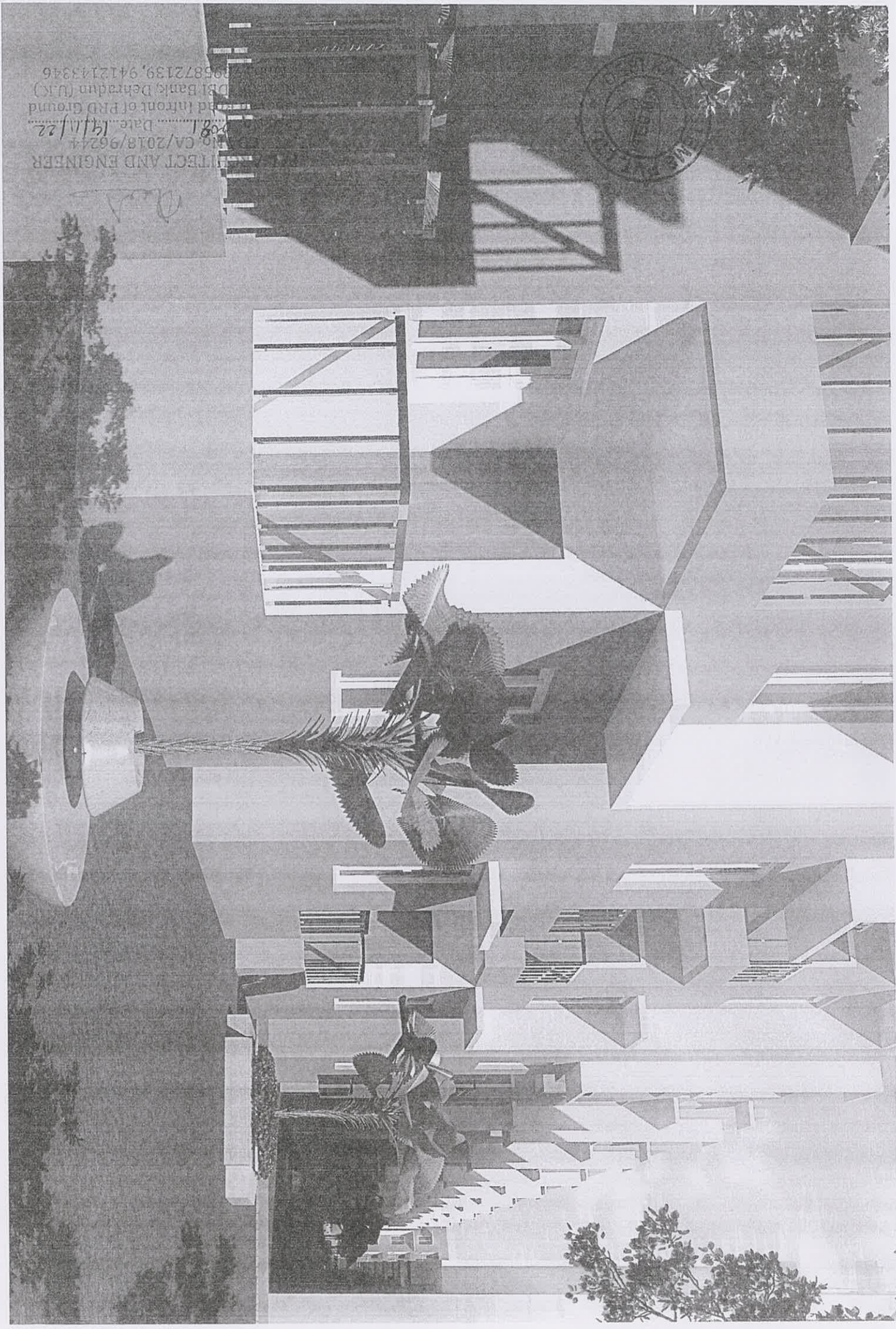


PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0081 Date 14/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob.: 7895872139, 9412143346

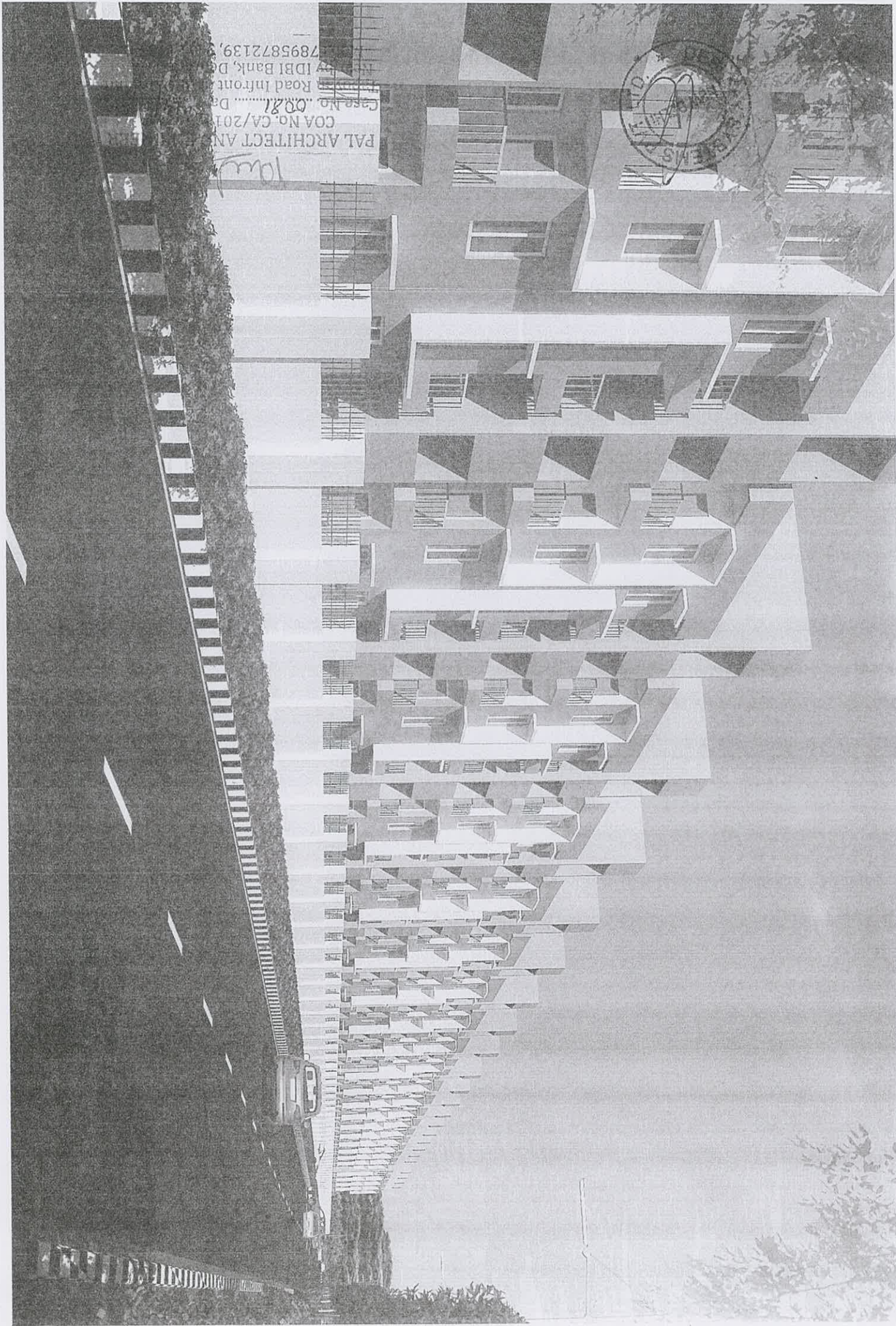




PROJECT AND ENGINEER  
No. CA/2018/96244  
Date 19/11/22  
Plot Infront of PRD Ground  
Del Bank Dehradun (U.K.)  
995872139, 9412143346







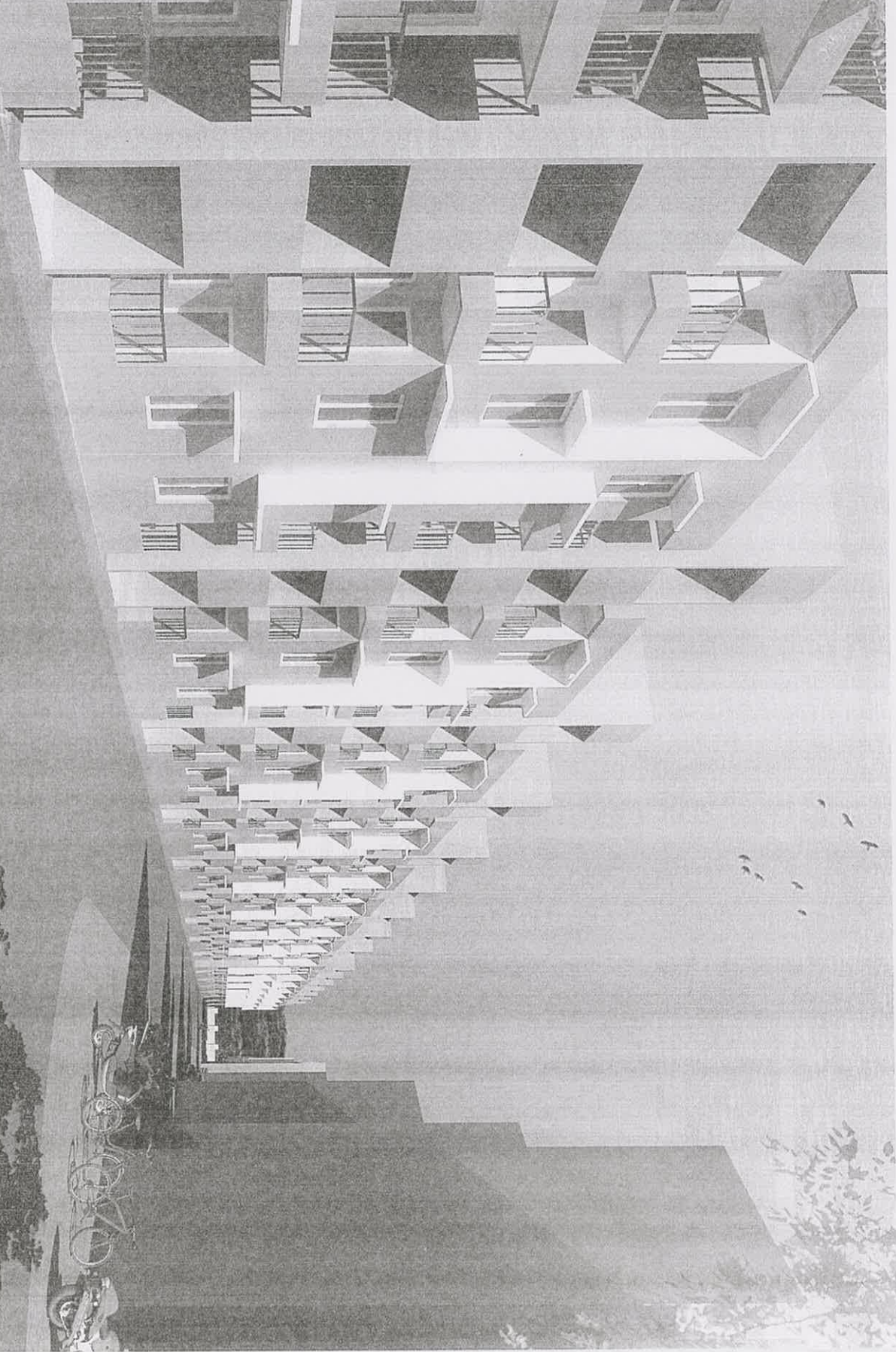
PAL ARCHITECT AND PLANNERS  
COA No. CA/2019/10081  
Case No. 0081  
Road Infront of  
IDBI Bank, D...  
7895872139, 8...



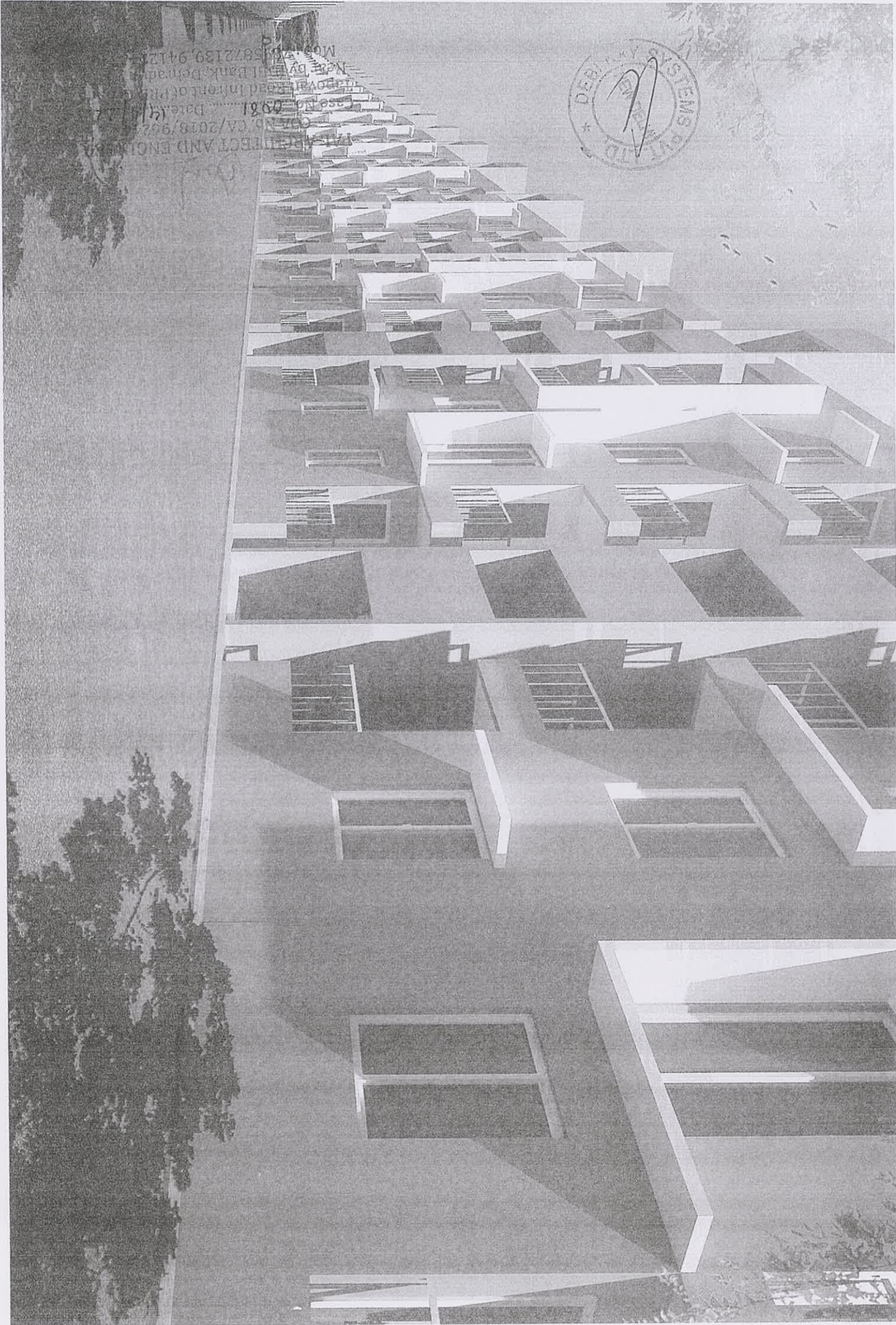


JAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Date: 11/11/2018  
Temporary Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.P.)  
MOB: 7895872139, 9412143370

*Debi*







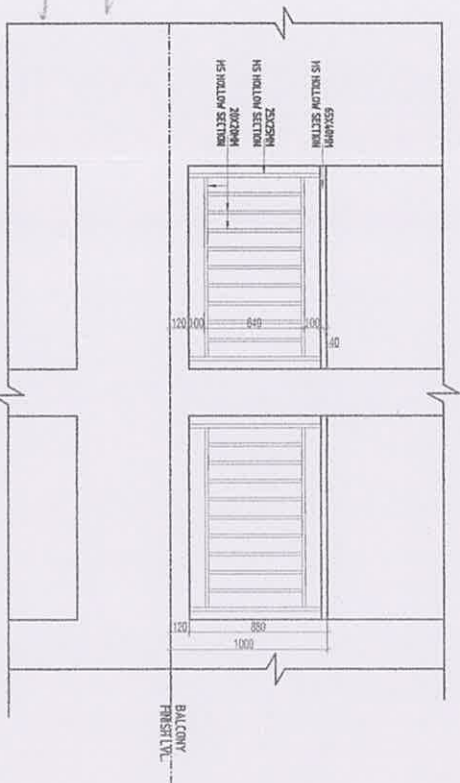
INVESTMENT AND ENGINEERING  
C/O. No. 2018/902  
Date: 15/11/2018  
C/O. No. 2018/902  
Approved in front of P.R.  
Notary Public Bank, Debadra  
Mo. 9775872139, 94121



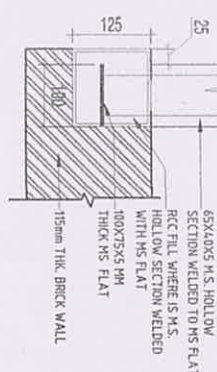
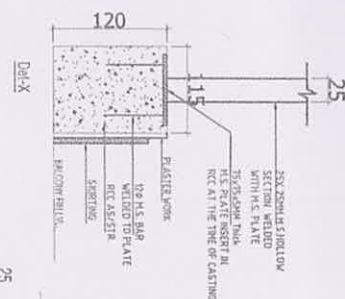
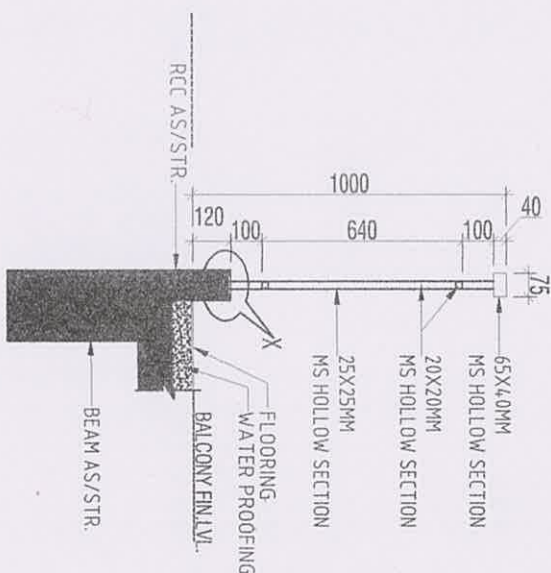




BAI ARCHITECT AND ENGINEER



ELEVATION-1


$$\frac{\text{Det-Y}}{\text{Scale 1:5}}$$


SECTION-A-A



### TYPICAL UNIT PLAN

| REVISED DATE | DESCRIPTION             |
|--------------|-------------------------|
| 04/10/22     | ISSUE FOR A/C (2 PRDCT) |

DEERKAY SYSTEMS (P) LTD.  
Through Director Mr Arjun Mangal  
C-127 13TH ELOOR HUNDAVA HOUSE

KASTURBA GANDHI MARG, NEW DELHI

**Techno Engineers Pvt.Ltd.**  
A-1001 Parkview Complex

Special Agent (strongly recommended)  
Tel : (011) 26531163  
e-mail : [bachheerajy4@gmail.com](mailto:bachheerajy4@gmail.com)

M.V.P. CONSULTANT &amp; ASSOCIATES

203, TAIRA PLACE NAINITAL ROAD  
HALDWANI  
Email: consultantmv@gmail.com

PROJECT ARCHITECTS

**GARG & ASSOCIATES**  
ARCHITECTS ENGINEERS PLANNERS

REGIONAL NATIONAL CONSULTING FIRM  
NEW DELHI-110021  
4065 Gurgaon Road, Gurgaon, Haryana

| Project                                          |
|--------------------------------------------------|
| RECONSTRUCTED MULTI-APARTMENT BUILDING WITH UNIT |

BELO, MEDONAR, UTTARAKHAND

| Drawing Title                |
|------------------------------|
| RAIL CONVEYOR RAILING DETAIL |

|                  |  |
|------------------|--|
| Draw/no Purposed |  |
|------------------|--|

GOOD FOR APPROVAL

|      |      |
|------|------|
| 1.80 | 1.80 |
|------|------|

| CAD no. ref. | Data      |
|--------------|-----------|
|              | OCT. 2022 |

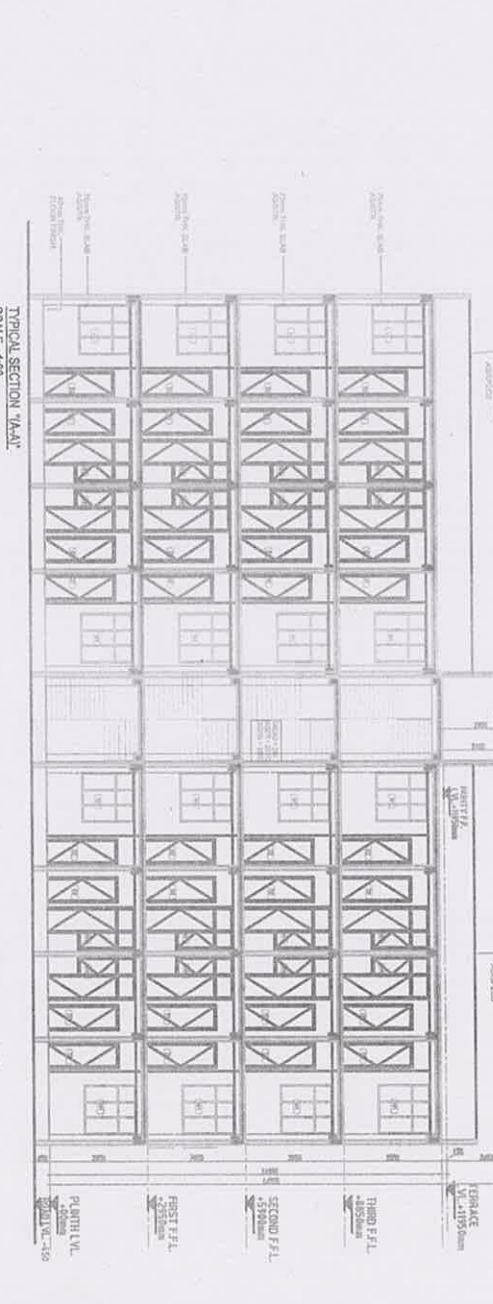
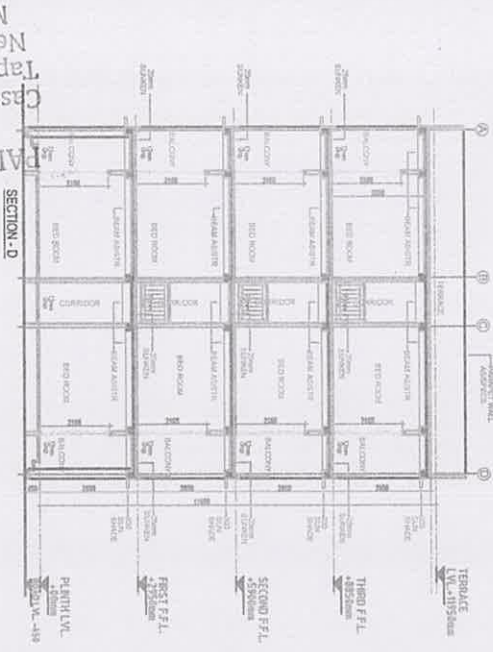
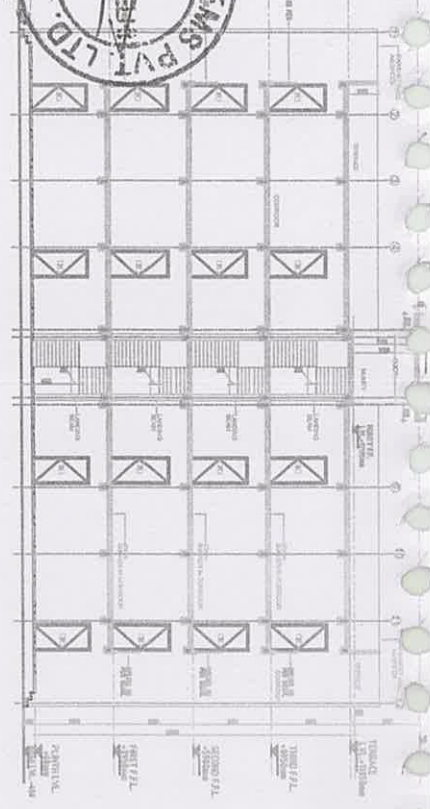
|          |            |             |
|----------|------------|-------------|
| Drawn by | Checked by | Approved by |
| SUMMAN   |            |             |

| Drawing Number | Rev. | RO |
|----------------|------|----|
| PURVISI001.DWG |      |    |



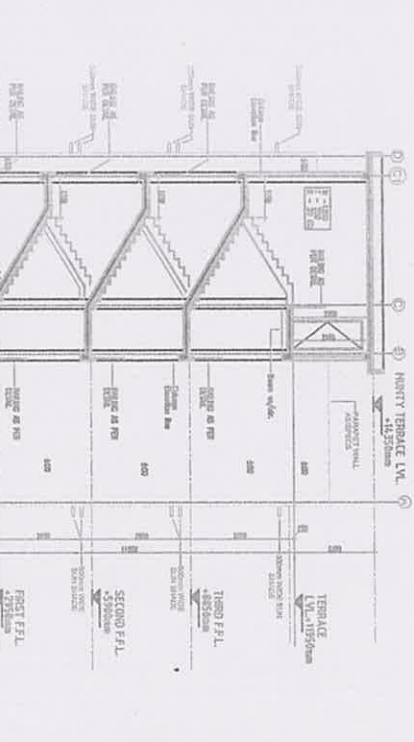
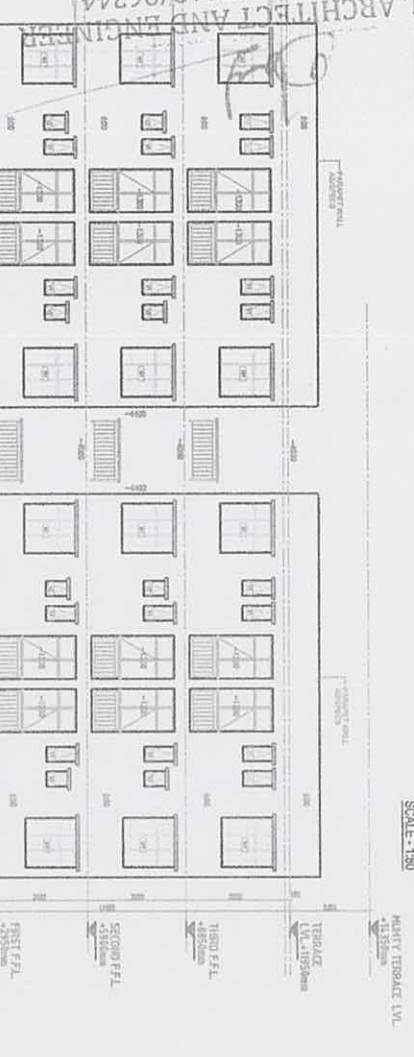


SCALE: 1/100



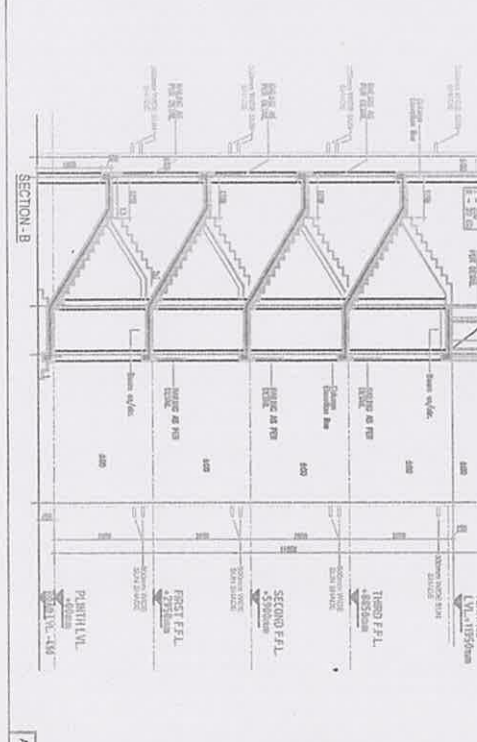
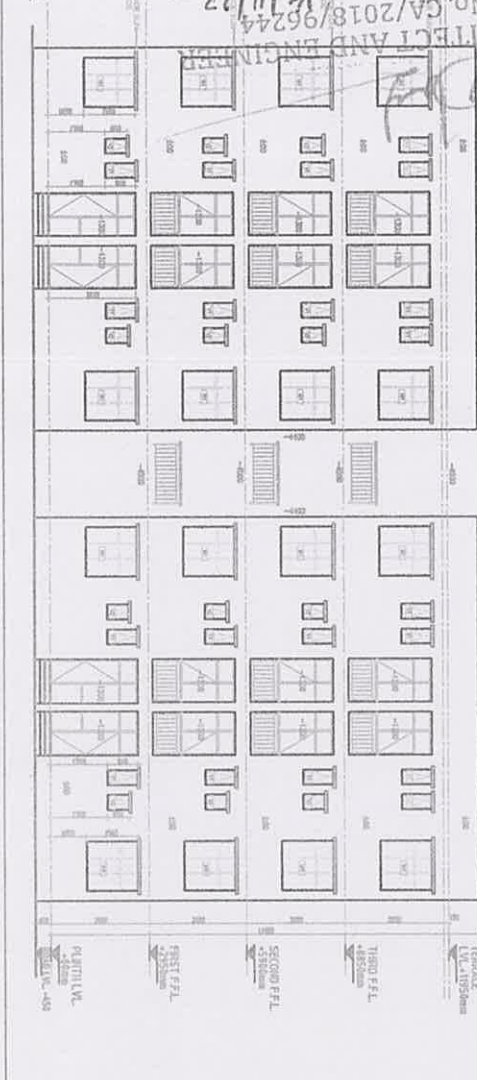
| NO. | REVISION          | DATE | BY | CHKD. |
|-----|-------------------|------|----|-------|
| 1   | AS PER 15 JANUARY |      |    |       |
| 2   | AS PER 15 JANUARY |      |    |       |
| 3   | AS PER 15 JANUARY |      |    |       |
| 4   | AS PER 15 JANUARY |      |    |       |
| 5   | AS PER 15 JANUARY |      |    |       |
| 6   | AS PER 15 JANUARY |      |    |       |
| 7   | AS PER 15 JANUARY |      |    |       |
| 8   | AS PER 15 JANUARY |      |    |       |
| 9   | AS PER 15 JANUARY |      |    |       |
| 10  | AS PER 15 JANUARY |      |    |       |

Case No. 00281  
COA No. CA/2018/96244  
Date 14/11/22  
Near by IDBI Bank, Dehradun (U.K.)  
Tapovan Road Infront of PRD Ground  
Mob.: 7895872139, 9412143346

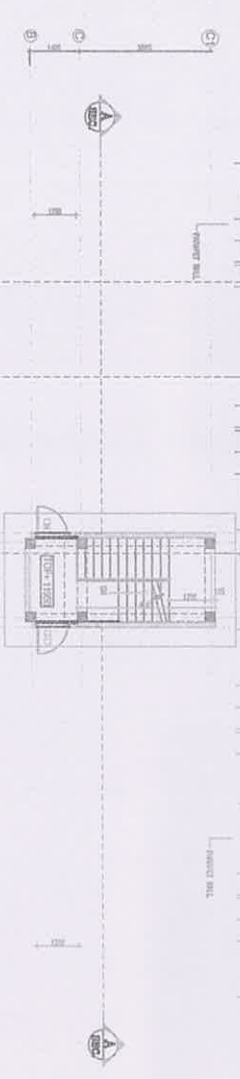


| NO. | REVISION          | DATE | BY | CHKD. |
|-----|-------------------|------|----|-------|
| 1   | AS PER 15 JANUARY |      |    |       |
| 2   | AS PER 15 JANUARY |      |    |       |
| 3   | AS PER 15 JANUARY |      |    |       |
| 4   | AS PER 15 JANUARY |      |    |       |
| 5   | AS PER 15 JANUARY |      |    |       |
| 6   | AS PER 15 JANUARY |      |    |       |
| 7   | AS PER 15 JANUARY |      |    |       |
| 8   | AS PER 15 JANUARY |      |    |       |
| 9   | AS PER 15 JANUARY |      |    |       |
| 10  | AS PER 15 JANUARY |      |    |       |

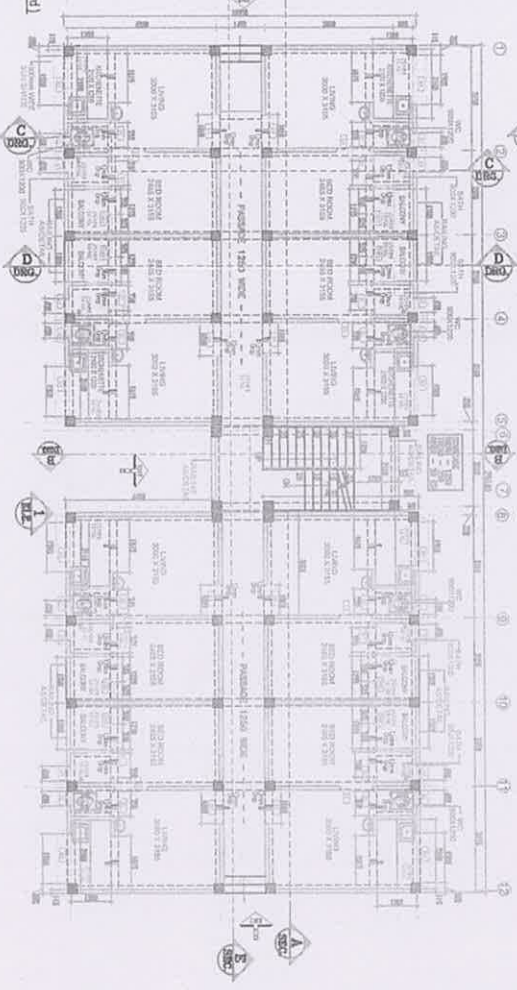
FRONT ELEVATION - 1  
SCALE: 1/80



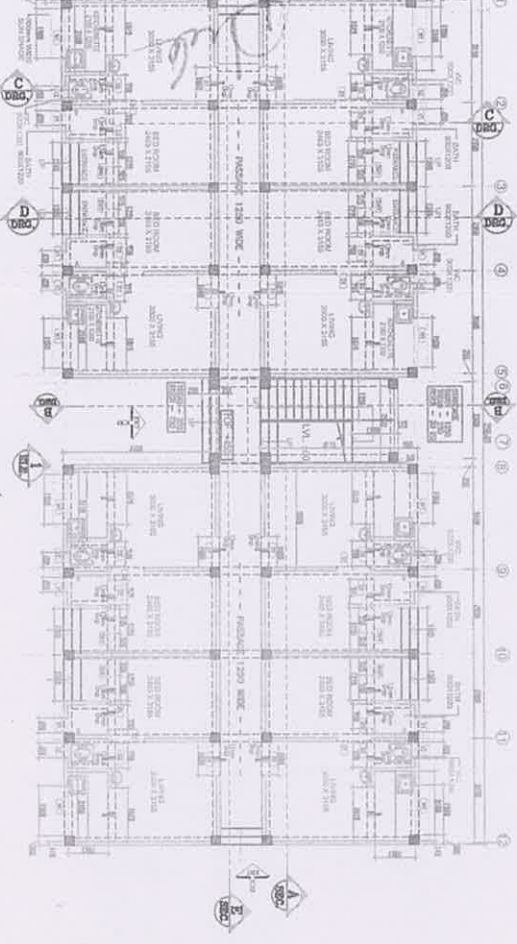
| NO. | REVISION          | DATE | BY | CHKD. |
|-----|-------------------|------|----|-------|
| 1   | AS PER 15 JANUARY |      |    |       |
| 2   | AS PER 15 JANUARY |      |    |       |
| 3   | AS PER 15 JANUARY |      |    |       |
| 4   | AS PER 15 JANUARY |      |    |       |
| 5   | AS PER 15 JANUARY |      |    |       |
| 6   | AS PER 15 JANUARY |      |    |       |
| 7   | AS PER 15 JANUARY |      |    |       |
| 8   | AS PER 15 JANUARY |      |    |       |
| 9   | AS PER 15 JANUARY |      |    |       |
| 10  | AS PER 15 JANUARY |      |    |       |



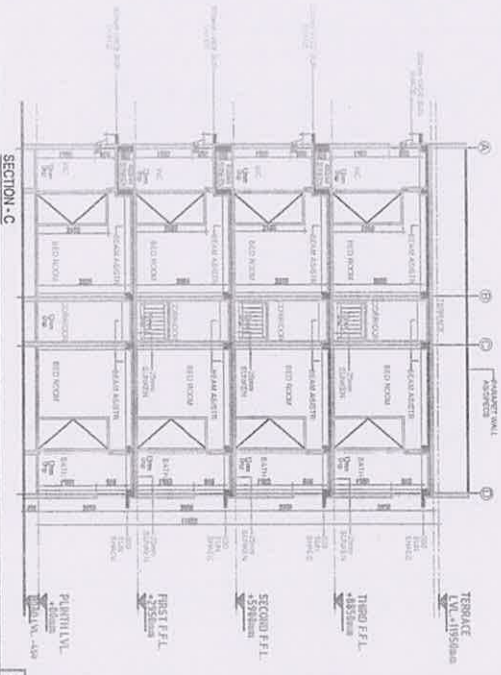
TERRACE FLOOR PLAN



TYPICAL FLOOR PLAN (1st, 2nd, 3rd)



Case No. 00287 Date: 14/11/2018/96244  
 COA No. CA/2018/96244  
 Near by IDBI Bank, Dehradun (UK)  
 Tapovan Road Mfr. Of PRL Group  
 Mob: 7895872139, 9412143340  
 GROUND FLOOR PLAN

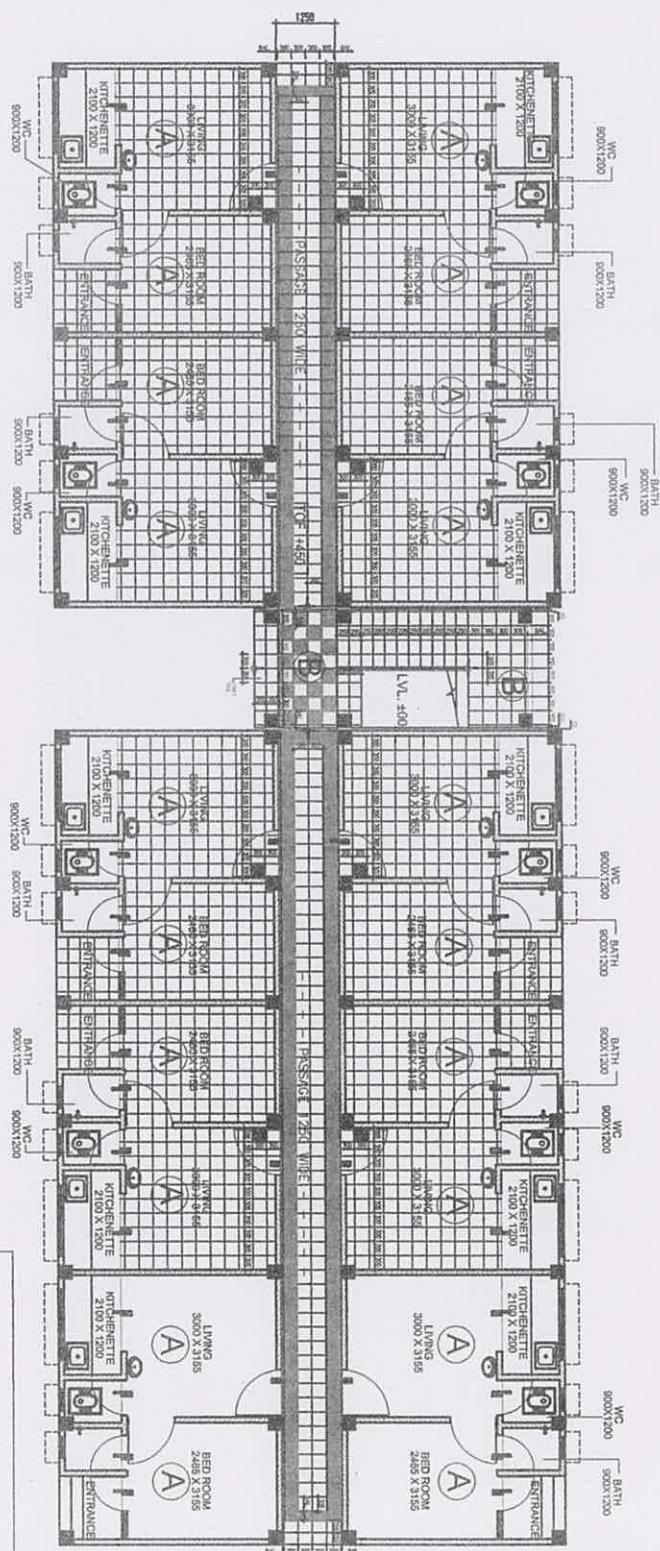


SECTION - C

|                                                                                                                                             |  |                                                                                                                                                 |  |                                                                                                                                                                                                    |  |
|---------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>DEBKA SYSTEMS PVT. LTD.</b><br>Through Director Mr. Anil Mehta<br>G-27, 12TH FLOOR, BHAILAIA HOUSE<br>KASTURBA GANDHI MARG, NEW DELHI    |  | <b>Project</b><br>RICHES PARK RESIDENTIAL<br>BELT, JALPAIGURI, JALPAIGURI                                                                       |  | <b>Project Architect</b><br>M/S. V. S. S. & ASSOCIATES<br>10/1, 1ST FLOOR, 1ST CROSS, 1ST STAGE, 1ST PHASE, 1ST FLOOR, 1ST CROSS, 1ST STAGE, 1ST PHASE, 1ST FLOOR, 1ST CROSS, 1ST STAGE, 1ST PHASE |  |
| <b>Client</b><br>M/S. V. S. S. & ASSOCIATES<br>10/1, 1ST FLOOR, 1ST CROSS, 1ST STAGE, 1ST PHASE, 1ST FLOOR, 1ST CROSS, 1ST STAGE, 1ST PHASE |  | <b>Contractor</b><br>M/S. V. S. S. & ASSOCIATES<br>10/1, 1ST FLOOR, 1ST CROSS, 1ST STAGE, 1ST PHASE, 1ST FLOOR, 1ST CROSS, 1ST STAGE, 1ST PHASE |  | <b>Contract Value</b><br>Rs. 100000000.00                                                                                                                                                          |  |
| <b>Contract Type</b><br>L1                                                                                                                  |  | <b>Contract Period</b><br>120 Days                                                                                                              |  | <b>Contract Start Date</b><br>01/11/2018                                                                                                                                                           |  |
| <b>Contract End Date</b><br>01/11/2019                                                                                                      |  | <b>Contract Status</b><br>In Progress                                                                                                           |  | <b>Contract Location</b><br>BELT, JALPAIGURI, JALPAIGURI                                                                                                                                           |  |
| <b>Contract Description</b><br>RICHES PARK RESIDENTIAL<br>BELT, JALPAIGURI, JALPAIGURI                                                      |  | <b>Contract Documents</b><br>1. Schematic Design<br>2. Preliminary Design<br>3. Final Design<br>4. Construction Documents                       |  | <b>Contract Drawings</b><br>1. Site Plan<br>2. Floor Plan<br>3. Section<br>4. Elevation<br>5. Detail                                                                                               |  |
| <b>Contract Approval</b><br>Approved by: [Signature]<br>Date: 14/11/2018                                                                    |  | <b>Contract Approval</b><br>Approved by: [Signature]<br>Date: 14/11/2018                                                                        |  | <b>Contract Approval</b><br>Approved by: [Signature]<br>Date: 14/11/2018                                                                                                                           |  |



**TYPICAL FLOOR  
FLOORING PLAN**  
(TOWER-A,B,C,D,E,F,G,H,  
J,K,L,M,N,O,P,Q,R,S,T)



**TYPICAL FLOOR  
FLOORING PLAN**  
(TOWER-U)

**LEGEND**

|   |                                               |
|---|-----------------------------------------------|
| A | MATTE FINISH<br>MATCHING SKI<br>(300MM X 300M |
| B | PRECAST CEM<br>(300MM X 300M                  |

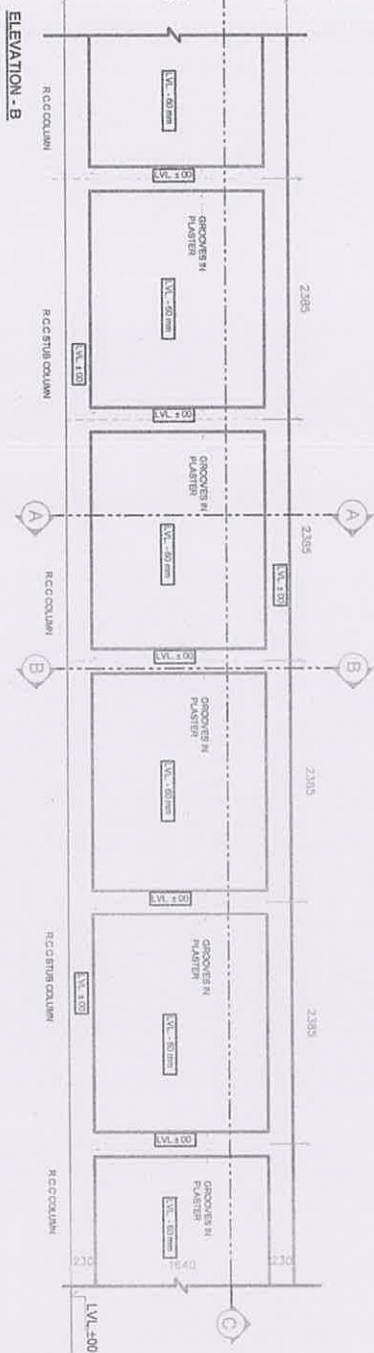
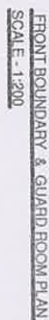
PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0081  
Date 14/11/22  
Near by IDBI Bank, Dehradun (U.K.)  
Tapovan Road Infront of PRD Ground  
Mob.: 7895872139, 9412143346

*Handwritten signature*

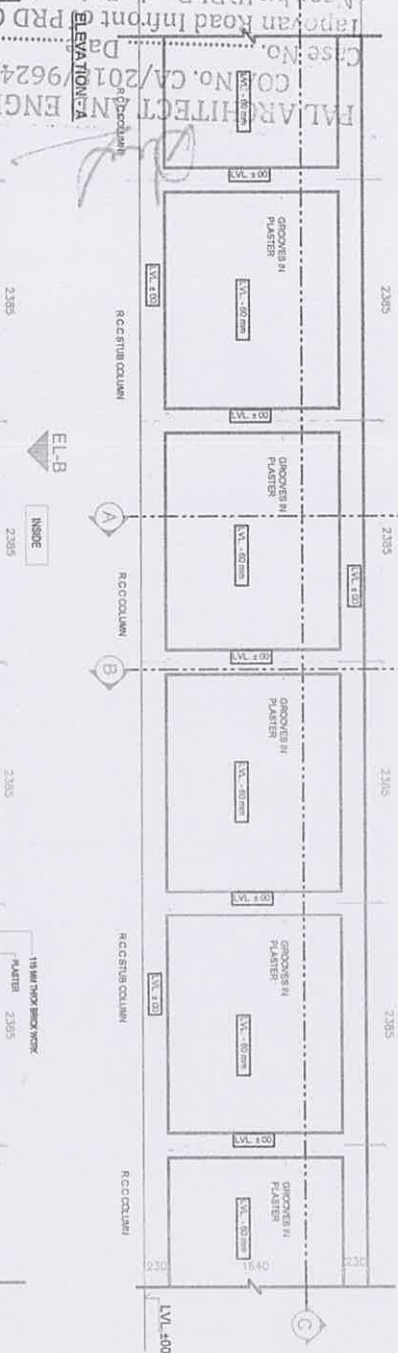




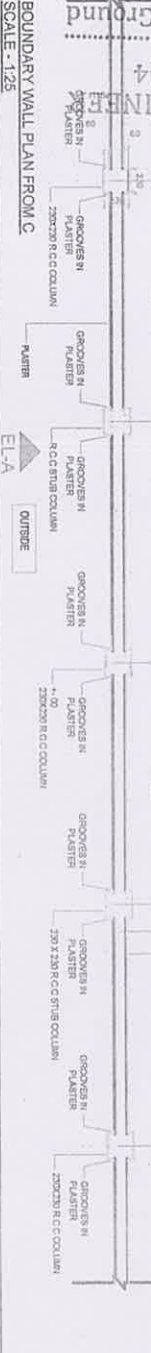




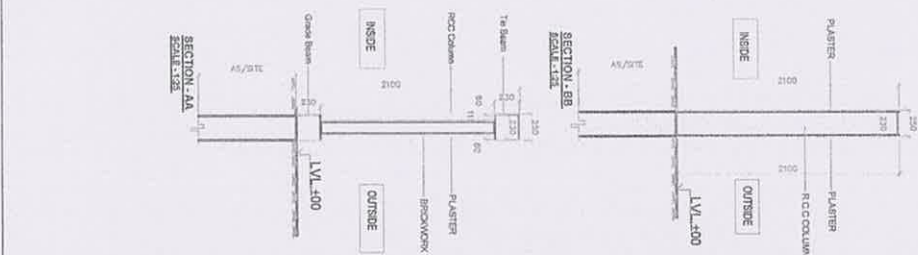
ELEVATION - B



245000



SCALE - 1:25



10

[illegible]

**(Structure Drawing)**  
**Pradhan Mantri Awas Yojna EWS**  
**Beldi**

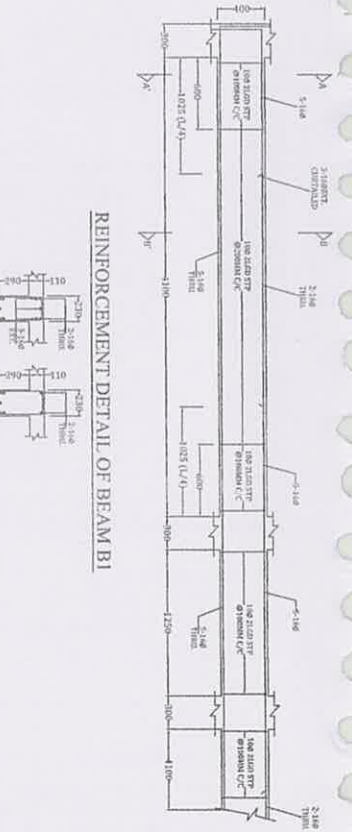
**Distt- Roorkee**  
**(Uttarakhand)**



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0081 Date 19/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob: 7895872139, 9412143346



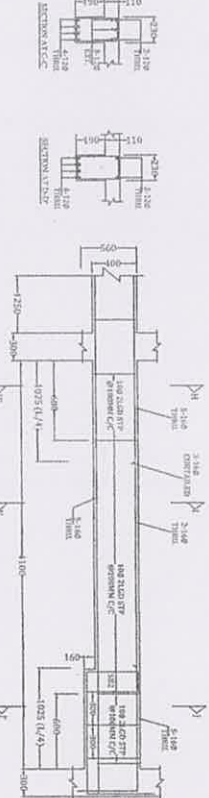
BEAM PLAN



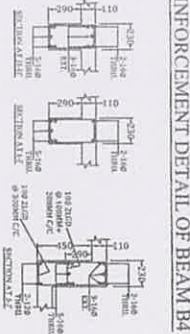
REINFORCEMENT DETAIL OF BEAM B1



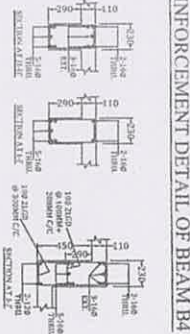
REINFORCEMENT DETAIL OF BEAM B2



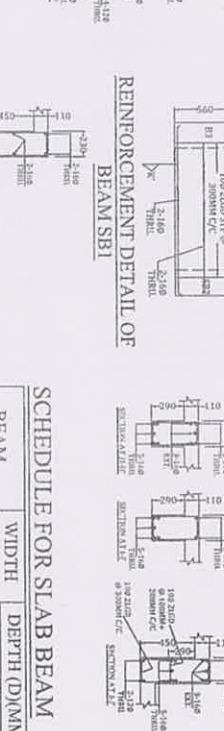
REINFORCEMENT DETAIL OF BEAM B4



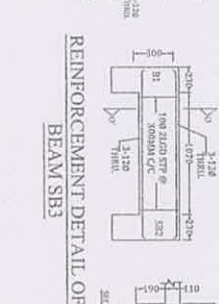
REINFORCEMENT DETAIL OF BEAM SB1



REINFORCEMENT DETAIL OF BEAM B3



REINFORCEMENT DETAIL OF BEAM SB2



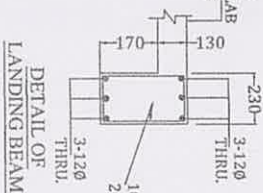
REINFORCEMENT DETAIL OF BEAM SB3



SCHEDULE FOR SLAB BEAM

| BEAM | WIDTH (B) (MM) | DEPTH (D) (MM) | AT SUNK |
|------|----------------|----------------|---------|
| B1   | 230            | 400            | -       |
| B2   | 230            | 300            | -       |
| B3   | 230            | 300            | 560     |
| B4   | 230            | 400            | 560     |
| SB1  | 230            | 560            | -       |
| SB2  | 230            | 300            | 560     |
| SB3  | 230            | 300            | -       |

DETAIL OF LANDING BEAM



- NOTE:-  
1. DRAWING NOT TO SCALE FOLLOW WRITTEN DIMENSIONS ONLY.  
2. ALL DIMENSIONS ARE IN M.M. UNLESS STATED OTHERWISE.  
3. THE R.C.C. GRADE FOR FOUNDATION, COLUMN, BEAM, SLAB & WALL SHALL BE OF M 20  
4. STEEL REINFORCEMENT BARS ARE TO BE HIGH YIELD STRENGTH COLD TWISTED DEFORMED BARS (FE 500 GRADE) AS PER IS 1786:2008. BEFORE USE IT SHOULD BE TESTED AND RECORDED.  
5. THE QUALITY OF MATERIALS USED IN CONCRETE SHALL BE CHECKED REGULARLY AND LAB TEST SHALL BE DONE TO ENSURE THAT SPECIFICATIONS ARE MET.  
6. THE CONCRETING SHALL BE DONE BY WEIGHT AND SITE RECORDS SHALL BE MAINTAINED.  
7. REGULAR CUBE CASTING AND TESTING SHALL BE DONE AT SITE AND RECORD SHALL BE MAINTAINED.  
8. P.C.C. SHALL BE OF GRADE M-7.5 (1:4:8) 75 MM THICK IN FOUNDATION.  
9. DEVELOPMENT LENGTH SHOULD BE MIN. 45d (WHERE d = DIA OF BAR)  
10. CL. FEAR COVER OF 25 MM IN BEAM, 30 MM IN COLUMN AND 50 MM IN FOUNDATION.  
11. ANY DIFFICULTY SHALL BE BROUGHT TO THE DESIGNER BEFORE TAKING ANY DECISION.  
12. CLOSED LINKS SHALL BE PROVIDED OVER THE ENTIRE LENGTH OVER WHICH THE LONGITUDINAL BARS ARE SPICED SPACING OF THESE LINKS SHALL NOT EXCEED 150 MM IN BEAM AND 100 MM IN COLUMN.  
13. LAP LENGTH SHALL NOT BE LESS THAN THE DEVELOPMENT LENGTH OF THE LARGEST LONGITUDINAL BAR IN TENSION.  
14. LAP SPICES SHALL NOT BE PROVIDED:  
A) WITHIN A JOINT.  
B) WITHIN A DISTANCE 2D FROM THE FACE OF COLUMN / BEAM  
15. MORE THAN 50 % OF BARS SHALL NOT BE SPICED AT ANY ONE SECTION.  
16. STRUCTURE IS DESIGNED FOR A S.B.C. OF 7.5T/M2  
17. ALL SLABS FROM GF TO FF TERRACE 110 MM THICK EXCEPT NOTED OTHERWISE

STRUCTURE ENGG. SIGN

CONSULTANT

DESIGNED BY:

ER. HARIT VERMA  
B-TECH (C.E.)  
AM-IEI

M.V.P. CONSULTANT & ASSOCIATES  
203, TARA PLACE MAINTAL ROAD  
HALDWANI  
Email: consultantmvp@gmail.com

L.C. Bhatia  
L.TECH. P.E. (M.C.E.)  
REGISTERED STRUCTURAL ENGINEER (A&S)  
REGD. NO. 0041008 (U.P.)  
201, Indraprastha Road, Mayapuri  
New Delhi (110028) Ph: 991177419

DRG. NO.

TITLE

REV. DATE

DETAIL OF TYP. FIRST,  
SECOND, THIRD FLOOR  
SLAB BEAM

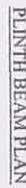
3

30/09/2022

G.F.C

PROPOSED EWS GROUP HOUSING  
UNDER PRADHAN MANTRI  
AWASARI YOJANA (MODEL 2)  
UNIT 16 BELD, ROORKEE

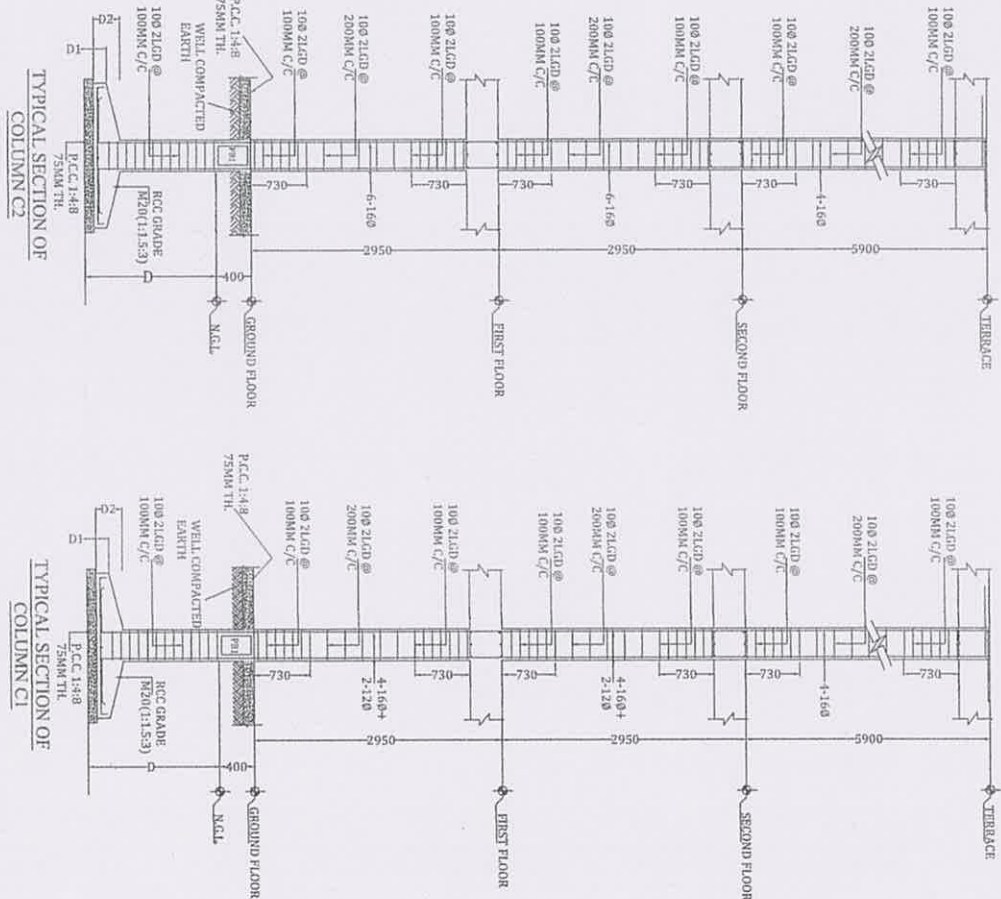
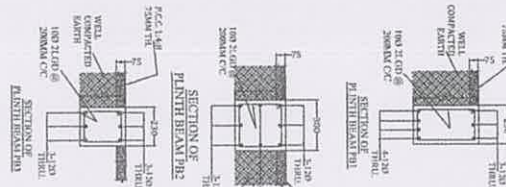




SCHEDULE FOR COLUMN DETAIL (M20 : FE 500)

| COLUMN NAME |               | COLUMN DETAIL | REMARKS                            |
|-------------|---------------|---------------|------------------------------------|
| C1          | B x D<br>(mm) |               | FROM FOUNDATION<br>TO SECOND FLOOR |
| C2          | 300 X 300     |               | FROM FOUNDATION<br>TO SECOND FLOOR |
|             |               |               | FROM SECOND FLOOR<br>TO TERRACE    |

IF 80% $\pm$ 1% STRIPS ARE USED THEN SPACING SHALL BE 80% $\pm$ 1% OF 150MM C/C IN PLINTH BEAM AND 80% $\pm$ 1% @ 100+150MM C/C (END & MID ZONE RESPECTIVELY) IN COLUMNS



NOTE:-

1. ALL DIMENSIONS ARE IN M.M. UNLESS STATED OTHERWISE.
2. THE R.C.C. GRADE FOR FOUNDATION, COLUMN, BEAM, SLAB & WALL SHALL BE OF M 20
3. STEEL REINFORCEMENT BARS ARE TO BE HIGH YIELD STRENGTH COIL TWISTED DEFORMED BARS (FE 500 GRADE) AS PER IS 1786:2008. BEFORE USE IT SHOULD BE TESTED AND RECORDED.
4. THE QUALITY OF MATERIALS USED IN CONCRETE SHALL BE CHECKED REGULARLY AND LAB TEST SHALL BE DONE TO ENSURE THAT SPECIFICATIONS ARE MET.
5. THE CONCRETING SHALL BE DONE BY WEIGHT AND SITE RECORDS SHALL BE MAINTAINED.
6. 7 REGULAR CUBE CASTING AND TESTING SHALL BE DONE AT SITE AND RECORD SHALL BE MAINTAINED.
7. R.C.C. SHALL BE OF GRADE M-7.5 (1:4:8) 75 MM THICK IN FOUNDATION.
8. DEVELOPMENT LENGTH SHOULD BE MIN. 45d (WHERE d = DIA OF BAR )
9. CLEAR COVER OF 25 MM IN BEAM, 30 MM IN COLUMN AND 50 MM IN FOUNDATION.
10. ANY DIFFICULTY SHALL BE BROUGHT TO THE DESIGNER BEFORE TAKING ANY DECISION.
11. 12. CLOSED LINKS SHALL BE PROVIDED OVER THE ENTIRE LENGTH OVER WHICH THE LONGITUDINAL BARS ARE SPLICED. SPACING OF THESE LINKS SHALL NOT EXCEED 150 MM IN BEAM AND 100 MM IN COLUMN.
13. LAP LENGTH SHALL NOT BE LESS THAN THE DEVELOPMENT LENGTH OF THE LARGEST LONGITUDINAL BAR IN TENSION.
14. LAP SPLICES SHALL NOT BE PROVIDED:
  - A) WITHIN A JOINT.
  - B) WITHIN A DISTANCE 2D FROM THE FACE OF COLUMN / BEAM
15. MORE THAN 50 % OF BARS SHALL NOT BE SPLICED AT ANY ONE SECTION.
16. STRUCTURE IS DESIGNED FOR A S.B.C. OF 7.5T/M2
17. ALL SLABS FROM GF TO FF TERRACE 110 MM THICK EXCEPT NOTED OTHERWISE.

PROJECT  
PROPOSED EW'S GROUP HOUSING  
UNDER PRADHAN MANTRI  
AWASIYA YOJANA ( MODEL 2 )  
UNIT 16 BELDI

DRG. NO.

TITLE  
PLINTH LEVEL, PLAN  
AND DETAIL OF COLUMN  
AND THE BEAM

| REV. | DATE       |
|------|------------|
| R0   | 30/09/2022 |

G.F.C

STRUCTURE ENGG. SIGN

  
 J.C. Barlow  
 Tech. P.E.R.T., Assistant, LINDTUM JAC  
 authorized Structural Engineer (A.S.E.)  
 Reg'd. No. DCH-DKS-VASE-44010  
 201, Terrace, Mainland Road, Huddersham  
 Tel. 01482 814100, Huddersham, W. Sussex GU1 2TA

DESIGNED BY:  
ER. HARIT VERMA  
B.TECH (C.E.)  
AM-1EI

**CONSULTANT**  
MYP CONSULTANT & ASSOCIATES  
203, TARA PLACE MAINTAL ROAD  
HALDWANI  
Email: consultantmyn@gmail.com

PAL ARCHITECT AND ENGINEER

COA No. CA/2018/96244

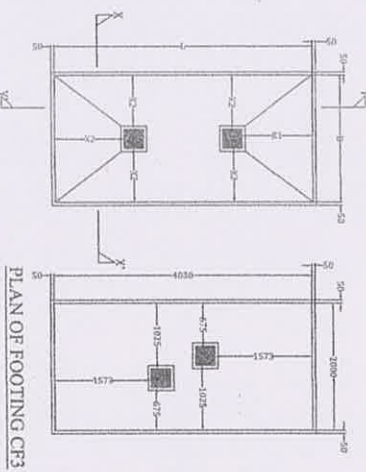
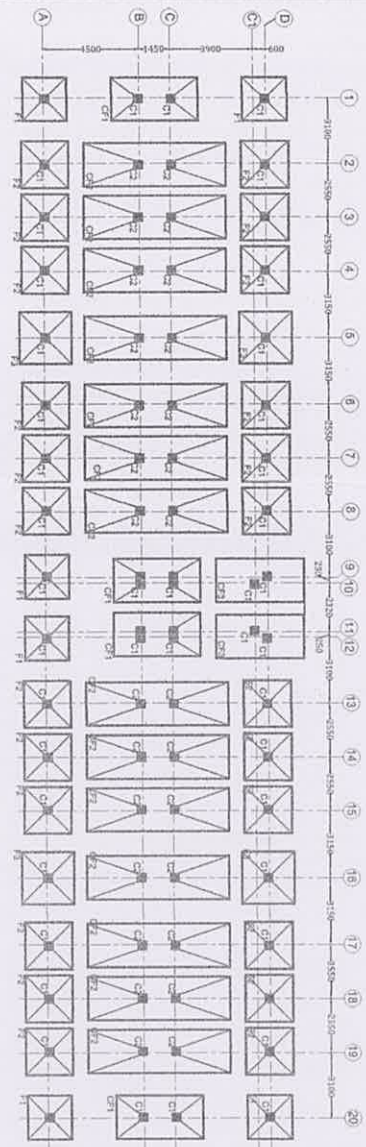
Case No. 2021 Date 19/11/22

Tapovan Road Infront of PRD Ground

Near by IDBI Bank, Dehradun (U.K.)

Mob: 7895872139, 9412143346

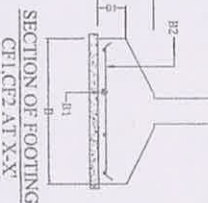
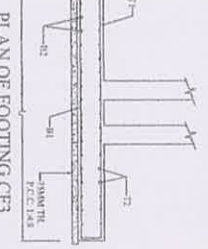
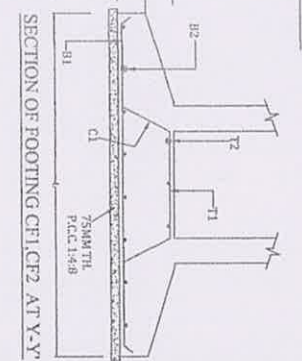
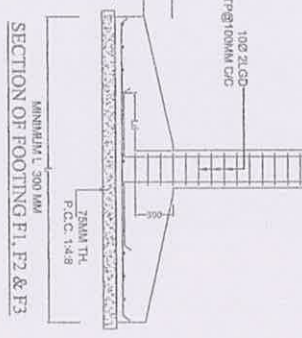
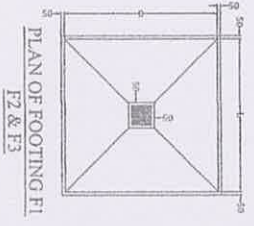




### TRENCH PLAN OF FOUNDATION

SCHEDULE FOR ISOLATED FOOTING (M20 : FE 500)

| FOOTING NAME | FOUNDATION DETAIL | FOUNDATION REINFORCEMENT |
|--------------|-------------------|--------------------------|
| F1           | L X B             | ALONG SHORT SPAN         |
| F2           | L X B             | ALONG LONG SPAN          |
| F3           | L X B             | ALONG LONG SPAN          |



| FOOTING NAME | FOUNDATION DETAIL | FOUNDATION REINFORCEMENT |
|--------------|-------------------|--------------------------|
| F1           | L X B             | ALONG SHORT SPAN         |
| F2           | L X B             | ALONG LONG SPAN          |
| F3           | L X B             | ALONG LONG SPAN          |

NOTE: THE DEPTH OF FOUNDATION FROM N.G.L. SHALL BE 1650 MM

| PROJECT                                                                                      | DRG. NO. | TITLE                       | REV. | DATE       | STRUCTURE ENGG. SIGN |
|----------------------------------------------------------------------------------------------|----------|-----------------------------|------|------------|----------------------|
| PROPOSED EWS GROUP HOUSING UNDER PRADHAN MANTRI AWAAS Yojana (MODEL 2) UNIT 16 BELD, MOORREE | 1        | PLAN & DETAIL OF FOUNDATION | R0   | 30/09/2022 | G.F.C                |

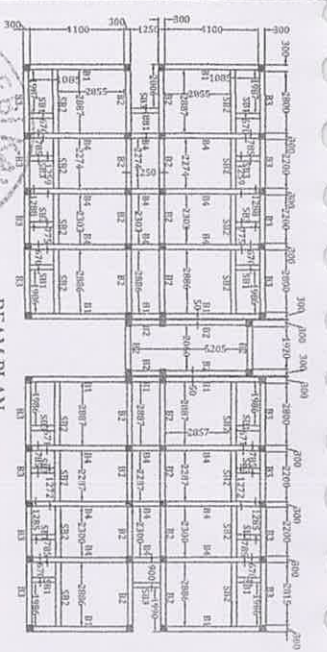
DESIGNED BY: ER. HART VERMA B.TECH (CE) AM-ICI

CONSULTANT: M.V.P. CONSULTANT & ASSOCIATES 203, TARA PLACE MAIN TARA ROAD HALDUPANI Email: consultantmvp@gmail.com

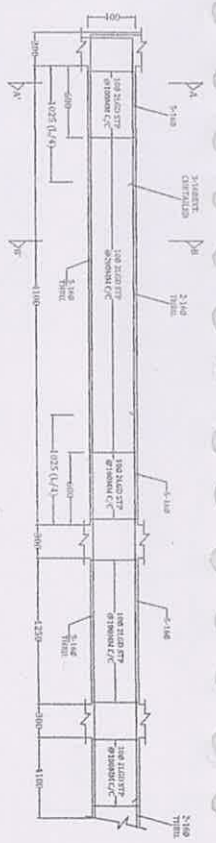
- NOTE:-
- DRAWING NOT TO SCALE FOLLOW WRITTEN DIMENSIONS ONLY.
  - ALL DIMENSIONS ARE IN M.M. UNLESS STATED OTHERWISE.
  - THE R.C.C. GRADE FOR FOUNDATION, COLUMN, BEAM, SLAB & WALL SHALL BE OF M 20.
  - STEEL REINFORCEMENT BARS ARE TO BE HIGH YIELD STRENGTH COLD TWISTED DEFORMED BARS (FE 500 GRADE) AS PER IS 1786:2008 BEFORE USE IT SHOULD BE TESTED AND RECORDED.
  - THE QUALITY OF MATERIALS USED IN CONCRETE SHALL BE CHECKED REGULARLY AND LAB TEST SHALL BE DONE TO ENSURE THAT SPECIFICATIONS ARE MET.
  - THE CONCRETING SHALL BE DONE BY WEIGHT AND SITE RECORDS SHALL BE MAINTAINED.
  - REGULAR CURE CASTING AND TESTING SHALL BE DONE AT SITE AND RECORD SHALL BE MAINTAINED.
  - R.C.C. SHALL BE OF GRADE M-7.5 (1:4:8) 75 MM THICK IN FOUNDATION.
  - DEVELOPMENT LENGTH SHOULD BE MIN. 45d (WHERE d = DIA OF BAR)
  - CLEAR COVER OF 25 MM IN BEAM, 30 MM IN COLUMN AND 50 MM IN FOUNDATION.
  - ANY DIFFICULTY SHALL BE BROUGHT TO THE DESIGNER BEFORE TAKING ANY DECISION.
  - CLOSED LINKS SHALL BE PROVIDED OVER THE ENTIRE LENGTH OVER WHICH THE LONGITUDINAL BARS ARE SPICED SPACING OF THESE LINKS SHALL NOT EXCEED 150 MM IN BEAM AND 100 MM IN COLUMN.
  - LAP LENGTH SHALL NOT BE LESS THAN THE DEVELOPMENT LENGTH OF THE LARGEST LONGITUDINAL BAR IN TENSION.
  - LAP SPLICES SHALL NOT BE PROVIDED:
  - WITHIN A JOINT.
  - WITHIN A DISTANCE 2D FROM THE FACE OF COLUMN / BEAM
  - MORE THAN 50 % OF BARS SHALL NOT BE SPICED AT ANY ONE SECTION.
  - STRUCTURE IS DESIGNED FOR A S.F.C. OF 7.57/12
  - ALL SLABS FROM GF TO FF TERRACE 110 MM THICK EXCEPT NOTED OTHERWISE

PAL ARCHITECT AND ENGINEER  
COA NO. CA/2018/96244  
Case No. 2021 Date 11/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob: 7895872139, 9412143346

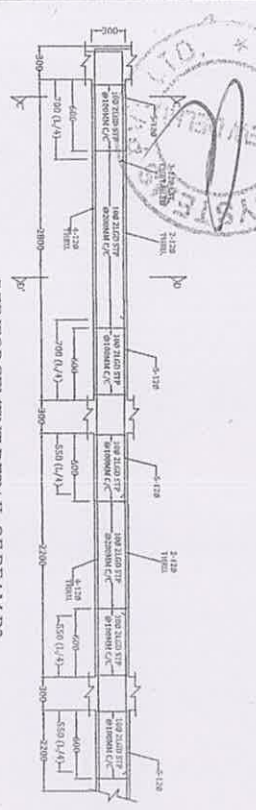




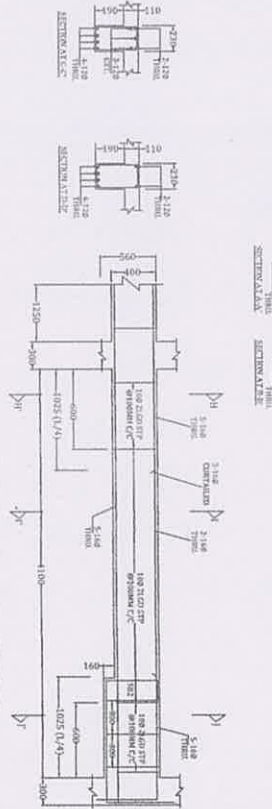
BEAM PLAN



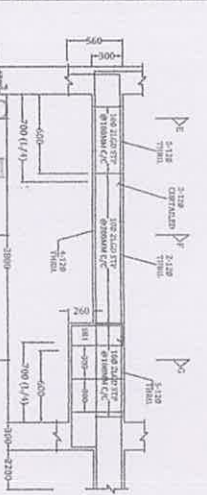
REINFORCEMENT DETAIL OF BEAM B1



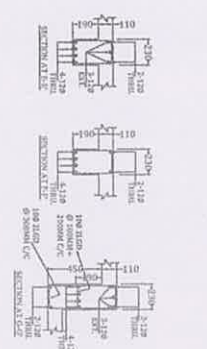
REINFORCEMENT DETAIL OF BEAM B2



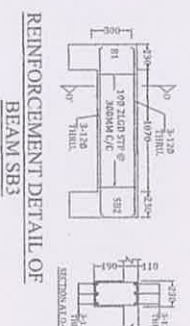
REINFORCEMENT DETAIL OF BEAM B4



REINFORCEMENT DETAIL OF BEAM B3



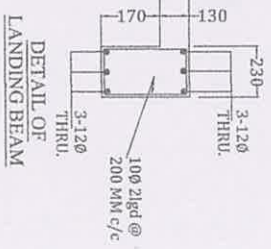
REINFORCEMENT DETAIL OF BEAM SB1



REINFORCEMENT DETAIL OF BEAM SB3

**SCHEDULE FOR SLAB BEAM**

| BEAM | WIDTH (B)(MM) | DEPTH (D)(MM) | AT SUNK |
|------|---------------|---------------|---------|
| B1   | 230           | 400           | -       |
| B2   | 230           | 300           | -       |
| B3   | 230           | 300           | 560     |
| B4   | 230           | 400           | 560     |
| SB1  | 230           | 560           | -       |
| SB2  | 230           | 300           | 560     |
| SB3  | 230           | 300           | -       |



DETAIL OF LANDING BEAM

- NOTE:-
1. DRAWING NOT TO SCALE FOLLOW WRITTEN DIMENSIONS ONLY.
  2. ALL DIMENSIONS ARE IN M.M. UNLESS STATED OTHERWISE.
  3. THE R.C.C. GRADE FOR FOUNDATION, COLUMN, BEAM, SLAB & WALL SHALL BE OF M 20
  4. STEEL REINFORCEMENT BARS ARE TO BE HIGH YIELD STRENGTH COLD TWISTED DEFORMED BARS (FE 500 GRADE) AS PER IS 1786:2008. BEFORE USE IT SHOULD BE TESTED AND RECORDED.
  5. THE QUALITY OF MATERIALS USED IN CONCRETE SHALL BE CHECKED REGULARLY AND LAB TEST SHALL BE DONE TO ENSURE THAT SPECIFICATIONS ARE MET.
  6. THE CONCRETING SHALL BE DONE BY WEIGHT AND SITE RECORDS SHALL BE MAINTAINED.
  7. REGULAR CUBE CASTING AND TESTING SHALL BE DONE AT SITE AND RECORD SHALL BE MAINTAINED.
  8. P.C.C. SHALL BE OF GRADE M-7.5 (1:4:8) 75 MM THICK IN FOUNDATION.
  9. DEVELOPMENT LENGTH SHOULD BE MIN. 45d (WHERE d = DIA OF BAR)
  10. CLEAR COVER OF 25 MM IN BEAM, 30 MM IN COLUMN AND 50 MM IN FOUNDATION.
  11. ANY DIFFICULTY SHALL BE BROUGHT TO THE DESIGNER BEFORE TAKING ANY DECISION.
  12. CLOSED LINKS SHALL BE PROVIDED OVER THE ENTIRE LENGTH OVER WHICH THE LONGITUDINAL BARS ARE SPACED. SPACING OF THESE LINKS SHALL NOT EXCEED 150 MM IN BEAM AND 100 MM IN COLUMN.
  13. LAP LENGTH SHALL NOT BE LESS THAN THE DEVELOPMENT LENGTH OF THE LARGEST LONGITUDINAL BAR IN TENSION.
  14. LAP SPLICES SHALL NOT BE PROVIDED:
    - A) WITHIN A JOINT.
    - B) WITHIN A DISTANCE 2D FROM THE FACE OF COLUMN / BEAM
  15. MORE THAN 50% OF BARS SHALL NOT BE SPLICED AT ANY ONE SECTION.
  16. STRUCTURE IS DESIGNED FOR A S.B.C. OF 7.5T/M2
  17. ALL SLABS FROM G/F TO FF TERRACE 110 MM THICK EXCEPT NOTED OTHERWISE

PROJECT: PROPOSED EWS GROUP HOUSING UNDER PRADHAN MANTRI AWASAYA YOJANA (MODEL 2) UNIT 8 BELDL, ROORKEE

DRG. NO. 3

TITLE: DETAIL OF TYP. FIRST, SECOND, THIRD FLOOR SLAB BEAM

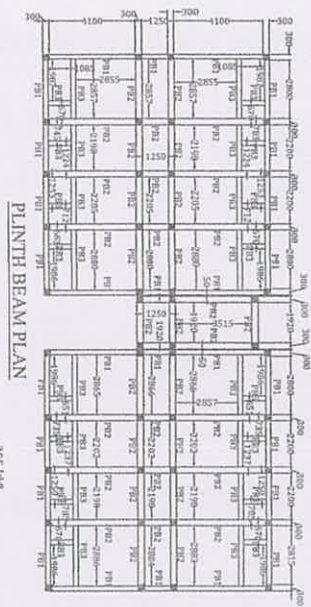
REV. DATE: 30/09/2022

STRUCTURE ENGG. SIGN: G.F.C.

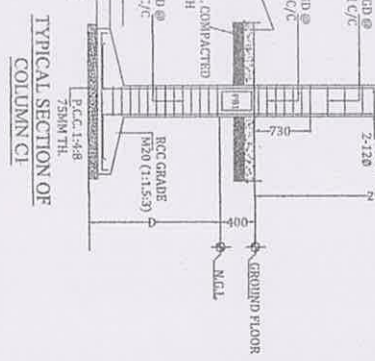
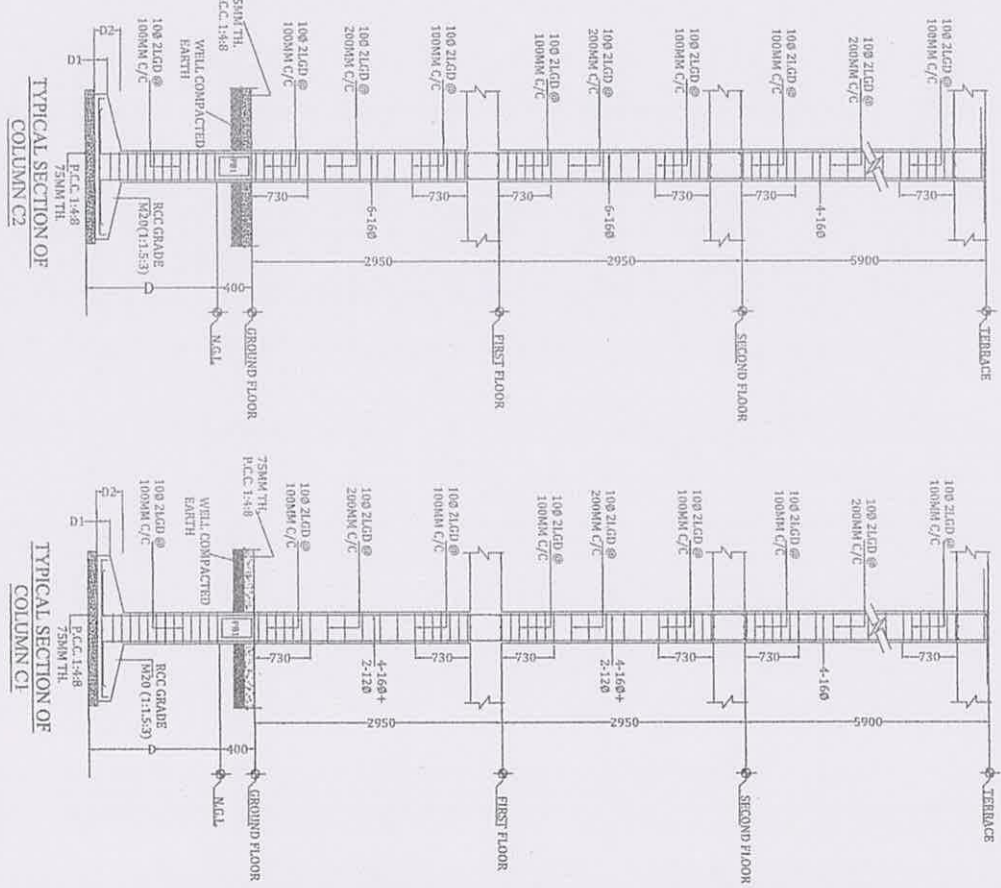
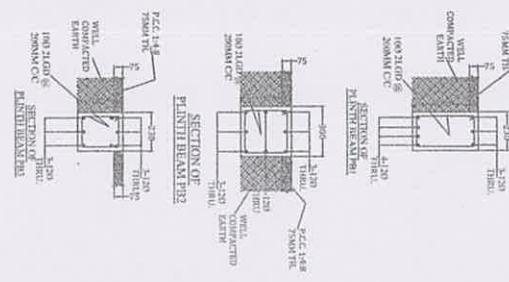
DESIGNED BY: ER. HARIT VERMA, B.TECH (C.E.) AM-IEI

CONSULTANT: M.V.P. CONSULTANT & ASSOCIATES, 203, TARA PLACE NAINITAL ROAD, HALDWANI, Email: consultantmv@gmail.com



[illegible]

NOTE:  
IF 80/2 LGD STIRRUPS ARE USED THEN SPACING SHALL BE  
80/2 LGD @ 150MM C/C IN PLINTH BEAM AND 80/2 LGD @ 100+150MM C/C  
(END & MID ZONE RESPECTIVELY) IN COLUMNS



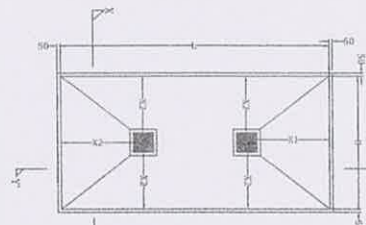
NOTE :-  
1. DRAWING NOT TO SCALE FOLLOW WRITTEN DIMENSIONS ONLY.  
2. ALL DIMENSIONS ARE IN M.M. UNLESS STATED OTHERWISE.  
3. THE R.C.C. GRADE FOR FOUNDATION, COLUMN, BEAM, SLAB & WALL SHALL BE OF M 20  
4. STEEL REINFORCEMENT BARS ARE TO BE HIGH YIELD STRONG COLD TWISTED DEFORMED BARS (FE 500 GRADE) AS PER IS 1786:2008. BEFORE USE IT SHOULD BE TESTED AND RECORDED.  
5. THE QUALITY OF MATERIALS USED IN CONCRETE SHALL BE CHECKED REGULARLY AND LAB TEST SHALL BE DONE TO ENSURE THAT SPECIFICATIONS ARE MET.  
6. THE CONCRETING SHALL BE DONE BY WEIGHT  
AND SITE RECORDS SHALL BE MAINTAINED.  
7. REGULAR CUBE CASTING AND TESTING SHALL BE DONE AT SITE AND RECORD SHALL BE MAINTAINED.

|                                                                                                  |          |                                                            |            |       |                                                                                                                                                                                                                                                                |                                          |                                                                                                            |
|--------------------------------------------------------------------------------------------------|----------|------------------------------------------------------------|------------|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|------------------------------------------------------------------------------------------------------------|
| PROJECT                                                                                          | DRG. NO. | TITLE                                                      | REV.       | DATE  | STRUCTURE ENGG. SIGN                                                                                                                                                                                                                                           | DESIGNED BY:                             | CONSULTANT                                                                                                 |
|                                                                                                  |          |                                                            | NO         |       |                                                                                                                                                                                                                                                                |                                          |                                                                                                            |
| PROPOSED EWS GROUP HOUSING<br>UNDER PRADHAN MANTRI<br>AWASTYA YOJANA ( MODEL 2 )<br>UNIT 8 BELDI | 2        | PLINTH LEVEL, PLAN<br>AND DETAIL OF COLUMN<br>AND THE BEAM | 30/09/2022 | G.F.C | <br>DR. E. V. Kulkarni<br>2304, PRADEEP, 2nd FLOOR, 1000<br>ROAD, KOTWADI, PUNE-411004<br>205, Engineering, Mumbai Road, Hyderabad<br>205, Medical (Hyderabad) No. 301774735 | ER. HARIT VERMA<br>B.TECH (CE)<br>AM-IEI | M.V.P CONSULTANT & ASSOCIATES<br>203, TARA PLACE NAINITAL ROAD<br>HAIDWAR<br>Email: consultantmv@gmail.com |

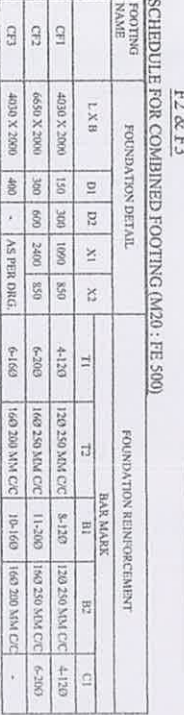
PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0081 Date 17/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K)  
Mob. 7895872139, 9412143346



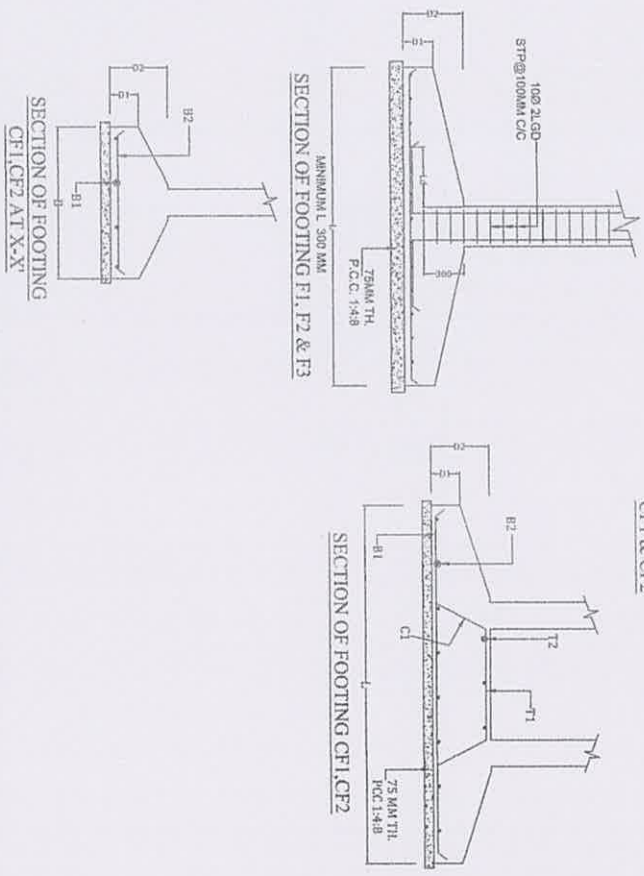




### PLAN OF FOOTING



| I.2 & I.3                                    |             |                   |     |            |     |                          |                |        |                |       |
|----------------------------------------------|-------------|-------------------|-----|------------|-----|--------------------------|----------------|--------|----------------|-------|
| SCHEDULE FOR COMBINED FOOTING (M20 : FE 500) |             |                   |     |            |     |                          |                |        |                |       |
| FOOTING NAME                                 |             | FOUNDATION DETAIL |     |            |     | FOUNDATION REINFORCEMENT |                |        |                |       |
|                                              |             |                   |     |            |     | BAR MARK                 |                |        |                |       |
|                                              |             |                   |     |            |     | T1                       | T2             | B1     | B2             | C1    |
| CF1                                          | L X B       | D1                | D2  | X1         | X2  |                          |                |        |                |       |
| CF1                                          | 4030 X 2000 | 150               | 300 | 1090       | 840 | 4-120                    | 120 250 MM C/C | 8-120  | 120 250 MM C/C | 4-120 |
| CF2                                          | 6650 X 2000 | 300               | 600 | 2400       | 850 | 6-200                    | 160 250 MM C/C | 11-200 | 160 250 MM C/C | 6-200 |
| CF3                                          | 4030 X 2000 | 400               | -   | AS PER DMD |     | 6-160                    | 160 200 MM C/C | 10-160 | 160 200 MM C/C | -     |



SECTION OF FOOTING  
CF1,CF2 AT X-X'

SECTION OF FOOTING CFI,CF2

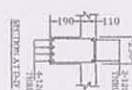
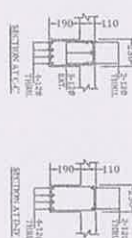
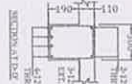
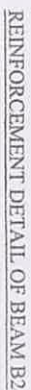
NOTE :-

1. DRAWING NOT TO SCALE FOLLOW WRITTEN DIMENSIONS ONLY.
2. ALL DIMENSIONS ARE IN M.M. UNLESS STATED OTHERWISE.
3. THE R.C.C. GRADE FOR FOUNDATION,COLUMN,BEAM, SLAB & WALL SHALL BE OF M 20
4. STEEL REINFORCEMENT BARS ARE TO BE HIGH YIELD STRENGTH COLD TWISTED DEFORMED BARS (FE 500 GRADE) AS PER IS 1786:2008.BEFORE USE IT SHOULD BE TESTED AND RECORDED.
5. THE QUALITY OF MATERIALS USED IN CONCRETE SHALL BE CHECKED REGULARLY AND LAB TEST SHALL BE DONE TO ENSURE THAT SPECIFICATIONS ARE MET.
6. THE CONCRETING SHALL BE DONE BY WEIGHT AND SITE RECORDS SHALL BE MAINTAINED.
7. REGULAR CURB CASTING AND TESTING SHALL BE DONE AT SITE AND RECORD SHALL BE MAINTAINED.
8. P.C.C. SHALL BE OF GRADE M-7.5 (1:4:8) 75 MM THICK IN FOUNDATION.
9. DEVELOPMENT LENGTH SHOULD BE MIN. 45d (WHERE d = DIA OF BAR)
10. CLEAR COVER OF 25 MM IN BEAM, 30 MM IN COLUMN AND 50 MM IN FOUNDATION.
11. ANY DIFFICULTY SHALL BE BROUGHT TO THE DESIGNER BEFORE TAKING ANY DECISION.
12. CLOSED LINKS SHALL BE PROVIDED OVER THE ENTIRE LENGTH OVER WHICH THE LONGITUDINAL BARS ARE SPICED.SPACING OF THESE LINKS SHALL NOT EXCEED 150 MM IN BEAM AND 100 MM IN COLUMN.
13. LAP LENGTH SHALL NOT BE LESS THAN THE DEVELOPMENT LENGTH OF THE LARGEST LONGITUDINAL BAR IN TENSION.
14. LAP SPLICES SHALL NOT BE PROVIDED:
  - A) WITHIN A JOINT.
  - B) WITHIN A DISTANCE 2D FROM THE FACE OF COLUMN / BEAM
15. MORE THAN 50 % OF BARS SHALL NOT BE SPICED AT ANY ONE SECTION.
16. STRUCTURE IS DESIGNED FOR A S.B.C. OF 7.5T/M2
17. ALL SLABS FROM GF TO FF TERRACE 110 MM THICK EXCEPT NOTED OTHERWISE.

|                      |                                                                                                               |                                                                                                                                                                                                                                                                                                            |  |
|----------------------|---------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| PROJECT              | PROPOSED EWS GROUP HOUSING<br>UNDER PRADHAN MANTRI<br>AWASAYA YOJANA ( MODEL 2 )<br>UNIT 8 BELDI,KOORKEE      |                                                                                                                                                                                                                                                                                                            |  |
| DRG. NO.             | 1                                                                                                             |                                                                                                                                                                                                                                                                                                            |  |
| TITLE                | PLAN AND DETAIL OF<br>COLUMN AND<br>FOUNDATION                                                                |                                                                                                                                                                                                                                                                                                            |  |
| REV.                 | DATE                                                                                                          |                                                                                                                                                                                                                                                                                                            |  |
|                      | 30/09/2022                                                                                                    | R0                                                                                                                                                                                                                                                                                                         |  |
| C.F.C                |                                                                                                               | <br>N.C. Bhatnagar<br>(Tenn. Res. Proj. & Control, District W. & C.,<br>Andhra Pradesh Govt. Engineering College,<br>Rajahmundry, Andhra Pradesh, India)<br>Date: 30/09/2022<br>Place: Rajahmundry, Andhra Pradesh, India |  |
| STRUCTURE ENGG. SIGN |                                                                                                               |                                                                                                                                                                                                                                                                                                            |  |
| DESIGNED BY:         | ER. HARIVERRMA<br>B.TECH (CE)<br>AM-IEI                                                                       |                                                                                                                                                                                                                                                                                                            |  |
| CONSULTANT           | M.V.P. CONSULTANT & ASSOCIATES<br>203, TARA PLACE MAINITAL ROAD<br>HALDIWANI<br>Email: consultantmv@gmail.com |                                                                                                                                                                                                                                                                                                            |  |

PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. .... Date. 14/11/22  
Tapovan Road Infront of PRD Ground Near by IDBI Bank, Dehradun (U.K.)  
Near by IDBI Bank Mob... 7895872139, 9412143346  
Mob. ....



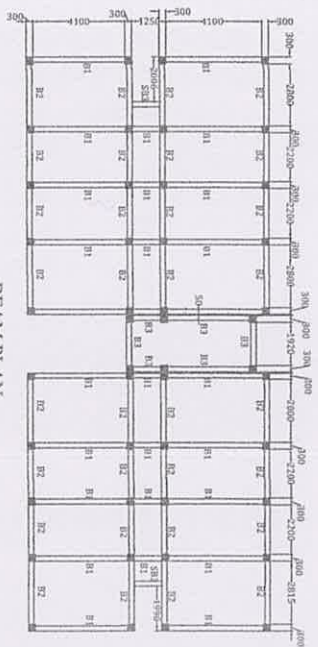


SCHEDULE FOR SLAB BEAM  
(TERRACE)

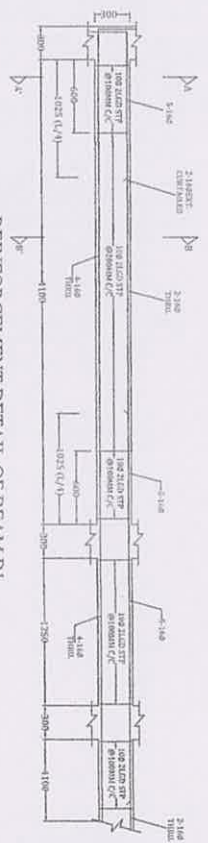
**EFFECTS OF CRYSTALLINITY ON THE MECHANICAL PROPERTIES OF POLYETHYLENE**

Email: consultantmvb@gmail.com

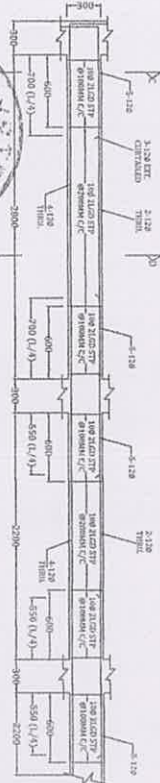
PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/9624  
Case No. 8081 Date: 19/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
01313142346



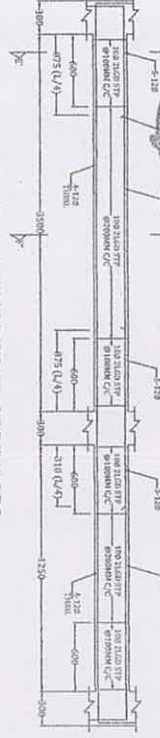
BEAM PLAN



REINFORCEMENT DETAIL OF BEAM B1



REINFORCEMENT DETAIL OF BEAM B2



REINFORCEMENT DETAIL OF BEAM B3

**SCHEDULE FOR SLAB BEAM (TERRACE)**

| BEAM | WIDTH (B) (MM) | DEPTH (D) (MM) |
|------|----------------|----------------|
| B1   | 300            | 300            |
| B2   | 300            | 300            |
| B3   | 230            | 300            |

- NOTE :-
1. DRAWING NOT TO SCALE FOLLOW WRITTEN DIMENSIONS ONLY.
  2. ALL DIMENSIONS ARE IN M.M. UNLESS STATED OTHERWISE.
  3. THE R.C.C. GRADE FOR FOUNDATION, COLUMN, BEAM, SLAB & WALL SHALL BE OF M 20
  4. STEEL REINFORCEMENT BARS ARE TO BE HIGH YIELD STRENGTH COLD TWISTED DEFORMED BARS (FE 500 GRADE) AS PER IS 1786:2008 BEFORE USE IT SHOULD BE TESTED AND RECORDED.
  5. THE QUALITY OF MATERIALS USED IN CONCRETE SHALL BE CHECKED REGULARLY AND LAB TEST SHALL BE DONE TO ENSURE THAT SPECIFICATIONS ARE MET.
  6. THE CONCRETING SHALL BE DONE BY WEIGHT AND SITE RECORDS SHALL BE MAINTAINED.
  7. REGULAR CUBE CASTING AND TESTING SHALL BE DONE AT SITE AND RECORD SHALL BE MAINTAINED.
  8. R.C.C. SHALL BE OF GRADE M-7.5 (1:4:8) 75 MM THICK IN FOUNDATION.
  9. DEVELOPMENT LENGTH SHOULD BE MIN. 45d (WHERE d = DIA OF BAR)
  10. CLEAR COVER OF 25 MM IN BEAM, 30 MM IN COLUMN AND 50 MM IN FOUNDATION.
  11. ANY DIFFICULTY SHALL BE BROUGHT TO THE DESIGNER BEFORE TAKING ANY DECISION.
  12. CLOSED LINKS SHALL BE PROVIDED OVER THE ENTIRE LENGTH OVER WHICH THE LONGITUDINAL BARS ARE SPICED SPACING OF THESE LINKS SHALL NOT EXCEED 150 MM IN BEAM AND 100 MM IN COLUMN.
  13. LAP LENGTH SHALL NOT BE LESS THAN THE DEVELOPMENT LENGTH OF THE LARGEST LONGITUDINAL BAR IN TENSION.
  14. LAP SPLICES SHALL NOT BE PROVIDED:
    - A) WITHIN A JOINT.
    - B) WITHIN A DISTANCE 2D FROM THE FACE OF COLUMN / BEAM
  15. MORE THAN 50% OF BARS SHALL NOT BE SPICED AT ANY ONE SECTION.
  16. STRUCTURE IS DESIGNED FOR A S.B.C. OF 7.5 MN/2
  17. ALL SLABS FROM GP TO FF TERRACE 110 MM THICK EXCEPT NOTED OTHERWISE

**PROJECT**

PROPOSED EWS GROUP HOUSING  
UNDER PRADHAN MANTRI  
AWASAYA YOJANA (MODEL 2)  
UNIT 8 BELD, ROORKEE

**DRG. NO.**

DETAIL OF TERRACE  
SLAB BEAM

**REV.**

R0 30/09/2022

**DATE**

30/09/2022

**STRUCTURE ENGG. SIGN**

100% FEEDBACK & SIGNED, 100% SILENT  
- Software Structural Engineer (P&S)  
- Regd. No. DOP-090-0488-2013  
20X, Tapsa, Ramnagar Road, (Roorkee)  
(884) 444444 (Roorkee) 0511-299777 (Roorkee)

**DESIGNED BY:**

ER. HARTI VERMA  
B.TECH (C.E.)  
AM-JEI

**CONSULTANT**

M.V.P. CONSULTANT & ASSOCIATES  
203, TARA PLACE MAIN TALL ROAD  
HALDHWANI  
Email: consultantmvp@gmail.com

**PAL ARCHITECT AND ENGINEER**

COA No. CA/2018/96244

Case No. .... Date.....  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob: 7895872139, 9412143346



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0081 Date 14/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob.: 7895872139, 9412143346



(Civil Work)

Tower No A,B,F,G,H,T to S ( 15 Tower)  
Bill Of Quantity PMAY EWS (Uttarakhand)

PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0921  
Date 14/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob.: 7895872139, 9412143346



| S.NO.                      | DSR - 21 | DESCRIPTION OF WORK                                                                                                                                                                                                                                                                                                   | UNIT | QTY      | RATE    | AMOUNT      |
|----------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|---------|-------------|
| <b>EARTH WORK</b>          |          |                                                                                                                                                                                                                                                                                                                       |      |          |         |             |
| 1                          | 2.28     | Surface dressing of the ground including removing vegetation and in equalities not exceeding 15 cm deep and disposal of rubbish, lead up to 50 m and lift up to 1.5 m.                                                                                                                                                |      |          |         |             |
| 2                          | 2.28.1   | All kinds of soil                                                                                                                                                                                                                                                                                                     | sqm  | 23665    | 28.15   | 666169.75   |
| 3                          | 2.32     | Clearing grass and removal of the rubbish up to a distance of 50 m outside the periphery of the area cleared.                                                                                                                                                                                                         | sqm  | 4733     | 7.4     | 35024.2     |
| 4                          | 2.6      | Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge. 2.6.1 All kinds of soil |      |          |         |             |
| 5                          | 2.6.1    | All kinds of soil                                                                                                                                                                                                                                                                                                     | cum  | 11821.56 | 205.45  | 2428739.502 |
| 6                          | 2.36     | Extra for levelling & neatly dressing of disposed soil completely as directed by Engineer-in-charge.                                                                                                                                                                                                                  | cum  | 1773.12  | 76.7    | 135998.304  |
| <b>CONCRETE WORK</b>       |          |                                                                                                                                                                                                                                                                                                                       |      |          |         |             |
| <b>SUB TOTAL</b>           |          |                                                                                                                                                                                                                                                                                                                       |      |          |         |             |
|                            |          |                                                                                                                                                                                                                                                                                                                       |      |          |         | 3265931.756 |
| 7                          | 4.1      | Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :                                                                                                                                                                    |      |          |         |             |
| 8                          | 4.1.8    | 1:4:8 (1 Cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 40 mm nominal size derived from natural sources)                                                                                                                                                                   | cum  | 1214.445 | 6326.05 | 7682639.792 |
| 9                          | 4.20.1   | 4.20.1 All works upto plinth level :                                                                                                                                                                                                                                                                                  |      |          |         |             |
| 10                         | 4.20.1.3 | Concrete of M20 grade with minimum cement content of 270 kg/cum                                                                                                                                                                                                                                                       | cum  | 2921.38  | 8387.15 | 24502052.27 |
| 11                         | 4.20.2   | All works above plinth and upto floor V level                                                                                                                                                                                                                                                                         |      |          |         |             |
| 12                         | 4.20.2.3 | Concrete of M20 grade with minimum cement content of 270 kg/cum                                                                                                                                                                                                                                                       | cum  | 5923.41  | 10009.5 | 59290372.4  |
| <b>SUB TOTAL</b>           |          |                                                                                                                                                                                                                                                                                                                       |      |          |         |             |
|                            |          |                                                                                                                                                                                                                                                                                                                       |      |          |         | 91475064.45 |
| <b>FORM WORK</b>           |          |                                                                                                                                                                                                                                                                                                                       |      |          |         |             |
| 12                         | 5.9      | Centering and shuttering including strutting, propping etc. and removal of form for                                                                                                                                                                                                                                   |      |          |         |             |
| 13                         | 5.9.1    | Foundations, footings, bases of columns, etc. for mass concrete                                                                                                                                                                                                                                                       | sqm  | 9726.39  | 307.95  | 2995241.801 |
| 14                         | 5.9.3    | Suspended floors, roofs, landings, balconies and access platform                                                                                                                                                                                                                                                      | sqm  | 127867.2 | 766.55  | 98016632.82 |
| 16                         | 5.9.6    | Columns, Pillars, Piers, Abutments, Posts and Struts                                                                                                                                                                                                                                                                  | sqm  | 19845    | 657.75  | 13053048.75 |
| 17                         | 5.9.7    | Stairs, (excluding landings) except spiral-staircases                                                                                                                                                                                                                                                                 | sqm  | 4153.17  | 657.75  | 2731747.568 |
| <b>SUB TOTAL</b>           |          |                                                                                                                                                                                                                                                                                                                       |      |          |         |             |
|                            |          |                                                                                                                                                                                                                                                                                                                       |      |          |         | 116796670.9 |
| <b>STEEL REINFORCEMENT</b> |          |                                                                                                                                                                                                                                                                                                                       |      |          |         |             |
| 18                         | 5.22     | Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level                                                                                                                                                                         |      |          |         |             |
| 19                         | 5.22.6   | Thermo-Mechanically Treated bars of grade Fe-500D or more                                                                                                                                                                                                                                                             | kg   | 985691.8 | 89.65   | 88367266.28 |
| <b>SUB TOTAL</b>           |          |                                                                                                                                                                                                                                                                                                                       |      |          |         |             |
|                            |          |                                                                                                                                                                                                                                                                                                                       |      |          |         | 88367266.28 |



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 9081 Date 14/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob: 7895872139, 9412143346



|                                                                                          |  |             |                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |      |        |        |             |
|------------------------------------------------------------------------------------------|--|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|------|--------|--------|-------------|
| S.NO.                                                                                    |  | DSR - 21    | DESCRIPTION OF WORK                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  | UNIT | QTY    | RATE   | AMOUNT      |
| TOWER NO A , B , F , G , H TO S (15 TOWER) BILL OF QUANTITY PMAY EWS BELDI (UTTARAKHAND) |  |             |                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |      |        |        |             |
| 20                                                                                       |  | 6.38        | Providing and laying autoclaved aerated cement blocks masonry with 100 mm thick AAC blocks in super structure above plinth level up to floor V level in cement mortar 1:4 (1 cement : 4 coarse sand ). The rate includes providing and placing in position 2 Nos 6 mm dia M.S. bars at every third course of masonry work.                                                                                                              |  |  |  | cum  | 4764.6 | 8890.8 | 42361105.68 |
| SUB TOTAL                                                                                |  | 42361105.68 |                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |      |        |        |             |
| CLADDING WORK                                                                            |  |             |                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |      |        |        |             |
| 21                                                                                       |  | 8.6         | Mirror polishing on marble work/Granite work/stone work where ever required to give high gloss finish complete.                                                                                                                                                                                                                                                                                                                         |  |  |  | sqm  | 586.5  | 417.6  | 244922.4    |
| 22                                                                                       |  | 8.9         | Stone tile (polished) work for wall lining over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and cement slurry @ 3.3 kg/sqm including pointing in white cement complete                                                                                                                                                                                                                                              |  |  |  |      |        |        | 244922.4    |
| SUB TOTAL                                                                                |  | 244922.4    |                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |      |        |        |             |
| TOWER NO A , B , F , G , H TO S (15 TOWER) BILL OF QUANTITY PMAY EWS BELDI (UTTARAKHAND) |  |             |                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |      |        |        |             |
| S.NO.                                                                                    |  | DSR - 21    | DESCRIPTION OF WORK                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  | UNIT | QTY    | RATE   | AMOUNT      |
| FLOORING WORK                                                                            |  |             |                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |      |        |        |             |
| 23                                                                                       |  | 9.18        | Providing and fixing Pre-laminated flat pressed 3 layer (medium density) particle board or graded wood particle board 15 : 3087 marked, with one side decorative and other side balancing lamination Grade I, Type II exterior wherever required, edges to be painted with polyurethane primer (fittings to be paid separately)                                                                                                         |  |  |  |      |        |        |             |
| 24                                                                                       |  | 9.18.2      | 25 mm thick Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.                                                                                                                                                                                                                          |  |  |  |      |        |        |             |
| 25                                                                                       |  | 10.25       | n gratings, frames, guard bar, ladder, railings, brackets, gates and similar works                                                                                                                                                                                                                                                                                                                                                      |  |  |  | KG   | 235200 | 142.3  | 33468960    |
| 26                                                                                       |  | 10.25.2     | Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer.                                                                                                                                                                                                                                |  |  |  |      |        |        |             |
| 27                                                                                       |  | 10.26       | M.S. tube                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |      |        |        |             |
| 28                                                                                       |  | 9.12        | Extra for providing frosted glass panes 4 mm thick instead of ordinary float glass panes 4 mm thick in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).                                                                                                                                                                                              |  |  |  | SQM  | 2332.8 | 148.5  | 346420.8    |
| SUB TOTAL                                                                                |  | 48267564    |                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |      |        |        |             |
| 29                                                                                       |  | 11.37       | Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), Jointing with grey cement slurry @ 3.3 kg/sqm including pointing the joints with white cement and matching pigment etc., complete. |  |  |  | SQM  | 32460  | 935.6  | 30369576    |
| SUB TOTAL                                                                                |  | 30369576    |                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |      |        |        |             |

PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0021 Date: 14/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob: 7895872139, 9412143346



| S.NO.                                       | DSR - 21 | DESCRIPTION OF WORK                                                                                                                                                                                                                                                                                                                                                   | UNIT   | QTY      | RATE   | AMOUNT      |
|---------------------------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------|--------|-------------|
| 30                                          | 13.1     | 12 mm cement plaster of mix :                                                                                                                                                                                                                                                                                                                                         |        |          |        |             |
| 31                                          | 13.1.2   | 1:6 (1 cement: 6 fine sand)                                                                                                                                                                                                                                                                                                                                           | sqm    | 199515.6 | 294.85 | 58827174.66 |
| 32                                          | 13.8     | Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.                                                                                                                                                                       | sqm    | 199515.6 | 123.85 | 24710007.06 |
| 33                                          | 13.48    | Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :                                                                                                                                                                                                                                       |        |          |        |             |
| 34                                          | 13.48.1  | Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of Special primer applied @ 0.75 ltr/10 sqm                                                                                                                                                                                                                                          | sqm    | 199515.6 | 158.95 | 31713004.62 |
| 33                                          | 13.47    | Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade:                                                                                                                                                                                                                                                                 |        |          |        |             |
| 34                                          | 13.47.1  | New work (Two or more coats applied @ 1.43 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)                                                                                                                                                                                                                                    | sqm    | 20376.9  | 162.35 | 3308189.715 |
| 35                                          | 13.83    | Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound ) content less than 50 grams/ litre of approved brand and manufacturer, including applying additional coats wherever required to achieve even shade and colour                                                                                             |        |          |        |             |
| 36                                          | 13.83.2  | Two coats                                                                                                                                                                                                                                                                                                                                                             | sqm    | 175594.5 | 121.55 | 21343511.48 |
|                                             |          |                                                                                                                                                                                                                                                                                                                                                                       |        |          |        | 139901887.5 |
| 37                                          | 17.3     | Plumbing and sanitary installation of 960 EWS per floor 16 unit G+3 (64 Unit) total 15 tower                                                                                                                                                                                                                                                                          |        |          |        | 19530177.6  |
|                                             | 17.3.1   | Internal Electrical work of 960 EWS per floor 16 unit G+3 (64 Unit) total 15 tower                                                                                                                                                                                                                                                                                    |        |          |        | 38824080    |
| <b>WATER PROOFING</b>                       |          |                                                                                                                                                                                                                                                                                                                                                                       |        |          |        |             |
| 22.6                                        | (a)      | Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying:                                                                                                                                                                                                           |        |          |        |             |
|                                             |          | after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm.                                                                                                                                                                                                                                   |        |          |        |             |
|                                             | (b)      | laying second layer of fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm.                                                                                                                                                                                                                        |        |          |        |             |
|                                             | (c)      | third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30 cm on parapet wall and tucked into groove in parapet all around |        |          |        |             |
|                                             | (d)      | fourth and final layer of brick tiling with cement mortar (which will be paid for separately.                                                                                                                                                                                                                                                                         |        |          |        |             |
|                                             |          | For the purpose of measurement the entire treated surface will be measured.                                                                                                                                                                                                                                                                                           | 247.55 | 15       | 585.55 | 1415596.403 |
| <b>GRAND TOTAL TOWER A, B, F, G, H TO 5</b> |          |                                                                                                                                                                                                                                                                                                                                                                       |        |          |        |             |
|                                             |          |                                                                                                                                                                                                                                                                                                                                                                       |        |          |        | 620819842.9 |

TOWER NO A, B, F, G, H TO 5 (15 TOWER) BILL OF QUANTITY PMAY EWS BELDI (UTTARAKHAND)



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0021  
Date 14/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob: 7895872139, 9412143346



| sno | DSR - 21 | CODE NO. | Description of work                                                                                                                                                                                                                                                                                                   | Item  | L    | B    | H | Qty   | No | Total Qty | Unit | Rate | Amount |
|-----|----------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|------|---|-------|----|-----------|------|------|--------|
| 1   | 2.6      | 2.6.1    | Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge. 2.6.1 All kinds of soil | (F1)  | 2.02 | 2.02 | 2 | 8.16  | 6  | 48.96     |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       | (F2)  | 2.16 | 2.16 | 2 | 9.331 | 24 | 223.94    |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       | (F3)  | 2.4  | 2.4  | 2 | 11.52 | 4  | 46.08     |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       | (CF1) | 4.03 | 4.03 | 2 | 16.12 | 4  | 64.48     |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       | (CF2) | 6.65 | 6.65 | 2 | 26.6  | 14 | 372.40    |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       | (CF3) | 4.03 | 4.03 | 2 | 16.12 | 2  | 32.24     |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       |       |      |      |   |       |    |           |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                                       | </    |      |      |   |       |    |           |      |      |        |

PAL ARCHITECT AND ENGINEER  
 COA No. CA/2018/96244  
 Case No. 0081 Date 19/11/22  
 Tapovan Road Infront of RBD Ground  
 Near by IDBI Bank, Dehradun (U.K.)  
 Mob.: 7895872139, 9412143346



| sno | DSR - 21 | CODE NO. | Description of work                                                                                                                                 | Item | Measurement | Qty        | No | Total Qty | Unit | Rate | Amount |
|-----|----------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------|------------|----|-----------|------|------|--------|
|     |          |          | Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:   |      |             |            |    |           |      |      |        |
|     |          |          | 1:4:8 (1 Cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 40 mm nominal size derived from natural sources) |      |             |            |    |           |      |      |        |
|     |          |          | Foundation (F1) P.C.C                                                                                                                               |      |             | 2.02       |    |           |      |      |        |
|     |          |          | Foundation (F2) P.C.C                                                                                                                               |      |             | 2.16       |    |           |      |      |        |
|     |          |          | Foundation (F3) P.C.C                                                                                                                               |      |             | 2.16       |    |           |      |      |        |
|     |          |          | Foundation (CF1) P.C.C                                                                                                                              |      |             | 2.075      |    |           |      |      |        |
|     |          |          | Foundation (CF2) P.C.C                                                                                                                              |      |             | 2.075      |    |           |      |      |        |
|     |          |          | Foundation (CF3) P.C.C                                                                                                                              |      |             | 2.075      |    |           |      |      |        |
|     |          |          | Sub Total                                                                                                                                           |      |             | 29.545     |    |           |      |      |        |
|     |          |          | Plinth beam (PB1) P.C.C                                                                                                                             |      |             | 3.692      |    |           |      |      |        |
|     |          |          | Plinth beam (PB2) P.C.C                                                                                                                             |      |             | 5.359      |    |           |      |      |        |
|     |          |          | Plinth beam (PB3) P.C.C                                                                                                                             |      |             | 3.692      |    |           |      |      |        |
|     |          |          | Ground floor pcc                                                                                                                                    |      |             | 10.65      |    |           |      |      |        |
|     |          |          | Sub TOTAL                                                                                                                                           |      |             | 48.42      |    |           |      |      |        |
|     |          |          |                                                                                                                                                     |      |             | 0.075      |    |           |      |      |        |
|     |          |          |                                                                                                                                                     |      |             | 12.743     |    |           |      |      |        |
|     |          |          |                                                                                                                                                     |      |             | 38.675     |    |           |      |      |        |
|     |          |          |                                                                                                                                                     |      |             | 6326.05    |    |           |      |      |        |
|     |          |          |                                                                                                                                                     |      |             | 244659.98  |    |           |      |      |        |
|     |          |          |                                                                                                                                                     |      |             | 512175.977 |    |           |      |      |        |

TOWER A, B, F, G, H TO S DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 16 UNIT G+3 (64 UNIT)



PAL ARCHITECT AND ENGINEER  
 COA No. CA/2018/96244  
 Date: 19/11/22  
 Case No. 008  
 Tapovan Road Infront of PRD Ground  
 Near by IDBI Bank, Del radun (U.K.)  
 Mob.: 7895872139, 9412143346



| sno       | DSR - 21  | CODE NO.  | Description of work                                                                                       | Item                                                              | L      | B    | H     | Qty    | No     | Total Qty | Unit    | Rate      | Amount |  |  |
|-----------|-----------|-----------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|--------|------|-------|--------|--------|-----------|---------|-----------|--------|--|--|
| 3         | 4.20.13   | 4.20.1    | 4.20.1 All works upto plinth level :<br>Concrete of M20 grade with minimum cement content of 270 kg / cum | Foundation (F1) R.C.C                                             | 2.02   |      |       | 0.3    | 1.22   | 6         |         | 7.34      |        |  |  |
|           |           |           |                                                                                                           | Foundation (F2) R.C.C                                             | 2.16   |      |       | 2.4    | 1.86   | 24        |         | 44.78     |        |  |  |
|           |           |           |                                                                                                           | Foundation (F3) R.C.C                                             | 2.4    |      |       | 0.4    | 2.3    | 4         |         | 9.216     |        |  |  |
|           |           |           |                                                                                                           | Foundation (CF1) R.C.C                                            | 4.03   |      |       | 2      | 2.418  | 4         |         | 9.672     |        |  |  |
|           |           |           |                                                                                                           | Foundation (CF2) R.C.C                                            | 6.55   |      |       | 2      | 3.99   | 14        |         | 55.86     |        |  |  |
|           |           |           |                                                                                                           | Foundation (CF3) R.C.C                                            | 4.03   |      |       | 2      | 3.224  | 2         |         | 6.448     |        |  |  |
|           |           |           |                                                                                                           | Plinth beam (PB1) R.C.C                                           | 164.1  | 0.23 | 0.4   |        |        |           | 133.316 |           |        |  |  |
|           |           |           |                                                                                                           | Plinth beam (PB2) R.C.C                                           | 238.18 | 0.3  | 0.3   |        |        |           | 15.09   |           |        |  |  |
|           |           |           |                                                                                                           | Plinth beam (PB3) R.C.C                                           | 164.1  | 0.23 | 0.3   |        |        |           | 11.32   |           |        |  |  |
|           |           |           |                                                                                                           | Plinth beam (PB3) R.C.C                                           | 164.1  | 0.23 | 0.3   |        |        |           | 42.84   |           |        |  |  |
|           |           |           |                                                                                                           | Column (C1) R.C.C upto plinth beam level                          | 0.3    | 0.3  | 2     | 0.2385 | 50     | 11.925    |         |           |        |  |  |
|           |           |           |                                                                                                           | Column (C2) R.C.C upto plinth beam level                          | 0.3    | 0.3  | 2     | 0.2385 | 28     | 6.678     |         |           |        |  |  |
| 4.20.2    | 4.20.2    | 4.20.2    | All works above plinth and upto floor V level                                                             |                                                                   |        |      |       |        |        |           |         |           |        |  |  |
|           |           |           |                                                                                                           | Concrete of M20 grade with minimum cement content of 270 kg / cum |        |      |       |        |        |           |         |           |        |  |  |
|           |           |           |                                                                                                           | Column (C1) R.C.C upto terrace level                              | 0.3    | 0.3  | 11.95 | 50     | 53.775 |           |         |           |        |  |  |
|           |           |           |                                                                                                           | Column (C2) R.C.C upto terrace level                              | 0.3    | 0.3  | 11.95 | 28     | 30.114 |           |         |           |        |  |  |
|           |           |           |                                                                                                           | Column (C1) R.C.C terrace to mummy                                | 0.3    | 0.3  | 2.4   | 6      | 1.296  | cum       | 10009.5 | 839686.94 |        |  |  |
|           |           |           |                                                                                                           | Column (C2) R.C.C terrace to mummy                                |        |      |       |        |        |           |         |           |        |  |  |
|           |           |           |                                                                                                           | (B1)                                                              | 36     | 0.23 | 0.4   |        |        |           | 3.312   |           |        |  |  |
|           |           |           |                                                                                                           | (B2)                                                              | 126    | 0.23 | 0.3   |        |        |           | 8.694   |           |        |  |  |
|           |           |           |                                                                                                           | (B3)                                                              | 92     | 0.23 | 0.3   |        |        |           | 6.348   |           |        |  |  |
|           |           |           |                                                                                                           | (B4)                                                              | 26     | 0.23 | 0.4   |        |        |           | 2.392   |           |        |  |  |
|           |           |           |                                                                                                           | (SB1)                                                             | 21.63  | 0.23 | 0.56  |        |        |           | 2.785   |           |        |  |  |
|           |           |           |                                                                                                           | (SB2)                                                             | 92     | 0.23 | 0.3   |        |        |           | 6.348   |           |        |  |  |
| 4.20.3    | 4.20.3    | 4.20.3    | Concrete of M20 grade with minimum cement content of 270 kg / cum                                         |                                                                   |        |      |       |        |        |           |         |           |        |  |  |
|           |           |           |                                                                                                           | Column (C1) R.C.C upto terrace level                              | 0.3    | 0.3  | 11.95 | 50     | 53.775 |           |         |           |        |  |  |
|           |           |           |                                                                                                           | Column (C2) R.C.C upto terrace level                              | 0.3    | 0.3  | 11.95 | 28     | 30.114 |           |         |           |        |  |  |
|           |           |           |                                                                                                           | Column (C1) R.C.C terrace to mummy                                | 0.3    | 0.3  | 2.4   | 6      | 1.296  | cum       | 10009.5 | 839686.94 |        |  |  |
|           |           |           |                                                                                                           | Column (C2) R.C.C terrace to mummy                                |        |      |       |        |        |           |         |           |        |  |  |
|           |           |           |                                                                                                           | (B1)                                                              | 36     | 0.23 | 0.4   |        |        |           | 3.312   |           |        |  |  |
|           |           |           |                                                                                                           | (B2)                                                              | 126    | 0.23 | 0.3   |        |        |           | 8.694   |           |        |  |  |
|           |           |           |                                                                                                           | (B3)                                                              | 92     | 0.23 | 0.3   |        |        |           | 6.348   |           |        |  |  |
|           |           |           |                                                                                                           | (B4)                                                              | 26     | 0.23 | 0.4   |        |        |           | 2.392   |           |        |  |  |
|           |           |           |                                                                                                           | (SB1)                                                             | 21.63  | 0.23 | 0.56  |        |        |           | 2.785   |           |        |  |  |
|           |           |           |                                                                                                           | (SB2)                                                             | 92     | 0.23 | 0.3   |        |        |           | 6.348   |           |        |  |  |
|           |           |           |                                                                                                           | (SB3)                                                             | 21.63  | 0.23 | 0.3   |        |        |           | 1.492   |           |        |  |  |
| SUB TOTAL | SUB TOTAL | SUB TOTAL | SUB TOTAL                                                                                                 |                                                                   |        |      |       |        |        |           |         |           |        |  |  |
|           |           |           |                                                                                                           |                                                                   |        |      |       |        |        |           |         |           |        |  |  |
|           |           |           |                                                                                                           |                                                                   |        |      |       |        |        |           |         |           |        |  |  |
|           |           |           |                                                                                                           |                                                                   |        |      |       |        |        |           |         |           |        |  |  |
|           |           |           |                                                                                                           |                                                                   |        |      |       |        |        |           |         |           |        |  |  |
|           |           |           |                                                                                                           |                                                                   |        |      |       |        |        |           |         |           |        |  |  |
|           |           |           |                                                                                                           |                                                                   |        |      |       |        |        |           |         |           |        |  |  |
|           |           |           |                                                                                                           |                                                                   |        |      |       |        |        |           |         |           |        |  |  |
|           |           |           |                                                                                                           |                                                                   |        |      |       |        |        |           |         |           |        |  |  |
|           |           |           |                                                                                                           |                                                                   |        |      |       |        |        |           |         |           |        |  |  |
|           |           |           |                                                                                                           |                                                                   |        |      |       |        |        |           |         |           |        |  |  |
|           |           |           |                                                                                                           |                                                                   |        |      |       |        |        |           |         |           |        |  |  |

TOWER A, B, F, G, H TO S DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 16 UNIT G+3 (64 UNIT)

PAL ARCHITECT AND ENGINEER  
 COA No. CA/2018/96244  
 Case No. 0081  
 Date 19/11/22  
 Tapovan Road Infront of PND Ground  
 Near by IDBI Bank, Del radun (UK)  
 Mob.: 7895872139, 9412143346

[illegible]



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Date: 14/11/22  
Case No. 0081  
Near by IDBI Bank, De. radun (U.K.)  
Tapovan Road Infront of PRD Ground  
Mob.: 7895872139, 9412143346



| SR     | DSR - 21 | CODE NO. | Description of work                                                                                                                         | Item  | L        | B | H | Qty    | No  | Total Qty | Unit | Rate | Amount |
|--------|----------|----------|---------------------------------------------------------------------------------------------------------------------------------------------|-------|----------|---|---|--------|-----|-----------|------|------|--------|
| 5      | 5.22     |          | Steel reinforcement for R.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level |       |          |   |   |        |     |           |      |      |        |
| 5.22.6 |          |          | Thermo-Mechanically Treated bars of grade Fe-500D or more                                                                                   |       |          |   |   |        |     |           |      |      |        |
|        |          |          | Foundation (F1) steel                                                                                                                       | 12 mm | 44.44    |   |   | 39.107 | 6   | 234.64    |      |      |        |
|        |          |          | Foundation (F2) steel                                                                                                                       | 12 mm | 49.68    |   |   | 43.718 | 24  | 1049.24   |      |      |        |
|        |          |          | Foundation (F3) steel                                                                                                                       | 12 mm | 69.9     |   |   | 61.512 | 4   | 246.048   |      |      |        |
|        |          |          | Foundation (F1) steel                                                                                                                       | 08 mm | 32.24    |   |   | 12.73  | 4   | 50.93     |      |      |        |
|        |          |          | Foundation (F2) steel                                                                                                                       | 12 mm | 48.24    |   |   | 42.45  | 4   | 169.8     |      |      |        |
|        |          |          | Foundation (F2) steel                                                                                                                       | 20 mm | 65.2     |   |   | 160.98 | 14  | 2253.82   |      |      |        |
|        |          |          | Foundation (F3) steel                                                                                                                       | 16 mm | 75       |   |   | 118.5  | 14  | 1659      |      |      |        |
|        |          |          | Foundation (F3) steel                                                                                                                       | 16 mm | 118      |   |   | 186.44 | 2   | 372.88    |      |      |        |
|        |          |          | Foundation (F3) steel                                                                                                                       | 16 mm |          |   |   |        |     |           |      |      |        |
|        |          |          | Column (C1) steel upto plinth beam level                                                                                                    | 16 mm | 10       |   |   | 15.8   | 50  | 790       |      |      |        |
|        |          |          | Column (C2) steel upto plinth beam level                                                                                                    | 16 mm | 5        |   |   | 4.4    | 50  | 220       |      |      |        |
|        |          |          | Column (C2) steel upto plinth beam level                                                                                                    | 10 mm | 16       |   |   | 9.76   | 50  | 488       |      |      |        |
|        |          |          | Column (C2) steel upto plinth beam level                                                                                                    | 16 mm | 15       |   |   | 23.7   | 28  | 663.6     |      |      |        |
|        |          |          | Column (C2) steel upto plinth beam level                                                                                                    | 10 mm | 5        |   |   | 4.4    | 28  | 123.2     |      |      |        |
|        |          |          | Column (C1) steel upto Terrace level                                                                                                        | 16 mm | 48       |   |   | 75.84  | 50  | 3792      |      |      |        |
|        |          |          | Column (C1) steel upto Terrace level                                                                                                        | 12 mm | 24       |   |   | 22     | 50  | 1100      |      |      |        |
|        |          |          | Column (C2) steel upto Terrace level                                                                                                        | 10 mm | 72       |   |   | 44     | 50  | 2200      |      |      |        |
|        |          |          | Column (C2) steel upto Terrace level                                                                                                        | 16 mm | 72       |   |   | 113.76 | 28  | 3185.28   |      |      |        |
|        |          |          | Column (C2) steel upto Terrace level                                                                                                        | 10 mm | 72       |   |   | 44     | 28  | 1232      |      |      |        |
|        |          |          | Column (C1) steel upto Terrace level                                                                                                        | 16 mm | 11509.28 |   |   |        |     |           |      |      |        |
|        |          |          | Column (C1) steel upto Terrace level                                                                                                        | 16 mm | 136.512  |   |   | 22.75  | 6   | 136.512   |      |      |        |
|        |          |          | Column (C1) steel upto Terrace level                                                                                                        | 12 mm | 4.224    |   |   | 5.688  | 6   | 34.128    |      |      |        |
|        |          |          | Column (C1) steel upto Terrace level                                                                                                        | 10 mm |          |   |   |        |     |           |      |      |        |
|        |          |          | Plinth beam (PB1) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB2) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB2) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1010.85   |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.26     |   |   | 0.768  | 820 | 630.25    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 238.18   |   |   | 209.59 | 6   | 1257.9    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 10 mm | 1.2      |   |   | 0.732  | 792 | 579.74    |      |      |        |
|        |          |          | Plinth beam (PB3) steel                                                                                                                     | 12 mm | 164.1    |   |   | 144.4  | 7   | 1         |      |      |        |



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 002 Date: 14/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Delradun (U.K.)  
Mob: 7895872139, 9412143346

| sno | DSR - 21 | CODE NO. | Description of work                                                                                                                                                                                                                                                                                 | Item | L    | B    | H     | Qty   | No | Total Qty  | Unit | Rate | Amount |
|-----|----------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|-------|-------|----|------------|------|------|--------|
| 6   | 6.38     |          | Providing and laying autoclaved aerated<br>AAC blocks in super structure above plinth<br>level up to floor V level in cement mortar 1:4<br>(1 cement : 4 coarse sand). The rate<br>includes providing and placing in position 2<br>Nos 6 mm dia M.S. bars at every third course<br>of masonry work. |      |      |      |       |       |    |            |      |      |        |
|     |          |          | WALL (G+3 building)                                                                                                                                                                                                                                                                                 | 4    | 2.8  | 2.65 | 29.68 | 16    |    | 474.88     |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     | 4    | 4.1  | 2.65 | 43.45 | 16    |    | 695.304    |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     | 4    | 2.8  | 2.65 | 29.68 | 16    |    | 474.88     |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     | 4    | 1.3  | 2.65 | 13.77 | 16    |    | 220.382    |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     | 4    | 0.6  | 2.65 | 6.359 | 16    |    | 101.75     |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     | 4    | 1    | 2.65 | 10.6  | 16    |    | 169.6      |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     | 4    | 0.35 | 2.65 | 3.706 | 16    |    | 59.304     |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     | 4    | 2.2  | 2.65 | 23.31 | 16    |    | 373.11     |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     | 4    | 3    | 2.65 | 31.79 | 16    |    | 508.66     |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     | 4    | 1.4  | 2.65 | 14.83 | 16    |    | 237.43     |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     | 4    | 1.4  | 2.65 | 14.83 | 16    |    | 237.43     |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     | 4    | 1.2  | 2.65 | 1.59  | 12.72 |    | 3578.17    | SQM  |      |        |
|     |          |          | WALL                                                                                                                                                                                                                                                                                                |      |      |      |       |       |    |            |      |      |        |
|     |          |          | (Door & window) Deduction no of unit 16 x                                                                                                                                                                                                                                                           | D1   | 1    | 2.1  | 2.1   | 2     |    | 268.8      |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     | D2   | 0.75 | 2.1  | 1.575 | 2     |    | 201.6      |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     | DW1  | 0.75 | 2.1  | 1.575 | 1     |    | 201.6      |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     | DW1  | 0.6  | 1.2  | 0.72  | 1     |    | 46.08      |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     | W1   | 1.5  | 0.9  | 1.35  | 1     |    | 86.4       |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     | V1   | 0.45 | 0.4  | 0.18  | 2     |    | 11.52      |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     |      |      |      |       |       |    | 816        | SQM  |      |        |
|     |          |          | wall                                                                                                                                                                                                                                                                                                |      |      |      |       |       |    | 3578.17    |      |      |        |
|     |          |          | Deduction                                                                                                                                                                                                                                                                                           |      |      |      |       |       |    | 816        |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     |      |      |      |       |       |    | 2762.17    | SQM  |      |        |
|     |          |          | SUB TOTAL                                                                                                                                                                                                                                                                                           |      |      |      |       |       |    | 2762.17    |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     |      |      |      |       |       |    | 0.115      |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     |      |      |      |       |       |    | 2762.17    |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     |      |      |      |       |       |    | 8890.8     | cum  |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     |      |      |      |       |       |    | 2824073.71 |      |      |        |
|     |          |          |                                                                                                                                                                                                                                                                                                     |      |      |      |       |       |    | 2824073.71 |      |      |        |

TOWER A, B, F, G, H TO S DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 16 UNIT G+3 (64 UNIT)



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0081 Date 14/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Delradun (U.K.)  
Mob.: 7895872139, 9412143346



| sno                | DSR NO.     | Description of work                                                                                                                                                                                                                                                                                                                                                                          | Item | L    | B | H | Qty   | No | Total Qty | Unit | Rate   | Amount    |
|--------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|---|---|-------|----|-----------|------|--------|-----------|
| 7                  | 9.18        | Providing and fixing Pre-laminated flat pressed 3 layer (medium density) particle board or graded wood particle board 15 : 3087 marked, with one side decorative and other side balancing lamination Grade I, Type II exterior grade 15 : 12823 marked, in shelves with screws and fittings wherever required, edges to be painted with polyurethane primer (fittings to be paid separately) |      |      |   |   |       |    |           |      |        |           |
| 9.18.2             | 25 mm thick |                                                                                                                                                                                                                                                                                                                                                                                              | D1   | 1    |   |   | 2.1   | 2  | 4.2       |      |        |           |
|                    | D2          |                                                                                                                                                                                                                                                                                                                                                                                              |      | 0.75 |   |   | 1.575 | 2  | 3.15      |      |        |           |
|                    | DW1         |                                                                                                                                                                                                                                                                                                                                                                                              |      | 0.75 |   |   | 1.575 | 1  | 1.575     |      |        |           |
| 64 unit G+3        |             |                                                                                                                                                                                                                                                                                                                                                                                              |      |      |   |   | 8.925 | 64 | 571.2     | sqm  | 1501   | 857371.2  |
| 10.25              |             | Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.                                                                                                                                                                                           |      |      |   |   |       |    |           |      |        |           |
| 10.25.2            |             | n gratings, frames, guard bar, ladder, railings, brackets, gates and similar works                                                                                                                                                                                                                                                                                                           |      |      |   |   |       |    |           |      |        |           |
|                    | D1          | Door chowkhats (16 UNIT)                                                                                                                                                                                                                                                                                                                                                                     |      |      |   |   | 30    | 2  | 60        |      |        |           |
|                    | D2          |                                                                                                                                                                                                                                                                                                                                                                                              |      |      |   |   | 30    | 2  | 60        |      |        |           |
|                    | DW1         |                                                                                                                                                                                                                                                                                                                                                                                              |      |      |   |   | 45    | 1  | 45        |      |        |           |
|                    | W1          |                                                                                                                                                                                                                                                                                                                                                                                              |      |      |   |   | 50    | 1  | 50        |      |        |           |
|                    | V1          |                                                                                                                                                                                                                                                                                                                                                                                              |      |      |   |   | 15    | 2  | 30        |      |        |           |
| 64 UNIT G+3 FLOOR  |             |                                                                                                                                                                                                                                                                                                                                                                                              |      |      |   |   | 245   | 64 | 15680     | kg   | 142.3  | 2231264   |
| 10.26              |             | Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer.                                                                                                                                                                                     |      |      |   |   |       |    |           |      |        |           |
| 10.26.1            | M.5. tube   |                                                                                                                                                                                                                                                                                                                                                                                              |      |      |   |   |       |    |           |      |        |           |
| 65x40              |             |                                                                                                                                                                                                                                                                                                                                                                                              |      |      |   |   | 1.25  | 1  | 1.25      |      |        |           |
| 25x25              |             |                                                                                                                                                                                                                                                                                                                                                                                              |      |      |   |   | 0.84  | 2  | 1.68      |      |        |           |
| 20x20              |             |                                                                                                                                                                                                                                                                                                                                                                                              |      |      |   |   | 1.25  | 2  | 2.5       |      |        |           |
| 20x20              |             |                                                                                                                                                                                                                                                                                                                                                                                              |      |      |   |   | 0.64  | 8  | 5.12      |      |        |           |
| per floor 16 unit  |             |                                                                                                                                                                                                                                                                                                                                                                                              |      |      |   |   | 10.55 | 16 | 168.8     |      |        |           |
| G+3 Floor          |             |                                                                                                                                                                                                                                                                                                                                                                                              |      |      |   |   | 168.8 | 4  | 675.2     | kg   | 157.15 | 106107.68 |
| 9.12               |             | Extra for providing frosted glass panes 4 mm thick instead of ordinary float glass panes 4 mm thick in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).                                                                                                                                                   | DW1  | 0.6  |   |   | 1.2   | 1  | 0.72      |      |        |           |
|                    | W1          |                                                                                                                                                                                                                                                                                                                                                                                              |      | 1.5  |   |   | 0.9   | 1  | 1.35      |      |        |           |
|                    | V1          |                                                                                                                                                                                                                                                                                                                                                                                              |      | 0.45 |   |   | 0.4   | 2  | 0.36      |      |        |           |
| Per floor 16 unit  |             |                                                                                                                                                                                                                                                                                                                                                                                              |      |      |   |   | 2.43  | 16 | 38.88     |      |        |           |
| G+3 Floor Building |             |                                                                                                                                                                                                                                                                                                                                                                                              |      |      |   |   | 38.88 | 4  | 155.52    | sqm  | 148.5  | 23094.72  |
| Sub Total          |             |                                                                                                                                                                                                                                                                                                                                                                                              |      |      |   |   |       |    |           |      |        | 2360466.4 |

TOWER A, B, F, G, H TO S DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 16 UNIT G+3 (64 UNIT)

PAL ARCHITECT AND ENGINEER  
 COA No. CA/2018/96244  
 Case No. 0081 Date 19/11/22  
 Tapovan Road Infront of PRD Ground  
 Near by IDBI Bank, Deliradun (U.K.)  
 Mob: 7895872139, 9412143346



| sno | DSR - 21 | CODE NO. | Description of work                                       | Item | Measurement | QTY     | No | Total QTY  | Unit | Rate   | Amount     |
|-----|----------|----------|-----------------------------------------------------------|------|-------------|---------|----|------------|------|--------|------------|
| 8   | 13.1     | 13.1.2   | 12 mm cement plaster of mix : 1:6 (1 cement: 6 fine sand) | Wall | 2.8         | 2.95    | 16 | 132.16     |      |        |            |
|     |          |          |                                                           | Wall | 4.1         | 2.95    | 16 | 193.52     |      |        |            |
|     |          |          |                                                           | Wall | 2.8         | 2.95    | 16 | 132.16     |      |        |            |
|     |          |          |                                                           | Wall | 1.3         | 2.95    | 16 | 61.36      |      |        |            |
|     |          |          |                                                           | Wall | 0.6         | 2.95    | 16 | 28.32      |      |        |            |
|     |          |          |                                                           | Wall | 1           | 2.95    | 16 | 47.2       |      |        |            |
|     |          |          |                                                           | Wall | 0.35        | 2.95    | 16 | 16.52      |      |        |            |
|     |          |          |                                                           | Wall | 2.2         | 2.95    | 16 | 103.84     |      |        |            |
|     |          |          |                                                           | Wall | 3           | 2.95    | 16 | 141.6      |      |        |            |
|     |          |          |                                                           | Wall | 1.4         | 2.95    | 16 | 66.08      |      |        |            |
|     |          |          |                                                           | Wall | 1.4         | 2.95    | 16 | 66.08      |      |        |            |
|     |          |          |                                                           | Wall | 1.2         | 2.95    | 16 | 56.64      |      |        |            |
|     |          |          | G.F., F.F., S.F., T.F. ceiling                            |      | 48.42       | 10.65   | 4  | 2062.69    |      |        |            |
|     |          |          |                                                           |      |             | 3108.17 | 4  | 12432.68   |      |        |            |
|     |          |          | INNER WALL                                                | D1   | 1           | 2.1     | 2  | 4.2        |      |        |            |
|     |          |          |                                                           | D2   | 0.75        | 2.1     | 2  | 3.15       |      |        |            |
|     |          |          |                                                           | DW1  | 0.75        | 1.575   | 1  | 1.575      |      |        |            |
|     |          |          |                                                           | DW1  | 0.6         | 0.72    | 1  | 0.72       |      |        |            |
|     |          |          |                                                           | W1   | 1.5         | 0.9     | 1  | 1.35       |      |        |            |
|     |          |          |                                                           | VI   | 0.45        | 0.4     | 2  | 0.36       |      |        |            |
|     |          |          | (Door & window) Deduction no of unit 16 x 4 floor         |      |             | 11.355  | 64 | 726.4      |      |        |            |
|     |          |          | INNER WALL                                                |      |             | 12432.7 |    | 726.4      |      |        |            |
|     |          |          | DEDUCTION                                                 |      |             |         |    | 11706.3    |      |        |            |
|     |          |          | TOTAL                                                     |      |             |         |    | 11706.3    | SOM  | 294.85 | 3451602.56 |
|     |          |          | OUTER WALL                                                |      | 4.361       | 2.95    | 16 | 205.8392   |      |        |            |
|     |          |          | CORRIDOR                                                  |      | 2.8         | 2.95    | 16 | 132.16     |      |        |            |
|     |          |          |                                                           |      | 10.65       | 2.95    | 2  | 62.835     |      |        |            |
|     |          |          | G+3 FLOOR                                                 |      |             | 400.815 | 4  | 1603.26    |      |        |            |
|     |          |          | DEDUCTION                                                 |      |             |         |    | 244.8      |      |        |            |
|     |          |          | WALL                                                      |      |             |         |    | 1603.26    |      |        |            |
|     |          |          | TOTAL                                                     |      |             |         |    | 1358.46    | SOM  | 294.85 | 400541.931 |
|     |          |          | PAPAPET WALL                                              |      | 48.42       | 1       | 4  | 193.68     |      |        |            |
|     |          |          |                                                           |      | 10.65       | 1       | 4  | 42.6       |      |        |            |
|     |          |          | Sub total                                                 |      |             |         |    | 236.28     | SOM  | 294.85 | 69667.158  |
|     |          |          |                                                           |      |             |         |    | 3921811.64 |      |        |            |

TOWER A, B, F, G, H TO S DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 16 UNIT G+3 (64 UNIT)



PAL ARCHITECT AND ENGINEER  
 COA No. CA/2018/96244  
 Case No. 0021 Date 14/11/22  
 Tapovan Road Infront of PRD Ground  
 Near by IDBI Bank, Delradun (U.K.)  
 Mob.: 7895872139, 9412143346



| sno | CODE NO. | Description of work                                                                                                                                                                                                                                                                                                                                                                                                                     | Item     | L     | B     | H       | Qty | No       | Total Qty | Unit  | Rate       | Amount     |
|-----|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------|-------|---------|-----|----------|-----------|-------|------------|------------|
| 9   | 11.37    | Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), Jointing with grey cement slurry @ 3.3 kg/sqm including pointing the joints with white cement and matching pigment etc., complete. | Floor    | 3.27  | 3.002 | 9.8165  | 16  | 157.064  |           |       |            |            |
|     |          | Kitchen                                                                                                                                                                                                                                                                                                                                                                                                                                 | skirting | 12.54 | 0.1   | 1.254   | 16  | 20.064   |           |       |            |            |
|     |          |                                                                                                                                                                                                                                                                                                                                                                                                                                         | floor    | 2.101 | 1.2   | 2.521   | 16  | 40.336   |           |       |            |            |
|     |          |                                                                                                                                                                                                                                                                                                                                                                                                                                         | skirting | 6.602 | 0.1   | 0.6602  | 16  | 10.5632  |           |       |            |            |
|     |          | toilet                                                                                                                                                                                                                                                                                                                                                                                                                                  | floor    | 0.9   | 1.2   | 1.08    | 16  | 17.28    |           |       |            |            |
|     |          |                                                                                                                                                                                                                                                                                                                                                                                                                                         | wall     | 0.9   | 1.52  | 1.368   | 16  | 21.88    |           |       |            |            |
|     |          |                                                                                                                                                                                                                                                                                                                                                                                                                                         | wall     | 1.2   | 1.52  | 1.824   | 16  | 29.18    |           |       |            |            |
|     |          | Bed room                                                                                                                                                                                                                                                                                                                                                                                                                                | floor    | 2.465 | 3.155 | 7.77    | 16  | 124.32   |           |       |            |            |
|     |          |                                                                                                                                                                                                                                                                                                                                                                                                                                         | skirting | 11.2  | 0.1   | 1.12    | 16  | 17.92    |           |       |            |            |
|     |          | Entrance                                                                                                                                                                                                                                                                                                                                                                                                                                | floor    | 1.335 | 1.335 | 1.7822  | 16  | 28.515   |           |       |            |            |
|     |          |                                                                                                                                                                                                                                                                                                                                                                                                                                         | skirting | 5.34  | 0.1   | 0.534   | 16  | 8.544    |           |       |            |            |
|     |          | Corridor                                                                                                                                                                                                                                                                                                                                                                                                                                | floor    | 48.42 | 1.25  | 60.525  |     |          |           |       |            |            |
|     |          |                                                                                                                                                                                                                                                                                                                                                                                                                                         | skirting | 48.42 | 0.1   | 4.842   |     |          |           |       |            |            |
|     |          | G+3 floor                                                                                                                                                                                                                                                                                                                                                                                                                               |          |       |       | 541.033 | 4   | 2164.012 | sqm       | 935.6 | 2024649.63 |            |
|     |          | work/stone work where ever required to Mirror polishing on marble work/Granite                                                                                                                                                                                                                                                                                                                                                          |          |       |       |         |     |          |           |       |            |            |
|     | 8.6      | give high gloss finish complete.                                                                                                                                                                                                                                                                                                                                                                                                        |          |       |       |         |     |          |           |       |            |            |
|     |          | G+3 Floor                                                                                                                                                                                                                                                                                                                                                                                                                               |          |       |       |         |     |          |           |       |            |            |
|     |          |                                                                                                                                                                                                                                                                                                                                                                                                                                         |          | 2.06  | 1.25  | 2.575   | 1   | 2.575    | sqm       | 417.6 | 16328.16   | 2040977.79 |
|     |          | Sub total                                                                                                                                                                                                                                                                                                                                                                                                                               |          |       |       |         |     |          |           |       |            |            |

TOWER A, B, F, G, H TO S DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 16 UNIT G+3 (64 UNIT)

PAL ARCHITECT AND ENGINEER  
 COA No. CA/2018/96244  
 Case No. 0081 Date 14/11/22  
 Tapovan Road Infront of PRD Ground  
 Near by IDBI Bank, Deliradun (U.K.)  
 Mob: 7895872139, 9412143346

| sno | DSR - 21 | CODE NO. | Description of work                                                                                                                                                                             | Item                                                                                                                                                                                                                                                                     | L          | B | H | Qty   | No    | Total Qty  | Unit   | Rate   | Amount     |
|-----|----------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---|---|-------|-------|------------|--------|--------|------------|
| 10  | 13.8     |          | Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete. | Wall                                                                                                                                                                                                                                                                     | 2.8        |   |   | 2.95  | 16    | 132.16     |        |        |            |
|     |          |          |                                                                                                                                                                                                 | Wall                                                                                                                                                                                                                                                                     | 4.1        |   |   | 2.95  | 16    | 193.52     |        |        |            |
|     |          |          |                                                                                                                                                                                                 | Wall                                                                                                                                                                                                                                                                     | 2.8        |   |   | 2.95  | 16    | 132.16     |        |        |            |
|     |          |          |                                                                                                                                                                                                 | Wall                                                                                                                                                                                                                                                                     | 1.3        |   |   | 2.95  | 16    | 61.36      |        |        |            |
|     |          |          |                                                                                                                                                                                                 | Wall                                                                                                                                                                                                                                                                     | 0.6        |   |   | 2.95  | 16    | 28.32      |        |        |            |
|     |          |          |                                                                                                                                                                                                 | Wall                                                                                                                                                                                                                                                                     | 1          |   |   | 2.95  | 16    | 47.2       |        |        |            |
|     |          |          |                                                                                                                                                                                                 | Wall                                                                                                                                                                                                                                                                     | 0.35       |   |   | 2.95  | 16    | 16.52      |        |        |            |
|     |          |          |                                                                                                                                                                                                 | Wall                                                                                                                                                                                                                                                                     | 2.2        |   |   | 2.95  | 16    | 103.84     |        |        |            |
|     |          |          |                                                                                                                                                                                                 | Wall                                                                                                                                                                                                                                                                     | 3          |   |   | 2.95  | 16    | 141.6      |        |        |            |
|     |          |          |                                                                                                                                                                                                 | Wall                                                                                                                                                                                                                                                                     | 1.4        |   |   | 2.95  | 16    | 66.08      |        |        |            |
|     |          |          |                                                                                                                                                                                                 | Wall                                                                                                                                                                                                                                                                     | 1.4        |   |   | 2.95  | 16    | 66.08      |        |        |            |
|     |          |          |                                                                                                                                                                                                 | Wall                                                                                                                                                                                                                                                                     | 1.2        |   |   | 2.95  | 16    | 56.64      |        |        |            |
|     |          |          |                                                                                                                                                                                                 | G.F, F.F, S.F, T.F ceiling                                                                                                                                                                                                                                               | 48.42      |   |   | 10.65 | 4     | 2062.69    |        |        |            |
|     |          |          |                                                                                                                                                                                                 | INNER WALL                                                                                                                                                                                                                                                               | 1          |   |   | 2.1   | 4     | 12432.68   |        |        |            |
|     |          |          |                                                                                                                                                                                                 | D1                                                                                                                                                                                                                                                                       | 1          |   |   | 2.1   | 2     | 4.2        |        |        |            |
|     |          |          |                                                                                                                                                                                                 | D2                                                                                                                                                                                                                                                                       | 0.75       |   |   | 2.1   | 2     | 3.15       |        |        |            |
|     |          |          |                                                                                                                                                                                                 | DW1                                                                                                                                                                                                                                                                      | 0.75       |   |   | 2.1   | 1     | 1.575      |        |        |            |
|     |          |          |                                                                                                                                                                                                 | DW1                                                                                                                                                                                                                                                                      | 0.6        |   |   | 1.2   | 1     | 0.72       |        |        |            |
|     |          |          |                                                                                                                                                                                                 | W1                                                                                                                                                                                                                                                                       | 1.5        |   |   | 0.9   | 16    | 21.6       |        |        |            |
|     |          |          |                                                                                                                                                                                                 | DEDUCTION                                                                                                                                                                                                                                                                | 1.5        |   |   | 0.9   | 16    | 14.4       |        |        |            |
|     |          |          |                                                                                                                                                                                                 | DW1                                                                                                                                                                                                                                                                      | 0.6        |   |   | 1.2   | 16    | 11.52      |        |        |            |
|     |          |          |                                                                                                                                                                                                 | VI                                                                                                                                                                                                                                                                       | 0.45       |   |   | 0.4   | 16    | 2.88       |        |        |            |
|     |          |          |                                                                                                                                                                                                 | G+3 FLOOR                                                                                                                                                                                                                                                                | 61.2       |   |   | 61.2  | 4     | 244.8      |        |        |            |
|     |          |          |                                                                                                                                                                                                 | WALL                                                                                                                                                                                                                                                                     | 1603.26    |   |   |       | 4     | 1603.26    |        |        |            |
|     |          |          |                                                                                                                                                                                                 | DEDUCTION                                                                                                                                                                                                                                                                | 244.8      |   |   |       |       | 244.8      |        |        |            |
|     |          |          |                                                                                                                                                                                                 | TOTAL                                                                                                                                                                                                                                                                    | 168245.271 |   |   |       |       | 168245.271 |        |        |            |
|     |          |          |                                                                                                                                                                                                 | PARAPET WALL                                                                                                                                                                                                                                                             | 48.42      |   |   | 1     | 48.42 | 4          | 193.68 |        |            |
|     |          |          |                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                          | 10.65      |   |   | 1     | 10.65 | 4          | 42.6   |        |            |
|     |          |          |                                                                                                                                                                                                 | Finishing with Deluxe Multi surface paint system for interiors and exteriors using primer as per manufacturers specifications :                                                                                                                                          |            |   |   |       |       |            |        |        |            |
|     |          |          |                                                                                                                                                                                                 | Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of special primer applied @ 0.75 ltr /10 sqm                                                                                                                                            |            |   |   |       |       |            |        |        |            |
|     |          |          |                                                                                                                                                                                                 | primer qty                                                                                                                                                                                                                                                               |            |   |   |       |       | 13301.04   | SQM    | 158.95 | 2114200.31 |
|     |          |          |                                                                                                                                                                                                 | Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives or required shade:                                                                                                                                                                    |            |   |   |       |       |            |        |        |            |
|     |          |          |                                                                                                                                                                                                 | New work (Two or more coats applied @ 1.43 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)                                                                                                                                       |            |   |   |       |       |            |        |        |            |
|     |          |          |                                                                                                                                                                                                 | exterior paint qty                                                                                                                                                                                                                                                       |            |   |   |       |       | 1358.46    | SQM    | 162.35 | 220545.981 |
|     |          |          |                                                                                                                                                                                                 | Wall painting with premium acrylic emission paint of interior grade, having VOC (Volatile Organic Compound ) content less than 50 grams/ litre of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour |            |   |   |       |       |            |        |        |            |
|     |          |          |                                                                                                                                                                                                 | Two coats                                                                                                                                                                                                                                                                |            |   |   |       |       |            |        |        |            |
|     |          |          |                                                                                                                                                                                                 | interior paint qty                                                                                                                                                                                                                                                       |            |   |   |       |       | 11706.3    |        | 121.55 | 1422900.77 |
|     |          |          |                                                                                                                                                                                                 | Sub total                                                                                                                                                                                                                                                                |            |   |   |       |       |            |        |        | 5404980.86 |

TOWER A, B, F, G, H TO S DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 16 UNIT G+3 (64 UNIT)



TAJ ARCHITECT AND ENGINEER  
 COA No. CA/2018/96244  
 Case No. 0081 Date 14/11/22  
 Tapovan Road Infront of PRD Ground  
 Near by IDBI Bank, Deliradun (U.K.)  
 Mob: 7895872139, 9412143346



| sno | DSR - 21 | CODE NO. | Description of work                                                                                                                                                                                                                                                                                                      | Item | L     | B     | H | Qty   | No | Total Qty | Unit | Rate   | Amount     |
|-----|----------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------|-------|---|-------|----|-----------|------|--------|------------|
| 11  | 22.6     |          | Providing and laying water proofing cement slurry mixed with water proofing treatment on roots of slabs by applying cement compound consisting of applying:                                                                                                                                                              |      |       |       |   |       |    |           |      |        |            |
|     | (a)      |          | after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm.                                                                                                                                                                                      |      |       |       |   |       |    |           |      |        |            |
|     | (b)      |          | laying second layer of fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm.                                                                                                                                                                           |      |       |       |   |       |    |           |      |        |            |
|     | (c)      |          | third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The parapet wall and tucked into groove in parapet all around |      |       |       |   |       |    |           |      |        |            |
|     | (d)      |          | fourth and final layer of brick tiling with cement mortar (which will be paid for separately.                                                                                                                                                                                                                            |      |       |       |   |       |    |           |      |        |            |
|     |          |          | For the purpose of measurement the entire treated surface will be measured                                                                                                                                                                                                                                               |      | 1.915 | 1.315 |   | 2.518 | 16 | 40.29     | sqm  | 585.55 | 94370.7513 |
|     |          |          | G+3 Floor                                                                                                                                                                                                                                                                                                                |      |       |       |   |       | 4  | 161.166   | sqm  |        |            |

TOWER A, B, F, G, H TO S DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 16 UNIT G+3 (64 UNIT)

PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0081  
Date 14/11/22

Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Delradun (U.K.)  
Mob.: 7895872139, 9412143346



| S.NO                                                                                                | DSR-2022 | ITEM DESCRIPTION                                                                                                                                                                                                                                                                                                                              | UNIT  | QTY  | RATE | AMOUNT |
|-----------------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|------|--------|
| 1                                                                                                   |          | Wiring for light point / fan point / exhaust fan point with 1.5 sq.m FRLS PVC insulated copper conductor single core in surface / recessed medium class pvc conduit, with piano type switch, phenolic laminated sheet, suitable size M/s box and earthing the point with 1.5 sq.m FRLS PVC                                                    |       |      |      |        |
| 1.8                                                                                                 |          | Insulated copper conductor single core cable etc. as required.                                                                                                                                                                                                                                                                                |       |      |      |        |
| 1.8.1                                                                                               |          | Group A point                                                                                                                                                                                                                                                                                                                                 | Nos.  | 436  | 1221 | 532356 |
| 1.2                                                                                                 |          | Wiring for twin control light point with 1.5 sq.m FRLS PVC insulated copper conductor single core cable in surface / recessed medium class pvc conduit, 2 way piano type switch, phenolic laminated sheet, suitable size M/s box and earthing the point with 1.5 sq.m FRLS PVC insulated copper conductor single core cable etc. as required. | Point | 40   | 1835 | 73400  |
| 1.3                                                                                                 |          | Wiring of circuit / sub main wiring along with earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface / recessed medium class PVC conduit as required                                                                                                                                       |       |      |      |        |
| 1.7.2                                                                                               |          | 2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire                                                                                                                                                                                                                                                                                                    | Meter | 1920 | 327  | 627840 |
| 1.7.3                                                                                               |          | 2 X 4 sq. mm + 1 X 1.5 sq. mm earth wire                                                                                                                                                                                                                                                                                                      | Meter | 960  | 428  | 410880 |
| 1.7.4                                                                                               |          | 2 X 6 sq. mm + 1 X 6 sq. mm earth wire                                                                                                                                                                                                                                                                                                        | Meter | 480  | 589  | 282720 |
| 1.27                                                                                                |          | modular base & cover plate for modular switches in recess etc. as required.                                                                                                                                                                                                                                                                   |       |      |      |        |
| 1.27.1                                                                                              |          | 1 or 2 Module (75 mmX75 mm)                                                                                                                                                                                                                                                                                                                   | Each  | 64   | 298  | 19072  |
| 1.27.2                                                                                              |          | 3 Module (100 mmX75 mm)                                                                                                                                                                                                                                                                                                                       | Each  | 256  | 327  | 83712  |
| 1.23                                                                                                |          | Supplying and fixing following piano type switch/ socket on the existing switch box/ cover including connections etc. as required.                                                                                                                                                                                                            |       |      |      |        |
| 5/6 amps switch                                                                                     |          |                                                                                                                                                                                                                                                                                                                                               | Each  | 64   | 103  | 6592   |
| 15/16 amp switch                                                                                    |          |                                                                                                                                                                                                                                                                                                                                               | Each  | 64   | 156  | 9984   |
| 3 pin 5/6 amp socket outlet                                                                         |          |                                                                                                                                                                                                                                                                                                                                               | Each  | 64   | 122  | 7808   |
| 6 pin 15/16 amp socket outlet                                                                       |          |                                                                                                                                                                                                                                                                                                                                               | Each  | 64   | 197  | 12608  |
| TV antenna socket outlet                                                                            |          |                                                                                                                                                                                                                                                                                                                                               | Each  | 64   | 148  | 9472   |
| Bell Push                                                                                           |          |                                                                                                                                                                                                                                                                                                                                               | Each  | 64   | 140  | 8960   |
| Supplying and fixing call bell / buzzer suitable for single phase, 230 volts, complete as required. |          |                                                                                                                                                                                                                                                                                                                                               | Each  | 64   | 99   | 6336   |
| 1.38                                                                                                |          | Supplying and fixing two module stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.                                                                                                                                                            | Each  | 64   | 369  | 23616  |
| 1.25                                                                                                |          | Supplying and fixing brass batten/ angle holder including connection etc. as required.                                                                                                                                                                                                                                                        | Each  | 192  | 131  | 25152  |
| 1.32                                                                                                |          | Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/ recess including cutting the wall and making good the same in case of recessed conduit as required.                                                                                                                                    |       |      |      |        |
| 1.21.2                                                                                              |          | 25 mm                                                                                                                                                                                                                                                                                                                                         | Meter | 384  | 145  | 55680  |
| 2.3                                                                                                 |          | Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 Volts, on surface / recess complete with time delay copper bus bar, neutral bar, earth bar, din bar, interconnections, powder painted including earthing etc as required (But without MCB/RCCBO/Isolator)                               |       |      |      |        |
| 2.3.1                                                                                               |          | 6 way double door                                                                                                                                                                                                                                                                                                                             | Each  | 64   | 2206 | 14184  |
| 2.1                                                                                                 |          | Supplying and fixing 5 amps to 32 amps rating 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in existing MCB DB complete with connections, testing and commissioning etc. as required.                                                                                                    |       |      |      |        |
| 2.10.1                                                                                              |          | single pole                                                                                                                                                                                                                                                                                                                                   | Each  | 192  | 256  | 49152  |
| 2.14                                                                                                |          | Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB) having sensitivity up to 30 milli ampere in the existing MCB DB complete with connections, testing commissioning etc. as required                                                                          |       |      |      |        |
| 2.14.2                                                                                              |          | 40 amps                                                                                                                                                                                                                                                                                                                                       | Each  | 64   | 2642 | 169088 |
| 9.1                                                                                                 |          | Supplying and making of end terminations with brass compression gland and AL/PVC lugs for following size PVC insulated and PVC sheathed / XLPE Al Armored / Unarmored conductor cable of 1.1 kV grade as required                                                                                                                             |       |      |      |        |
| 9.1.23                                                                                              |          | 3.5C x 70 sq. mm (Al Armored Cable)                                                                                                                                                                                                                                                                                                           | Each  | 8    | 468  | 3744   |
| 5.4                                                                                                 |          | Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including 2.7 meter long etc with charcoal/ coke and salt as required.                                                                                                                                                                                                            | Each  | 8    | 7472 | 59776  |
| 5.7                                                                                                 |          | Supplying and laying 6 SWG G.I. wire at 0.50 Meter below ground level for conductor earth electrode including connections / termination with G.I. thimble etc. as required                                                                                                                                                                    | meter | 36   | 51   | 1836   |
| 5.15                                                                                                |          | Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.                                                                                                                                                                                                                                        | meter | 36   | 1162 | 41832  |
| 2072                                                                                                |          | Providing and fixing of lightning conductor final, made of 25mm dia 300mm long G.I. tube having single prong at top, with 85mm dia 6mm thick G.I. base plate including holes etc. complete as required.                                                                                                                                       | Each  | 4    | 518  | 2072   |
| 50400                                                                                               |          | Providing and fixing G.I. tape 20mm x 3mm thick on parapet or surface of wall for lightning conductor complete as required. (for horizontal run)                                                                                                                                                                                              | meter | 400  | 126  | 50400  |
| 2588272                                                                                             |          | Sub Total                                                                                                                                                                                                                                                                                                                                     |       |      |      |        |





| S. No. | DSR 2021  | DESCRIPTION OF WORK                                                                                                                                                                                                                                                                                                                                                                                                        | UNIT  | QTY | Rate (Rs) | Amount (Rs) |
|--------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-----------|-------------|
| 1      | 17.1      | Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device(handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required :                                          |       |     |           |             |
| a)     | 17.1.1    | White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests.                                                                                                                                                                                                                                                                                                                             | Each  | 64  | 5781.35   | 370006.4    |
|        | 17.10     | Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required :                                                                                                                                                                                   |       |     |           |             |
| i      | 17.10.2   | Kitchen sink without drain board 610x460 mm bowl depth 200 mm                                                                                                                                                                                                                                                                                                                                                              | Each  | 64  | 3337.85   | 213622.4    |
|        |           | Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.                                                                                                                                                                                                                                                                                                                    |       |     |           |             |
|        | 17.28.2   | Flexible pipe                                                                                                                                                                                                                                                                                                                                                                                                              |       |     |           |             |
|        | 17.28.2.1 | 32 mm dia                                                                                                                                                                                                                                                                                                                                                                                                                  |       |     |           |             |
|        | 18.51     | Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.                                                                                                                                                                                                                                                                                      |       |     |           |             |
| a)     | 18.51.1   | 15 mm nominal bore                                                                                                                                                                                                                                                                                                                                                                                                         | Each  | 192 | 594.75    | 114192      |
|        |           |                                                                                                                                                                                                                                                                                                                                                                                                                            |       |     |           |             |
| b)     | 18.7.2    | 20 mm nominal outer dia. Pipes.                                                                                                                                                                                                                                                                                                                                                                                            | metre | 400 | 325.10    | 130040      |
| c)     | 18.7.3    | 25 mm nominal outer dia .Pipes.                                                                                                                                                                                                                                                                                                                                                                                            | metre | 112 | 408.55    | 45757.6     |
| d)     | 18.7.4    | 32 mm nominal outer dia. Pipes.                                                                                                                                                                                                                                                                                                                                                                                            | metre | 192 | 500.95    | 96182.4     |
| e)     | 18.7.5    | 40 mm nominal outer dia. Pipes.                                                                                                                                                                                                                                                                                                                                                                                            | metre | 48  | 674.35    | 32368.8     |
|        |           |                                                                                                                                                                                                                                                                                                                                                                                                                            |       |     |           |             |
|        | 18.7      | Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. : Internal work - Exposed on wall |       |     |           |             |
|        |           | <b>WATER SUPPLY SYSTEM</b>                                                                                                                                                                                                                                                                                                                                                                                                 |       |     |           |             |

G+3 64 UNITS

DETAILED ESTIMATE OF INTERNAL PLUMBING WORK 16 UNIT PER FLOOR

**DETAILED ESTIMATE OF INTERNAL PLUMBING WORK 16 UNIT PER FLOOR**  
**G+3 (64 unit)**

| S. No. | DSR 2021  | DESCRIPTION OF WORK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | UNIT  | Qty | Rate (Rs) | Amount (Rs) |
|--------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-----------|-------------|
| a)     | 18.8.1    | 15 mm nominal outer dia Pipes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Metre | 96  | 441.15    | 42350       |
|        | 18.8.2    | 20 mm nominal outer dia Pipes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | metre | 128 | 712.75    | 91232       |
|        | 18.8.3    | 25 mm nominal outer dia Pipes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | metre | 16  | 626.05    | 10016.8     |
|        | 18.17.3   | 40 mm dia nominal bore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Each  | 32  | 707.30    | 22633.6     |
|        | 18.17.5   | 65 mm dia nominal bore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Each  | 12  | 1490.70   | 17888.4     |
|        | 18.18     | Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |     |           |             |
| b)     | 18.18.2   | 20 mm nominal bore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Each  | 64  | 397.45    | 25436.8     |
| c)     | 18.18.3   | 25 mm nominal bore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Each  | 4   | 399.15    | 1596.6      |
|        | 18.21     | Providing and fixing uplasticised PVC connection pipe with brass unions :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |       |     |           |             |
| a)     | 18.21.1   | 30 cm length                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |       |     |           |             |
| (i)    | 18.21.1.1 | 15 mm nominal bore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Each  | 64  | 74.80     | 1196.8      |
|        | 18.33     | Constructing masonry Chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep ( inside) with chained lid and RCC top slab 1:2:4 mix (1cement :2 coarse sand : 4 graded stone aggregate 20mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design : |       |     |           |             |
| a)     | 18.33.1   | With common burnt clay F.P.S.(non modular) bricks of class designation 7.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No.   | 4   | 10102.50  | 40410       |
|        | 18.58     | Providing and fixing PTMT grating of approved quality and colour.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |     |           |             |
| a)     | 18.58.1   | Circular type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |     |           |             |
| (ii)   | 18.58.1.2 | 125 mm nominal dia with 25 mm waste hole.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No.   | 128 | 45.25     | 5795.84     |



PAL ARCHITECT AND ENGINEER  
 COA No. CA/2018/96244  
 Case No. 0081 Date. 14/11/22  
 Tapovan Road Infront of PRD Ground  
 Near by IDBI Bank, Del. radun (U.K.)  
 Mob.: 7895872139, 9412143346



| DETAILED ESTIMATE OF INTERNAL PLUMBING WORK 16 UNIT PER FLOOR |          |                                                                                                                                                                                                                                                                                                                                       |      |     |             |
|---------------------------------------------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|-------------|
| G+3 (64 unit)                                                 |          |                                                                                                                                                                                                                                                                                                                                       |      |     |             |
| S. No.                                                        | DSR 2021 | DESCRIPTION OF WORK                                                                                                                                                                                                                                                                                                                   | UNIT | QTY | Rate (Rs)   |
|                                                               |          |                                                                                                                                                                                                                                                                                                                                       |      |     | Amount (Rs) |
| 12.43                                                         | 12.43.2  | Providing and fixing un plasticised -PVC pipe clips of approved design to un plasticised - PVC rain water pipes by means of 50x50x50 mm hard wood plugs, screwed with M.S. screws of required length, including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete. | Each | 128 | 309.5       |
|                                                               |          |                                                                                                                                                                                                                                                                                                                                       |      |     | 39616       |
| Total cost for single (G+3) tower                             |          |                                                                                                                                                                                                                                                                                                                                       |      |     | 1302011.84  |

PAL ARCHITECT AND ENGINEER  
 COA No. CA/2018/96244  
 Case No. 9081 Date 19/11/22  
 Tapovan Road Infront of PRD Ground  
 Near by IDBI Bank, Delradun (U.K.)  
 Mob: 7895872139, 9412143346



**Tower No. C,D,E & T ( 4 Tower)  
Bill of Qunnatity PMAY EWS  
(Uttarakhand)**



**(Civil Work)**

PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 3899  
Date: 14/11/2022  
Near by HECI Bank, Tehriadun (UK)  
Mob: 78838/2139, 9412143346





Case No. 0481  
Date: 14/11/2020  
GCA No. CA/2018/96244  
TAL ARCHITECT AND ENGINEER  
Mob: 789 522133, 9412143346  
Rajiv Road, In front of PRD Ground  
Dadarpada (U.K.)

| S.NO.                      | DSR - 21 | DESCRIPTION OF WORK                                                                                                                                                                                                                                                                                                       | UNIT | QTY       | RATE    | AMOUNT       |
|----------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|---------|--------------|
| <b>EARTH WORK</b>          |          |                                                                                                                                                                                                                                                                                                                           |      |           |         |              |
| 1                          | 2.28.1   | All kinds of soil                                                                                                                                                                                                                                                                                                         |      |           |         |              |
| 2                          | 2.32     | Clearing grass and removal of the rubbish up to a distance of 50 m outside the periphery of the area cleared.                                                                                                                                                                                                             |      |           |         |              |
| 3                          | 2.6      | Earth work in excavation by mechanical means (hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge.                             |      |           |         |              |
| 4                          | 2.6.1    | All kinds of soil                                                                                                                                                                                                                                                                                                         | cum  | 1540.024  | 205.45  | 316397.9308  |
| 5                          | 2.36     | Extra for levelling & neatly dressing of disposed soil completely as directed by Engineer-in-charge.                                                                                                                                                                                                                      | cum  | 231.008   | 76.7    | 17718.3136   |
| <b>CONCRETE WORK</b>       |          |                                                                                                                                                                                                                                                                                                                           |      |           |         |              |
| <b>SUB TOTAL</b>           |          |                                                                                                                                                                                                                                                                                                                           |      |           |         |              |
|                            |          |                                                                                                                                                                                                                                                                                                                           |      |           |         | 334116.2444  |
| 6                          | 4.1      | Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :                                                                                                                                                                        |      |           |         |              |
| 7                          | 4.1.8    | 1:4:8 (1 Cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 40 mm nominal size derived from natural sources)                                                                                                                                                                       | cum  | 158.102   | 6326.05 | 1000161.157  |
| 8                          | 4.20.1   | 4.20.1 All works upto plinth level :                                                                                                                                                                                                                                                                                      |      |           |         |              |
| 9                          | 4.20.1.3 | Concrete of M20 grade with minimum cement content of 270 kg/cum                                                                                                                                                                                                                                                           | cum  | 397.568   | 8387.15 | 3334462.451  |
| 10                         | 4.20.2   | All works above plinth and upto floor V level                                                                                                                                                                                                                                                                             |      |           |         |              |
| 11                         | 4.20.2.3 | Concrete of M20 grade with minimum cement content of 270 kg/cum                                                                                                                                                                                                                                                           | cum  | 822.564   | 10009.5 | 82333454.358 |
| <b>FORM WORK</b>           |          |                                                                                                                                                                                                                                                                                                                           |      |           |         |              |
| <b>SUB TOTAL</b>           |          |                                                                                                                                                                                                                                                                                                                           |      |           |         |              |
|                            |          |                                                                                                                                                                                                                                                                                                                           |      |           |         | 12568077.97  |
| 12                         | 5.9      | Centering and shuttering including strutting, propping etc. and removal of form for                                                                                                                                                                                                                                       |      |           |         |              |
| 13                         | 5.9.1    | Foundations, footings, bases of columns, etc. for mass concrete                                                                                                                                                                                                                                                           | sqm  | 1381.8    | 307.95  | 425525.31    |
| 14                         | 5.9.3    | Suspended floors, roofs, landings, balconies and access platform                                                                                                                                                                                                                                                          | sqm  | 17047.036 | 766.55  | 13067405.45  |
| 15                         | 5.9.6    | Columns, pillars, piers, Abutments, Posts and Struts                                                                                                                                                                                                                                                                      | sqm  | 3149.28   | 657.75  | 2071438.92   |
| 16                         | 5.9.7    | Stairs, (excluding landings) except spiral-staircases                                                                                                                                                                                                                                                                     | sqm  | 654.548   | 657.75  | 430528.947   |
| <b>STEEL REINFORCEMENT</b> |          |                                                                                                                                                                                                                                                                                                                           |      |           |         |              |
| 17                         | 5.22     | Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level                                                                                                                                                                             |      |           |         |              |
| 18                         | 5.22.6   | Thermo-Mechanically Treated bars of grade Fe-500D or more                                                                                                                                                                                                                                                                 | kg   | 136110.72 | 89.65   | 12202326.05  |
| <b>A.C.C BLOCK WORK</b>    |          |                                                                                                                                                                                                                                                                                                                           |      |           |         |              |
| <b>SUB TOTAL</b>           |          |                                                                                                                                                                                                                                                                                                                           |      |           |         |              |
|                            |          |                                                                                                                                                                                                                                                                                                                           |      |           |         | 12202326.05  |
| 19                         | 6.38     | Providing and laying autoclaved aerated cement blocks masonry with 100 mm thick AAC blocks in super structure above plinth level up to floor V level in cement mortar 1:4 (1 cement : 4 coarse sand). The rate includes providing and placing in position 2 Nos 6 mm dia M.S. bars at every third course of masonry work. | cum  | 641       | 8890.8  | 5699002.8    |
| <b>SUB TOTAL</b>           |          |                                                                                                                                                                                                                                                                                                                           |      |           |         |              |
|                            |          |                                                                                                                                                                                                                                                                                                                           |      |           |         | 5699002.8    |





| S.NO. | DSR - 21 | DESCRIPTION OF WORK | UNIT | QTY | RATE | AMOUNT |
|-------|----------|---------------------|------|-----|------|--------|
|-------|----------|---------------------|------|-----|------|--------|

|                                            |         |                                                                                                                                                                                                                                                                           |     |          |        |             |
|--------------------------------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------|--------|-------------|
| 30                                         | 13.1    | 12 mm cement plaster of mix :                                                                                                                                                                                                                                             |     |          |        |             |
| 31                                         | 13.1.2  | 1:6 (1 cement: 6 fine sand)                                                                                                                                                                                                                                               | sqm | 27189.8  | 294.85 | 8016912.53  |
| 32                                         | 13.8    | Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.                                                                           | sqm | 27189.8  | 123.85 | 3367456.73  |
| 33                                         | 13.48   | Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :                                                                                                                                           |     |          |        |             |
| 34                                         | 13.48.1 | Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of Special primer applied @ 0.75 ltr/10 sqm                                                                                                                                              | sqm | 27189.8  | 158.95 | 4321818.71  |
| 35                                         | 13.47   | Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade:                                                                                                                                                                     |     |          |        |             |
| 36                                         | 13.47.1 | New work (Two or more coats applied @ 1.43 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)                                                                                                                                        | sqm | 3219.632 | 162.35 | 522707.2552 |
| 37                                         | 13.83   | Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound ) content less than 50 grams/ litre of approved brand and manufacturer, including applying additional coats wherever required to achieve even shade and colour | sqm | 23412.4  | 121.55 | 2845777.22  |
| 38                                         | 13.83.2 | Two coats                                                                                                                                                                                                                                                                 |     |          |        |             |
| <b>SUB TOTAL</b>                           |         |                                                                                                                                                                                                                                                                           |     |          |        |             |
| <b>PLUMBING AND SANITARY INSTALLATIONS</b> |         |                                                                                                                                                                                                                                                                           |     |          |        |             |
| 39                                         |         | Plumbing and sanitary installation of 128 EWS per floor 8 unit G+3 (32 Unit) total 4 tower                                                                                                                                                                                |     |          |        | 2885230.36  |
| <b>ELECTRICAL WORK</b>                     |         |                                                                                                                                                                                                                                                                           |     |          |        |             |
| 40                                         |         | Internal Electrical work of 128 EWS per floor 8 unit G+3 (32 Unit) total 4 tower                                                                                                                                                                                          |     |          |        | 5340880     |

|                                                     |  |                                                                                                                                                                                                                                                                                                                                                                       |        |   |        |             |
|-----------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---|--------|-------------|
| <b>WATER PROOFING</b>                               |  |                                                                                                                                                                                                                                                                                                                                                                       |        |   |        |             |
| 22.6                                                |  | Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying:                                                                                                                                                                                                           |        |   |        |             |
| (a)                                                 |  | after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm.                                                                                                                                                                                                                                   |        |   |        |             |
| (b)                                                 |  | laying second layer of fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm.                                                                                                                                                                                                                        |        |   |        |             |
| (c)                                                 |  | third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30 cm on parapet wall and tucked into groove in parapet all around |        |   |        |             |
| (d)                                                 |  | fourth and final layer of brick tiling with cement mortar (which will be paid for separately.                                                                                                                                                                                                                                                                         |        |   |        |             |
|                                                     |  | For the purpose of measurement the entire treated surface will be measured.                                                                                                                                                                                                                                                                                           | 644.68 | 4 | 585.55 | 377492.374  |
| <b>Grand total amount for tower C, D, E &amp; T</b> |  |                                                                                                                                                                                                                                                                                                                                                                       |        |   |        |             |
|                                                     |  |                                                                                                                                                                                                                                                                                                                                                                       |        |   |        | 80704224.32 |

PAL ARCHITECT AND ENGINEER  
 COA No. CA/2018/96344  
 Date: 01/11/2018  
 Case No. 84  
 Tapovan Road Infront of MID Ground  
 Near by IDBI Bank, Dehradun (U.P.)  
 Mob: 7895972139, 9412144946



PAL ARCHITECT AND ENGINEER  
 COA No. CA/2018/96244  
 Case No. 0081 Date 14/11/22  
 Tapovan Road Infront of PRD Ground  
 Near by IDBI Bank, Delradun (U.K.)  
 Mob: 7895872139, 9412143546



| sno                                                                                                                                                                                                                                       | DSR - 21 | Description of work                                                                                                                                                                                                                                                                                                   | Item  | L     | B  | H      | Qty    | No     | Total Qty | Unit   | Rate       | Amount |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|----|--------|--------|--------|-----------|--------|------------|--------|
| 1                                                                                                                                                                                                                                         | 2.6      | Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in charge. 2.6.1 All kinds of soil | (F1)  | 2.02  | 2  | 2      | 8.1608 | 6      | 48.966    |        |            |        |
|                                                                                                                                                                                                                                           |          |                                                                                                                                                                                                                                                                                                                       | (F2)  | 2.16  | 2  | 2      | 9.33   | 12     | 111.96    |        |            |        |
|                                                                                                                                                                                                                                           |          |                                                                                                                                                                                                                                                                                                                       | (CF1) | 4.03  | 2  | 2      | 16.12  | 2      | 32.24     |        |            |        |
|                                                                                                                                                                                                                                           |          |                                                                                                                                                                                                                                                                                                                       | (CF2) | 6.65  | 2  | 2      | 26.6   | 6      | 159.6     |        |            |        |
|                                                                                                                                                                                                                                           |          |                                                                                                                                                                                                                                                                                                                       | (CF3) | 4.03  | 2  | 2      | 16.12  | 2      | 32.24     |        |            |        |
|                                                                                                                                                                                                                                           |          |                                                                                                                                                                                                                                                                                                                       |       |       |    |        |        |        |           |        |            |        |
|                                                                                                                                                                                                                                           |          |                                                                                                                                                                                                                                                                                                                       |       |       |    |        |        |        |           |        |            |        |
|                                                                                                                                                                                                                                           |          |                                                                                                                                                                                                                                                                                                                       |       |       |    |        |        |        |           |        |            |        |
|                                                                                                                                                                                                                                           |          |                                                                                                                                                                                                                                                                                                                       |       |       |    |        |        |        |           |        |            |        |
|                                                                                                                                                                                                                                           |          |                                                                                                                                                                                                                                                                                                                       |       |       |    |        |        |        |           |        |            |        |
| 2.6.1 All kinds of soil                                                                                                                                                                                                                   |          |                                                                                                                                                                                                                                                                                                                       |       |       |    |        |        |        |           |        |            |        |
| Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m. |          |                                                                                                                                                                                                                                                                                                                       |       |       |    |        |        |        |           |        |            |        |
| (F1)                                                                                                                                                                                                                                      | 2.02     | 2.02                                                                                                                                                                                                                                                                                                                  | 0.3   | 1.224 | 6  | 7.344  |        |        |           |        |            |        |
| (F2)                                                                                                                                                                                                                                      | 2.16     | 2.16                                                                                                                                                                                                                                                                                                                  | 0.3   | 1.399 | 12 | 16.796 |        |        |           |        |            |        |
| (CF1)                                                                                                                                                                                                                                     | 4.03     | 2                                                                                                                                                                                                                                                                                                                     | 0.3   | 2.418 | 2  | 4.836  |        |        |           |        |            |        |
| (CF2)                                                                                                                                                                                                                                     | 6.65     | 2                                                                                                                                                                                                                                                                                                                     | 0.3   | 3.99  | 6  | 23.94  |        |        |           |        |            |        |
| (CF3)                                                                                                                                                                                                                                     | 4.03     | 2                                                                                                                                                                                                                                                                                                                     | 0.3   | 2.418 | 2  | 4.836  |        |        |           |        |            |        |
| SUB TOTAL                                                                                                                                                                                                                                 |          |                                                                                                                                                                                                                                                                                                                       |       |       |    |        |        | 57.752 | CUM       | 253.95 | 14666.1204 |        |
|                                                                                                                                                                                                                                           |          |                                                                                                                                                                                                                                                                                                                       |       |       |    |        |        |        |           |        | 93765.6031 |        |

TOWER C,D,E,T (4 TOWER ) DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 8 UNIT G+3 (32 UNIT)



P.A.L ARCHITECT AND ENGINEER  
 COA No. CA/2018/96244  
 Case No. 0081 Date. 14/11/22  
 Tapovan Road Infront of PRD Ground  
 Near by IDBI Bank, Deliradun (U.K.)  
 Mob.: 7895872139, 9412143346



| sno | DSR - 21 | CODE | Description of work                                                                                                                                 | Item  | L     | B     | H       | Measurement | Qty     | No          | Total Qty | Unit | Rate | Amount      |
|-----|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|-------|---------|-------------|---------|-------------|-----------|------|------|-------------|
| 2   | 4.1      |      | Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :  |       |       |       |         |             |         |             |           |      |      |             |
|     | 4.1.8    |      | 1:4:8 (1 Cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 40 mm nominal size derived from natural sources) |       |       |       |         |             |         |             |           |      |      |             |
|     |          |      | (F1) Foundation P.C.C                                                                                                                               | 2.02  | 2.02  | 0.075 | 0.306   | 6           | 1.836   |             |           |      |      |             |
|     |          |      | (F2) Foundation P.C.C                                                                                                                               | 2.16  | 2.16  | 0.075 | 0.3499  | 12          | 4.199   |             |           |      |      |             |
|     |          |      | (CF1) Foundation P.C.C                                                                                                                              | 4.03  | 2     | 0.075 | 0.6045  | 2           | 1.209   |             |           |      |      |             |
|     |          |      | (CF2) Foundation P.C.C                                                                                                                              | 6.65  | 2     | 0.075 | 0.9975  | 6           | 5.985   |             |           |      |      |             |
|     |          |      | (CF3) Foundation P.C.C                                                                                                                              | 4.03  | 2     | 0.075 | 0.3022  | 2           | 0.6045  |             |           |      |      |             |
|     |          |      | Sub Total                                                                                                                                           | 82.05 | 0.3   | 0.075 | 13.8335 | cum         | 6326.05 | 186903.147  |           |      |      |             |
|     |          |      | Plinth beam (PB1) P.C.C                                                                                                                             | 82.05 | 0.3   | 0.075 | 1.846   |             |         |             |           |      |      |             |
|     |          |      | Plinth beam (PB2) P.C.C                                                                                                                             | 119.1 | 0.3   | 0.075 | 2.67    |             |         |             |           |      |      |             |
|     |          |      | Plinth beam (PB3) P.C.C                                                                                                                             | 82.05 | 0.3   | 0.075 | 1.846   |             |         |             |           |      |      |             |
|     |          |      | Ground floor pcc                                                                                                                                    | 24.21 | 10.65 | 0.075 | 19.33   | cum         | 6326.05 | 122282.5465 |           |      |      |             |
|     |          |      | SUB TOTAL                                                                                                                                           |       |       |       |         |             |         |             |           |      |      | 389798.5435 |

TOWER C,D,E,T (4 TOWER ) DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 8 UNIT G+3 (32 UNIT)

[illegible]



**TOWER C,D,E,T (4 TOWER ) DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 8 UNIT G+3 (32 UNIT)**

| sno | DSR - 21 | CODE | Description of work                                                                 | Item   | L     | B | H | Qty     | No | Total Qty      | Unit | Rate   | Amount             |
|-----|----------|------|-------------------------------------------------------------------------------------|--------|-------|---|---|---------|----|----------------|------|--------|--------------------|
| 4   | 5.9      |      | Centering and shuttering including strutting, propping etc. and removal of form for |        |       |   |   |         |    |                |      |        |                    |
|     | 5.9.1    |      | Foundations, footings, bases of columns, etc. for mass concrete                     |        |       |   |   |         |    |                |      |        |                    |
|     |          |      | (F1)                                                                                | 2-side | 2.02  |   |   | 1.818   | 6  | 10.908         |      |        |                    |
|     |          |      | (F2)                                                                                | 2-side | 2.16  |   |   | 2.099   | 12 | 25.194         |      |        |                    |
|     |          |      | (F3)                                                                                | 2-side | 2.16  |   |   | 1.944   | 12 | 23.328         |      |        |                    |
|     |          |      | (CF1)                                                                               | 2-side | 4.03  |   |   | 3.627   | 2  | 7.254          |      |        |                    |
|     |          |      | (CF2)                                                                               | 2-side | 6.65  |   |   | 5.427   | 6  | 32.56          |      |        |                    |
|     |          |      | (CF3)                                                                               | 2-side | 4.03  |   |   | 3.627   | 2  | 7.254          |      |        |                    |
|     |          |      |                                                                                     |        | 2     |   |   | 3.627   | 2  | 7.254          |      |        |                    |
|     |          |      | Plinth beam (PB1)                                                                   | 2-side | 82.05 |   |   | 32.82   | 2  | 65.64          | sqm  | 307.95 | 43948.763          |
|     |          |      | Plinth beam (PB2)                                                                   |        | 119.1 |   |   | 35.73   | 2  | 71.46          |      |        |                    |
|     |          |      | Plinth beam (PB3)                                                                   |        | 82.05 |   |   | 32.82   | 2  | 65.64          |      |        |                    |
|     | 5.9.6    |      | Columns, Pillars, Piers, Abutments, Posts and Struts                                |        |       |   |   |         |    |                |      |        |                    |
|     |          |      | C1 upto plinth beam level                                                           | 4 side | 0.3   |   |   | 2.4     | 34 | 81.6           |      |        |                    |
|     |          |      | C2 upto plinth beam level                                                           | 4 side | 0.3   |   |   | 2.4     | 12 | 28.8           |      |        |                    |
|     |          |      | C1 G+3 upto terrace level                                                           | 4 side | 0.3   |   |   | 11.95   | 34 | 487.56         | sqm  | 804.25 | 88789.2            |
|     |          |      | C2 G+3 upto terrace level                                                           | 4 side | 0.3   |   |   | 11.95   | 12 | 172.08         |      |        |                    |
|     |          |      | C1 upto terrace TO Mummy level                                                      | 4 side | 0.3   |   |   | 2.4     | 6  | 17.28          | sqm  | 804.25 | 530515.47          |
|     |          |      |                                                                                     |        |       |   |   |         |    |                |      |        | 13897.44           |
|     | 5.9.3    |      | Suspended floors, roofs, landings, balconies and access platform                    |        |       |   |   |         |    |                |      |        |                    |
|     |          |      | (B1)                                                                                |        | 18    |   |   | 14.4    | 2  | 14.4           |      |        |                    |
|     |          |      | (B2)                                                                                |        | 63    |   |   | 37.8    | 2  | 37.8           |      |        |                    |
|     |          |      | (B3)                                                                                |        | 46    |   |   | 27.6    | 2  | 27.6           |      |        |                    |
|     |          |      | (B4)                                                                                |        | 13    |   |   | 10.4    | 2  | 10.4           |      |        |                    |
|     |          |      | (SB1)                                                                               |        | 10.82 |   |   | 12.112  | 2  | 12.11          |      |        |                    |
|     |          |      | (SB2)                                                                               |        | 46    |   |   | 27.6    | 2  | 27.6           |      |        |                    |
|     |          |      | (SB3)                                                                               |        | 10.82 |   |   | 6.489   | 2  | 6.489          |      |        |                    |
|     |          |      | G.F                                                                                 |        | 24.21 |   |   | 257.836 | 4  | 1031.34        | sqm  | 766.55 | 104556.6535        |
|     |          |      | F.F                                                                                 |        | 24.21 |   |   | 257.836 | 4  | 1031.34        |      |        |                    |
|     |          |      | S.F                                                                                 |        | 24.21 |   |   | 257.836 | 4  | 1031.34        |      |        |                    |
|     |          |      | T.F                                                                                 |        | 24.21 |   |   | 257.836 | 4  | 1031.34        | sqm  | 766.55 | 3162294.708        |
|     | 5.9.7    |      | Stairs, (excluding landings) except spiral-staircases                               |        |       |   |   |         |    |                |      |        |                    |
|     |          |      | Staircase landing                                                                   |        | 2.06  |   |   | 2.575   | 4  | 10.3           |      |        |                    |
|     |          |      | projection                                                                          |        | 1.7   |   |   | 0.765   | 32 | 24.48          |      |        |                    |
|     |          |      | projection                                                                          |        | 0.65  |   |   | 0.2925  | 32 | 9.376          |      |        |                    |
|     |          |      | projection                                                                          |        | 0.65  |   |   | 0.2925  | 32 | 9.376          |      |        |                    |
|     |          |      | projection                                                                          |        | 1.65  |   |   | 0.7425  | 32 | 23.776         |      |        |                    |
|     |          |      | Kitchen Counter                                                                     |        | 2.07  |   |   | 1.242   | 32 | 39.744         |      |        |                    |
|     |          |      | Mummy slab                                                                          |        | 5.91  |   |   | 13.17   | 1  | 6.585          | sqm  | 657.75 | 107632.2368        |
|     |          |      | <b>SUB TOTAL</b>                                                                    |        |       |   |   |         |    | <b>163.637</b> |      |        | <b>4114068.268</b> |



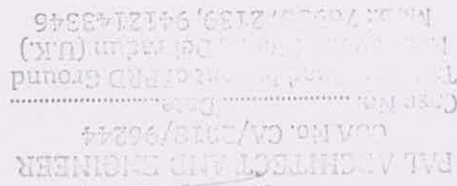
PAL ARCHITECT AND ENGINEER  
 COA No. CA/2018/96244  
 Case No. 150/18  
 Date: 11/11/2018  
 Tapovan Road Infront of PWD Ground  
 Near by IBI Bank, Dehradun (U.K.)  
 Mob: 7895672139, 9412143346





TOWER C,D,E,T ( 4 TOWER ) DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 8 UNIT G+3 ( 32 UNIT)





| sno | DSR - 21 | CODE | Description of work                                                                                                                                                                                            | Item | L<br>Measurement | B | H     | Qty    | No   | Total Qty | Unit | Rate   | Amount    |
|-----|----------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------------|---|-------|--------|------|-----------|------|--------|-----------|
| 6   | 6.38     |      | Providing and laying autoclaved aerated cement blocks masonry with floor V level in cement mortar 1:4 (includes providing and placing position 2 Nos 6 mm dia M.S. bars at every third course of masonry work. |      |                  |   |       |        |      |           |      |        |           |
|     |          |      | WALL (G+3 building)                                                                                                                                                                                            | 4    | 2.8              |   | 2.65  | 29.68  | 8    | 237.44    |      |        |           |
|     |          |      |                                                                                                                                                                                                                | 4    | 4.1              |   | 2.65  | 43.45  | 8    | 347.6     |      |        |           |
|     |          |      |                                                                                                                                                                                                                | 4    | 2.8              |   | 2.65  | 29.68  | 8    | 237.44    |      |        |           |
|     |          |      |                                                                                                                                                                                                                | 4    | 1.3              |   | 2.65  | 13.77  | 8    | 110.16    |      |        |           |
|     |          |      |                                                                                                                                                                                                                | 4    | 0.6              |   | 2.65  | 6.359  | 8    | 50.872    |      |        |           |
|     |          |      |                                                                                                                                                                                                                | 4    | 1                |   | 2.65  | 10.6   | 8    | 84.8      |      |        |           |
|     |          |      |                                                                                                                                                                                                                | 4    | 0.35             |   | 2.65  | 3.706  | 8    | 29.648    |      |        |           |
|     |          |      |                                                                                                                                                                                                                | 4    | 2.2              |   | 2.65  | 23.31  | 8    | 186.48    |      |        |           |
|     |          |      |                                                                                                                                                                                                                | 4    | 3                |   | 2.65  | 31.79  | 8    | 254.32    |      |        |           |
|     |          |      |                                                                                                                                                                                                                | 4    | 1.4              |   | 2.65  | 14.83  | 8    | 118.64    |      |        |           |
|     |          |      |                                                                                                                                                                                                                | 4    | 1.4              |   | 2.65  | 14.83  | 8    | 118.64    |      |        |           |
|     |          |      | corridor wall                                                                                                                                                                                                  | 4    | 1.2              |   | 2.65  | 12.72  | 2    | 25.44     | SQM  |        |           |
|     |          |      | (Door & window ) Deduction no of unit 8 x 4 floor                                                                                                                                                              | D1   | 1                |   | 2.1   | 2.1    | 2    | 134.4     |      |        |           |
|     |          |      | D2                                                                                                                                                                                                             | 0.75 | 2.1              |   | 1.575 | 2.1    | 2    | 100.8     |      |        |           |
|     |          |      | DW1                                                                                                                                                                                                            | 0.75 | 2.1              |   | 1.575 | 2.1    | 1    | 100.8     |      |        |           |
|     |          |      | DW1                                                                                                                                                                                                            | 0.6  | 1.2              |   | 0.72  | 1.35   | 1    | 43.2      |      |        |           |
|     |          |      | V1                                                                                                                                                                                                             | 0.45 | 0.4              |   | 0.18  | 2      | 5.76 | SQM       |      |        |           |
|     |          |      | wall                                                                                                                                                                                                           |      |                  |   |       |        |      | 1801.48   | cum  | 8890.8 | 1424750.7 |
|     |          |      | Deduction                                                                                                                                                                                                      |      |                  |   |       |        |      | 1393.5    | SQM  |        |           |
|     |          |      | SUB TOTAL                                                                                                                                                                                                      |      |                  |   |       | 1393.5 |      | 160.25    | cum  |        |           |

**TOWER C,D,E,T (4 TOWER ) DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 8 UNIT G+3 (32 UNIT)**

| sno | DSR - 21 | CODE        | Description of work                                                                                                                                                                                                                                                                                                                                    | Item | L    | B    | H    | Qty   | No   | Total Qty | Unit | Rate   | Amount    |
|-----|----------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|------|-------|------|-----------|------|--------|-----------|
| 7   | 9.18     |             | Providing and fixing Pre-laminated flat pressed 3 layer (medium density) particle board or graded wood particle board IS : 3087 marked, with one side decorative and other side exterior grade IS : 12823 marked, in shelves with screws and fittings wherever required, edges to be painted with polyurethane primer (fittings to be paid separately) |      |      |      |      |       |      |           |      |        |           |
|     | 9.18.2   | 25 mm thick |                                                                                                                                                                                                                                                                                                                                                        | D1   | 8    | 1    | 2.1  | 2.1   | 2    | 4.2       |      |        |           |
|     |          |             |                                                                                                                                                                                                                                                                                                                                                        | D2   | 8    | 0.75 | 2.1  | 1.575 | 2    | 3.15      |      |        |           |
|     |          |             |                                                                                                                                                                                                                                                                                                                                                        | DW1  | 8    | 0.75 | 2.1  | 1.575 | 1    | 1.575     |      |        |           |
|     |          |             |                                                                                                                                                                                                                                                                                                                                                        |      |      |      |      | 8.925 |      | 8.925     |      |        |           |
|     |          |             | 32 unit G+3                                                                                                                                                                                                                                                                                                                                            |      |      |      |      | 8.925 | 32   | 285.6     | sqm  | 1501   | 428685.6  |
|     | 10.25    |             | Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.                                                                                                                                                     |      |      |      |      |       |      |           |      |        |           |
|     | 10.25.2  |             | n gratings, frames, guard bar, ladder, railings, brackets, gates and similar works                                                                                                                                                                                                                                                                     |      |      |      |      |       |      |           |      |        |           |
|     |          |             | Door chowkhats (16 UNIT)                                                                                                                                                                                                                                                                                                                               | D1   | 8    |      |      | 30    | 2    | 60        |      |        |           |
|     |          |             |                                                                                                                                                                                                                                                                                                                                                        | D2   | 8    |      |      | 30    | 2    | 60        |      |        |           |
|     |          |             |                                                                                                                                                                                                                                                                                                                                                        | DW1  | 8    |      |      | 45    | 1    | 45        |      |        |           |
|     |          |             |                                                                                                                                                                                                                                                                                                                                                        | W1   | 8    |      |      | 50    | 1    | 50        |      |        |           |
|     |          |             |                                                                                                                                                                                                                                                                                                                                                        | V1   | 8    |      |      | 30    | 2    | 60        |      |        |           |
|     |          |             | 32 UNIT G+3 FLOOR                                                                                                                                                                                                                                                                                                                                      |      |      |      |      | 245   |      | 245       |      |        |           |
|     |          |             |                                                                                                                                                                                                                                                                                                                                                        |      |      |      |      | 245   | 32   | 7840      | kg   | 142.3  | 1115632   |
|     | 10.26    |             | Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer.                                                                                                                                               |      |      |      |      |       |      |           |      |        |           |
|     | 10.26.1  | M.S. tube   |                                                                                                                                                                                                                                                                                                                                                        |      |      |      |      |       |      |           |      |        |           |
|     |          |             | 65x40                                                                                                                                                                                                                                                                                                                                                  |      |      |      |      | 1.25  | 1    | 1.25      |      |        |           |
|     |          |             | 25x25                                                                                                                                                                                                                                                                                                                                                  |      |      |      |      | 0.84  | 2    | 1.68      |      |        |           |
|     |          |             | 20x20                                                                                                                                                                                                                                                                                                                                                  |      |      |      |      | 1.25  | 2    | 2.5       |      |        |           |
|     |          |             | 20x20                                                                                                                                                                                                                                                                                                                                                  |      |      |      |      | 0.64  | 8    | 5.12      |      |        |           |
|     |          |             | Per floor 8 unit                                                                                                                                                                                                                                                                                                                                       |      |      |      |      | 10.55 |      | 10.55     |      |        |           |
|     |          |             | G+3 Floor                                                                                                                                                                                                                                                                                                                                              |      |      |      |      | 84.4  | 8    | 84.4      | kg   | 157.15 | 53053.84  |
|     | 9.12     |             | Extra for providing frosted glass panes 4 mm thick instead of ordinary float glass panes 4 mm thick in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).                                                                                                             | DW1  | 0.6  | 1.2  | 0.72 | 1     | 0.72 | 0.72      |      |        |           |
|     |          |             |                                                                                                                                                                                                                                                                                                                                                        | W1   | 1.5  | 0.9  | 1.35 | 1     | 1.35 | 1.35      |      |        |           |
|     |          |             |                                                                                                                                                                                                                                                                                                                                                        | V1   | 0.45 | 0.4  | 0.18 | 2     | 0.36 | 0.36      |      |        |           |
|     |          |             | Per floor 8 unit                                                                                                                                                                                                                                                                                                                                       |      |      |      |      | 2.43  |      | 2.43      |      |        |           |
|     |          |             | G+3 Floor Building                                                                                                                                                                                                                                                                                                                                     |      |      |      |      | 19.44 | 8    | 19.44     | sqm  | 148.5  | 11547.36  |
|     |          |             | Sub Total                                                                                                                                                                                                                                                                                                                                              |      |      |      |      | 19.44 | 4    | 77.76     |      |        | 1180233.2 |

**PAT ARCHITECT AND ENGINEER**  
 OMA No. CA/2010/96244  
 Case No. 0981 Date 11/11/2022  
 Plot No. 1011 Bank, Dehradun (U.K.)  
 Mob: 7695072139, 9412143346







PAL ARCHITECT AND ENGINEER  
 Case No. 19/11/2021  
 Date 19/11/2021  
 Near by 15th Bank, Dehradun (U.K.)  
 Mob: 7895872139, 9412143346

| sno | DSR - 21 | CODE   | Description of work                                       | Item | L     | B | H | Qty     | No | Total Qty | Unit | Rate   | Amount      |
|-----|----------|--------|-----------------------------------------------------------|------|-------|---|---|---------|----|-----------|------|--------|-------------|
| 8   | 13.1     | 13.1.2 | 12 mm cement plaster of mix : 1:6 (1 cement: 6 fine sand) | wall | 2.8   |   |   | 2.95    | 8  | 66.08     |      |        |             |
|     |          |        |                                                           | wall | 4.1   |   |   | 2.95    | 8  | 96.76     |      |        |             |
|     |          |        |                                                           | wall | 2.8   |   |   | 2.95    | 8  | 66.08     |      |        |             |
|     |          |        |                                                           | wall | 1.3   |   |   | 2.95    | 8  | 30.68     |      |        |             |
|     |          |        |                                                           | wall | 0.6   |   |   | 2.95    | 8  | 14.16     |      |        |             |
|     |          |        |                                                           | wall | 1     |   |   | 2.95    | 8  | 23.6      |      |        |             |
|     |          |        |                                                           | wall | 0.35  |   |   | 2.95    | 8  | 8.26      |      |        |             |
|     |          |        |                                                           | wall | 2.2   |   |   | 2.95    | 8  | 51.92     |      |        |             |
|     |          |        |                                                           | wall | 3     |   |   | 2.95    | 8  | 70.8      |      |        |             |
|     |          |        |                                                           | wall | 1.4   |   |   | 2.95    | 8  | 33.04     |      |        |             |
|     |          |        |                                                           | wall | 1.4   |   |   | 2.95    | 8  | 33.04     |      |        |             |
|     |          |        |                                                           | wall | 1.2   |   |   | 2.95    | 8  | 28.32     |      |        |             |
|     |          |        | G.F, F.F, S.F, T.F ceiling                                |      | 24.21 |   |   | 10.65   | 4  | 1031.34   |      |        |             |
|     |          |        | INNER WALL                                                |      |       |   |   | 1554.08 | 4  | 1554.08   |      |        |             |
|     |          |        |                                                           |      |       |   |   | 2.1     | 2  | 4.2       |      |        |             |
|     |          |        |                                                           | D1   | 1     |   |   | 2.1     | 2  | 4.2       |      |        |             |
|     |          |        |                                                           | D2   | 0.75  |   |   | 2.1     | 2  | 3.15      |      |        |             |
|     |          |        |                                                           | DW1  | 0.75  |   |   | 1.575   | 1  | 1.575     |      |        |             |
|     |          |        |                                                           | DW1  | 0.6   |   |   | 0.72    | 1  | 0.72      |      |        |             |
|     |          |        |                                                           | W1   | 1.5   |   |   | 0.9     | 1  | 0.9       |      |        |             |
|     |          |        |                                                           | V1   | 0.45  |   |   | 0.4     | 2  | 0.36      |      |        |             |
|     |          |        | (Door & window) Deduction Per floor 8 unit (32 unit)      |      |       |   |   | 11.35   | 32 | 11.355    | SQM  |        |             |
|     |          |        | INNER WALL                                                |      |       |   |   | 363.2   |    | 363.2     |      |        |             |
|     |          |        | DEDUCTION                                                 |      |       |   |   | 6216.32 |    | 6216.32   |      |        |             |
|     |          |        | TOTAL                                                     |      |       |   |   | 5853.1  |    | 5853.1    | SQM  | 294.85 | 1725786.535 |
|     |          |        | OUTER WALL                                                |      | 4.361 |   |   | 2.95    | 8  | 102.912   |      |        |             |
|     |          |        |                                                           |      | 2.8   |   |   | 2.95    | 8  | 66.08     |      |        |             |
|     |          |        | CORRIDOR                                                  |      | 10.65 |   |   | 2.95    | 8  | 62.835    |      |        |             |
|     |          |        |                                                           |      |       |   |   | 2.95    | 2  | 5.9       |      |        |             |
|     |          |        | G+3 FLOOR                                                 |      |       |   |   | 231.827 |    | 231.827   |      |        |             |
|     |          |        | DEDUCTION                                                 |      | 1.5   |   |   | 0.9     | 4  | 3.6       |      |        |             |
|     |          |        |                                                           | W1   | 0.75  |   |   | 1.35    | 8  | 10.8      |      |        |             |
|     |          |        |                                                           | DW1  | 0.75  |   |   | 1.575   | 8  | 12.6      |      |        |             |
|     |          |        |                                                           | DW1  | 0.6   |   |   | 0.72    | 8  | 5.76      |      |        |             |
|     |          |        |                                                           | V1   | 0.45  |   |   | 0.4     | 8  | 3.2       |      |        |             |
|     |          |        | G+3 FLOOR                                                 |      |       |   |   | 30.6    |    | 30.6      |      |        |             |
|     |          |        |                                                           |      |       |   |   | 30.6    |    | 30.6      |      |        |             |
|     |          |        | WALL                                                      |      |       |   |   | 122.4   |    | 122.4     |      |        |             |
|     |          |        | DEDUCTION                                                 |      |       |   |   | 927.308 |    | 927.308   |      |        |             |
|     |          |        | TOTAL                                                     |      |       |   |   | 804.908 |    | 804.908   | SQM  | 294.85 | 237327.1238 |
|     |          |        | PARAPET WALL                                              |      | 24.21 |   |   | 10.65   | 2  | 96.84     |      |        |             |
|     |          |        |                                                           |      |       |   |   | 10.65   | 2  | 42.6      |      |        |             |
|     |          |        | Sub total                                                 |      |       |   |   |         |    | 139.44    | SQM  | 294.85 | 41113.884   |
|     |          |        |                                                           |      |       |   |   |         |    |           |      |        | 2004227.543 |

TOWER C,D,E,T (4 TOWER ) DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 8 UNIT G+3 (32 UNIT)



FAL ARCHITECT AND ENGINEER  
COA No. CA/2016/96244  
Case No. 0001 Date 11/11/2012  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Delhaden (U.K.)  
Mob: 7895872139, 9412143346

| sno | DSR - 21 | CODE | Description of work                                                                                                                                                                                                                                                                                                                                                                                                                   | Item     | L     | B     | H | Qty     | No | Total Qty | Unit | Rate  | Amount      |
|-----|----------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------|-------|---|---------|----|-----------|------|-------|-------------|
| 9   | 11.37    |      | Providing and laying Ceramic glazed floor tiles of size 300X300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), Joining with grey cement slurry @ 3.3 kg/sqm including pointing the joints with white cement and matching pigment etc, complete. | floor    | 3.27  | 3.002 |   | 9.8165  | 8  | 78.532    |      |       |             |
|     |          |      | Living Room                                                                                                                                                                                                                                                                                                                                                                                                                           | skirting | 12.54 | 0.1   |   | 1.254   | 8  | 10.032    |      |       |             |
|     |          |      | Kitchen                                                                                                                                                                                                                                                                                                                                                                                                                               | floor    | 2.101 | 1.2   |   | 2.521   | 8  | 20.168    |      |       |             |
|     |          |      |                                                                                                                                                                                                                                                                                                                                                                                                                                       | skirting | 6.602 | 0.1   |   | 0.6602  | 8  | 5.2816    |      |       |             |
|     |          |      | toilet                                                                                                                                                                                                                                                                                                                                                                                                                                | floor    | 0.9   | 1.2   |   | 1.08    | 8  | 8.64      |      |       |             |
|     |          |      |                                                                                                                                                                                                                                                                                                                                                                                                                                       | wall     | 0.9   |       |   | 1.52    | 8  | 10.944    |      |       |             |
|     |          |      |                                                                                                                                                                                                                                                                                                                                                                                                                                       | wall     | 1.2   |       |   | 1.824   | 8  | 14.592    |      |       |             |
|     |          |      | Bed room                                                                                                                                                                                                                                                                                                                                                                                                                              | floor    | 2.465 | 3.155 |   | 7.77    | 8  | 62.16     |      |       |             |
|     |          |      |                                                                                                                                                                                                                                                                                                                                                                                                                                       | skirting | 11.2  | 0.1   |   | 1.12    | 8  | 8.96      |      |       |             |
|     |          |      | Entrance                                                                                                                                                                                                                                                                                                                                                                                                                              | floor    | 1.335 | 1.335 |   | 1.7822  | 8  | 14.2576   |      |       |             |
|     |          |      |                                                                                                                                                                                                                                                                                                                                                                                                                                       | skirting | 5.34  | 0.1   |   | 0.534   | 8  | 4.272     |      |       |             |
|     |          |      | Corridor                                                                                                                                                                                                                                                                                                                                                                                                                              | floor    | 24.21 | 1.25  |   | 30.2625 |    |           |      |       |             |
|     |          |      |                                                                                                                                                                                                                                                                                                                                                                                                                                       | skirting | 24.21 | 0.1   |   | 2.421   |    |           |      |       |             |
|     |          |      | G+3 floor                                                                                                                                                                                                                                                                                                                                                                                                                             |          |       |       |   | 270.523 | 4  | 1082.09   | sqm  | 935.6 | 1012405.275 |
|     |          |      |                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |       |       |   |         |    |           |      |       |             |
|     |          |      | Mirror polishing on marble work/granite work/stone work where ever required to give high gloss finish complete.                                                                                                                                                                                                                                                                                                                       |          |       |       |   |         |    |           |      |       |             |
|     |          |      | 8.6                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |       |       |   |         |    |           |      |       |             |
|     |          |      |                                                                                                                                                                                                                                                                                                                                                                                                                                       |          | 0.3   | 1.2   |   | 0.36    | 20 | 7.2       |      |       |             |
|     |          |      |                                                                                                                                                                                                                                                                                                                                                                                                                                       |          | 2.06  | 1.25  |   | 2.575   | 1  | 2.575     |      |       |             |
|     |          |      | G+3 Floor                                                                                                                                                                                                                                                                                                                                                                                                                             |          |       |       |   | 9.775   | 4  | 39.1      | sqm  | 417.6 | 16328.16    |
|     |          |      | Sub total                                                                                                                                                                                                                                                                                                                                                                                                                             |          |       |       |   |         |    |           |      |       | 1028733.435 |

TOWER C,D,E,T (4 TOWER ) DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 8 UNIT G+3 (32 UNIT)





PAL ARCHITECT AND ENGINEER  
 COA No. CA/2018/96244  
 Case No. 50-18 Date 11/11/2022  
 Tapovan Road Infront of RKD Ground  
 Near by IDBI Bank, Dehradun (U.K.)  
 Mob: 7895872139, 9412143346

| sno | DSR - 21 | CODE | Description of work                                                                                                                                                                             | Item | Measurement |   |   | Qty     | No | Total   | Unit | Rate   | Amount     |
|-----|----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------|---|---|---------|----|---------|------|--------|------------|
|     |          |      |                                                                                                                                                                                                 |      | L           | B | H |         |    |         |      |        |            |
| 10  |          | 13.8 | Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete. | wall | 2.8         |   |   | 2.95    | 8  | 66.08   |      |        |            |
|     |          |      |                                                                                                                                                                                                 | wall | 4.1         |   |   | 2.95    | 8  | 96.76   |      |        |            |
|     |          |      |                                                                                                                                                                                                 | wall | 2.8         |   |   | 2.95    | 8  | 66.08   |      |        |            |
|     |          |      |                                                                                                                                                                                                 | wall | 1.3         |   |   | 2.95    | 8  | 30.68   |      |        |            |
|     |          |      |                                                                                                                                                                                                 | wall | 0.6         |   |   | 2.95    | 8  | 14.16   |      |        |            |
|     |          |      |                                                                                                                                                                                                 | wall | 1           |   |   | 2.95    | 8  | 23.6    |      |        |            |
|     |          |      |                                                                                                                                                                                                 | wall | 0.35        |   |   | 2.95    | 8  | 8.26    |      |        |            |
|     |          |      |                                                                                                                                                                                                 | wall | 2.2         |   |   | 2.95    | 8  | 51.92   |      |        |            |
|     |          |      |                                                                                                                                                                                                 | wall | 3           |   |   | 2.95    | 8  | 70.8    |      |        |            |
|     |          |      |                                                                                                                                                                                                 | wall | 1.4         |   |   | 2.95    | 8  | 33.04   |      |        |            |
|     |          |      |                                                                                                                                                                                                 | wall | 1.4         |   |   | 2.95    | 8  | 33.04   |      |        |            |
|     |          |      |                                                                                                                                                                                                 | wall | 1.2         |   |   | 2.95    | 8  | 28.32   |      |        |            |
|     |          |      |                                                                                                                                                                                                 | wall | 24.21       |   |   | 10.65   | 4  | 1031.34 |      |        |            |
|     |          |      | G.F., F.F., S.F., T.F ceiling                                                                                                                                                                   |      |             |   |   | 257.83  | 4  | 1554.08 |      |        |            |
|     |          |      |                                                                                                                                                                                                 |      |             |   |   | 1554.08 |    |         |      |        |            |
|     |          |      |                                                                                                                                                                                                 |      |             |   |   | 1554.08 |    |         |      |        |            |
|     |          |      | INNER WALL                                                                                                                                                                                      |      |             |   |   | 1554.08 | 4  | 6216.32 |      |        |            |
|     |          |      |                                                                                                                                                                                                 | D1   | 1           |   |   | 2.1     | 2  | 4.2     |      |        |            |
|     |          |      |                                                                                                                                                                                                 | D2   | 0.75        |   |   | 2.1     | 2  | 3.15    |      |        |            |
|     |          |      |                                                                                                                                                                                                 | DW1  | 0.75        |   |   | 2.1     | 1  | 1.575   |      |        |            |
|     |          |      |                                                                                                                                                                                                 | DW1  | 0.6         |   |   | 1.2     | 1  | 0.72    |      |        |            |
|     |          |      |                                                                                                                                                                                                 | W1   | 1.5         |   |   | 0.9     | 1  | 1.35    |      |        |            |
|     |          |      |                                                                                                                                                                                                 | VI   | 0.45        |   |   | 0.4     | 2  | 0.36    |      |        |            |
|     |          |      | (Door & window ) Deduction Per floor 8 unit (32 unit)                                                                                                                                           |      |             |   |   | 11.35   | 32 | 363.2   |      |        |            |
|     |          |      | INNER WALL                                                                                                                                                                                      |      |             |   |   |         |    | 6216.32 |      |        |            |
|     |          |      | DEDUCTION                                                                                                                                                                                       |      |             |   |   |         |    | 363.2   |      |        |            |
|     |          |      | TOTAL                                                                                                                                                                                           |      |             |   |   |         |    | 5853.1  | SQM  | 123.85 | 724906.435 |

TOWER C,D,E,T (4 TOWER ) DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 8 UNIT G+3 (32 UNIT)





PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 0081 Date: 14/11/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Del. radun (U.K.)  
Mob.: 7895872139, 9412143346



| sno | DSR - 21 | CODE | Description of work                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Item | L     | B     | H | Qty    | No | Total Qty | Unit | Rate   | Amount     |
|-----|----------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------|-------|---|--------|----|-----------|------|--------|------------|
|     | 22.6     |      | Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying:                                                                                                                                                                                                                                                                                                         |      |       |       |   |        |    |           |      |        |            |
|     |          | (a)  | after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm.                                                                                                                                                                                                                                                                                                                                 |      |       |       |   |        |    |           |      |        |            |
|     |          | (b)  | laying second layer of fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm.                                                                                                                                                                                                                                                                                                                      |      |       |       |   |        |    |           |      |        |            |
|     |          | (c)  | third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30 cm on parapet wall and tucked into groove in parapet all around fourth and final layer of brick tiling with cement mortar (which will be paid for separately. |      |       |       |   |        |    |           |      |        |            |
|     |          | (d)  | For the purpose of measurement the entire treated surface will be measured.                                                                                                                                                                                                                                                                                                                                                                                         |      |       |       |   |        |    |           |      |        |            |
|     |          |      | G+3 Floor                                                                                                                                                                                                                                                                                                                                                                                                                                                           |      | 1.915 | 1.315 |   | 2.518  | 8  | 20.144    | sqm  | 585.55 | 47181.2768 |
|     |          |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |       |       |   | 20.144 | 4  | 80.576    |      |        |            |

TOWER C,D,E,T (4 TOWER ) DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 8 UNIT G+3 (32 UNIT)

PAL ARCHITECT AND ENGINEER  
 COA No. CA/2018/96244  
 Date 19/11/22  
 Case No. 0081  
 Tapovan Road Infront of PRD Ground  
 Near by IDBI Bank, Dehradun (U.K.)  
 Mob.: 7895872139, 9412143346



| S.NO | DSR -2022 | ITEM DESCRIPTION                                                                                                                                                                                                                                                                                                                         | UNIT  | QTY | RATE   | AMOUNT |
|------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|--------|--------|
| 1    | 1.8       | Wiring for light point / fanpoint/exhaust fan point with 1.5 sq.mm FRLS PVC insulated copper conductor single core in surface / recessed                                                                                                                                                                                                 |       |     |        |        |
|      |           | medium class PVC conduit, with piano type switch, phenolic laminated sheet, suitable size                                                                                                                                                                                                                                                |       |     |        |        |
|      |           | 2 x 4 sq. mm. + 1 x 4 sq. mm. earth wire                                                                                                                                                                                                                                                                                                 | Meter | 428 | 205440 |        |
|      |           | 2 x 6 sq. mm. + 1 x 6 sq. mm. earth wire                                                                                                                                                                                                                                                                                                 | Meter | 589 | 141360 |        |
|      |           | supplying and fixing following size/ modules, GI box along with                                                                                                                                                                                                                                                                          |       |     |        |        |
|      |           | modular base & cover plate for modular switches in recess                                                                                                                                                                                                                                                                                |       |     |        |        |
|      |           | etc. as required.                                                                                                                                                                                                                                                                                                                        |       |     |        |        |
|      |           | 1.27                                                                                                                                                                                                                                                                                                                                     |       |     |        | 0      |
|      |           | 1.7.2                                                                                                                                                                                                                                                                                                                                    |       |     |        |        |
|      |           | 1.7.3                                                                                                                                                                                                                                                                                                                                    |       |     |        |        |
| 2    | 2.3       | Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core in surface / recessed medium class PVC conduit, 2 way piano type switch, phenolic laminated sheet, suitable size M5 box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required. | Point | 20  | 1835   | 36700  |
|      |           | 1.3                                                                                                                                                                                                                                                                                                                                      |       |     |        | 0      |
|      |           | 1.7.2                                                                                                                                                                                                                                                                                                                                    |       |     |        |        |
|      |           | 1.7.3                                                                                                                                                                                                                                                                                                                                    |       |     |        |        |
|      |           | 1.7.4                                                                                                                                                                                                                                                                                                                                    |       |     |        |        |
|      |           | 1.27                                                                                                                                                                                                                                                                                                                                     |       |     |        | 0      |
|      |           | 1.27.1                                                                                                                                                                                                                                                                                                                                   |       |     |        | 9536   |
|      |           | 1.27.2                                                                                                                                                                                                                                                                                                                                   |       |     |        | 41856  |
|      |           | 1.23                                                                                                                                                                                                                                                                                                                                     |       |     |        | 0      |
|      |           | 5/6 amps switch                                                                                                                                                                                                                                                                                                                          | Each  | 32  | 103    | 3296   |
|      |           | 15/16 amp switch                                                                                                                                                                                                                                                                                                                         | Each  | 32  | 156    | 4992   |
|      |           | 3 pin 5/6 amp socket outlet                                                                                                                                                                                                                                                                                                              | Each  | 32  | 122    | 3904   |
|      |           | 6 pin 15/16 amp socket outlet                                                                                                                                                                                                                                                                                                            | Each  | 32  | 197    | 6304   |
|      |           | TV antenna socket outlet                                                                                                                                                                                                                                                                                                                 | Each  | 32  | 148    | 4736   |
|      |           | Bell Push                                                                                                                                                                                                                                                                                                                                | Each  | 32  | 140    | 4480   |
|      |           | Supplying and fixing call bell / buzzer suitable for single phase, 230 volts, complete as required.                                                                                                                                                                                                                                      | Each  | 32  | 99     | 3168   |
|      |           | 1.25                                                                                                                                                                                                                                                                                                                                     |       |     |        | 11808  |
|      |           | 1.32                                                                                                                                                                                                                                                                                                                                     |       |     |        | 12576  |
|      |           | 1.21.2                                                                                                                                                                                                                                                                                                                                   |       |     |        | 27840  |
|      |           | 2.3.1                                                                                                                                                                                                                                                                                                                                    |       |     |        | 0      |
|      |           | 6 way double door                                                                                                                                                                                                                                                                                                                        | Each  | 32  |        | 70592  |
|      |           | 2.3                                                                                                                                                                                                                                                                                                                                      |       |     |        | 0      |

DETAILED ESTIMATED FOR INTERNAL ELECTRICAL PER FLOOR 8 UNIT G+3 (32 UNIT)







| DETAILED ESTIMATE OF INTERNAL PLUMBING WORK PER FLOOR 8 UNIT |           |                                                                                                                                                                                                                                                                                                                                                                                                                            |       |     |           |
|--------------------------------------------------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-----------|
| G+3 32 UNITS                                                 |           |                                                                                                                                                                                                                                                                                                                                                                                                                            |       |     |           |
| S. No.                                                       | DSR 2021  | DESCRIPTION OF WORK                                                                                                                                                                                                                                                                                                                                                                                                        | UNIT  | Qty | Rate (Rs) |
| Sanitary Fixtures                                            |           |                                                                                                                                                                                                                                                                                                                                                                                                                            |       |     |           |
| 1                                                            | 17.1      | Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device(handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required :                                          |       |     |           |
| a)                                                           | 17.1.1    | White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests.                                                                                                                                                                                                                                                                                                                             | Each  | 32  | 5781.35   |
|                                                              |           |                                                                                                                                                                                                                                                                                                                                                                                                                            |       |     | 185003.2  |
|                                                              | 17.10     | Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required :                                                                                                                                                                                   |       |     |           |
|                                                              | 17.10.2   | Kitchen sink without drain board                                                                                                                                                                                                                                                                                                                                                                                           | Each  | 32  | 3337.85   |
|                                                              | 17.10.2.2 | 610x460 mm bowl depth 200 mm                                                                                                                                                                                                                                                                                                                                                                                               |       |     | 106811.2  |
|                                                              |           | Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.                                                                                                                                                                                                                                                                                                                    |       |     |           |
|                                                              | 17.28.2   | Flexible pipe                                                                                                                                                                                                                                                                                                                                                                                                              |       |     |           |
|                                                              | 17.28.2.1 | 32 mm dia                                                                                                                                                                                                                                                                                                                                                                                                                  | Each  | 32  | 104.35    |
|                                                              |           |                                                                                                                                                                                                                                                                                                                                                                                                                            |       |     | 3339.2    |
|                                                              | 18.51     | Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.                                                                                                                                                                                                                                                                                      |       |     |           |
| a)                                                           | 18.51.1   | 15 mm nominal bore                                                                                                                                                                                                                                                                                                                                                                                                         | Each  | 96  | 594.75    |
|                                                              |           |                                                                                                                                                                                                                                                                                                                                                                                                                            |       |     | 57096     |
| WATER SUPPLY SYSTEM                                          |           |                                                                                                                                                                                                                                                                                                                                                                                                                            |       |     |           |
| 18.7                                                         |           | Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. : Internal work - Exposed on wall |       |     |           |
| b)                                                           | 18.7.2    | 20 mm nominal outer dia. Pipes.                                                                                                                                                                                                                                                                                                                                                                                            | metre | 200 | 325.10    |
|                                                              |           |                                                                                                                                                                                                                                                                                                                                                                                                                            |       |     | 65020     |
| c)                                                           | 18.7.3    | 25 mm nominal outer dia. Pipes.                                                                                                                                                                                                                                                                                                                                                                                            | metre | 56  | 408.55    |
|                                                              |           |                                                                                                                                                                                                                                                                                                                                                                                                                            |       |     | 22879.36  |
| d)                                                           | 18.7.4    | 32 mm nominal outer dia. Pipes.                                                                                                                                                                                                                                                                                                                                                                                            | metre | 96  | 500.95    |
|                                                              |           |                                                                                                                                                                                                                                                                                                                                                                                                                            |       |     | 48091.2   |
| e)                                                           | 18.7.5    | 40 mm nominal outer dia. Pipes.                                                                                                                                                                                                                                                                                                                                                                                            | metre | 24  | 674.35    |
|                                                              |           |                                                                                                                                                                                                                                                                                                                                                                                                                            |       |     | 16184.4   |



**DETAILED ESTIMATE OF INTERNAL PLUMBING WORK PER FLOOR 8 UNIT**  
**G+3 (32 unit)**

| S. No. | DSR 2021  | DESCRIPTION OF WORK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | UNIT  | Qty | Rate (Rs) | Amount (Rs) |
|--------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-----------|-------------|
| a)     | 18.8.1    | 15 mm nominal outer dia. Pipes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Metre | 48  | 441.15    | 21175       |
|        | 18.8.2    | 20 mm nominal outer dia Pipes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | metre | 64  | 712.75    | 45616       |
|        | 18.8.3    | 25 mm nominal outer dia Pipes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | metre | 8   | 626.05    | 50008.4     |
|        | 18.17.3   | 40 mm dia nominal bore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Each  | 16  | 707.30    | 11316.8     |
|        | 18.17.5   | 65 mm dia nominal bore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Each  | 6   | 1490.70   | 8944.2      |
|        | 18.18     | Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |       |     |           |             |
| b)     | 18.18.2   | 20 mm nominal bore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Each  | 32  | 397.45    | 12718.4     |
| c)     | 18.18.3   | 25 mm nominal bore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Each  | 4   | 399.15    | 1596.6      |
|        | 18.21     | Providing and fixing uplasticised PVC connection pipe with brass unions :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |       |     |           |             |
| a)     | 18.21.1   | 30 cm length                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |       |     |           |             |
| (i)    | 18.21.1.1 | 15 mm nominal bore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Each  | 32  | 74.80     | 2393.6      |
|        | 18.33     | Constructing masonry Chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep ( inside) with chained lid and RCC top slab 1:2:4 mix (1cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design : |       |     |           |             |
| a)     | 18.33.1   | With common burnt clay F.P.S.(non modular) bricks of class designation 7.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No.   | 4   | 10102.50  | 40410       |
|        | 18.58     | Providing and fixing PTMT grating of approved quality and colour.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |       |     |           |             |
| a)     | 18.58.1   | Circular type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |       |     |           |             |
| (ii)   | 18.58.1.2 | 125 mm nominal dia with 25 mm waste hole.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No.   | 64  | 45.25     |             |

PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 81 Date 11/12/22  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob.: 7895872139, 9412143346



PAT ARCHITECT AND ENGINEER  
 COA No. CA/2018/96244  
 Case No. 721307.56 Date 11/11/2018  
 Near by IDBI Bank, Delradun (U.K.)  
 Tapovan Road Infront of PRD Ground  
 Mob.: 7895872139, 9412143346



| DETAILED ESTIMATE OF INTERNAL PLUMBING WORK PER FLOOR 8 UNIT |                                                                                                                                                                                                                                                                                                                                       |      |     |           |             |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|-----------|-------------|
| G+3 (32 unit)                                                |                                                                                                                                                                                                                                                                                                                                       |      |     |           |             |
| S.No.                                                        | DESCRIPTION OF WORK                                                                                                                                                                                                                                                                                                                   | UNIT | Qty | Rate (Rs) | Amount (Rs) |
| 12.43                                                        | Providing and fixing un plasticised -PVC pipe clips of approved design to un plasticised - PVC rain water pipes by means of 50x50x50 mm hard wood plugs, screwed with M.S. screws of required length, including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete. | Each | 64  | 309.5     | 19808       |
| 12.43.2                                                      | 110 mm                                                                                                                                                                                                                                                                                                                                | Each | 64  |           |             |
| Total cost for single (G+3) tower                            |                                                                                                                                                                                                                                                                                                                                       |      |     |           | 721307.56   |



## (Other services)

Bill of Quantity PMAY EWS (Uttarakhand)

1- External Sewrage System

2- External Water Supply System

3- External Drainage System

4- C.C Paving Work Cost

5- Boundry Wall Construction 833.575M

6- Tube Wall Cost

7- Main Entrance gate

8- UG Tank And Pump room

9- S.T.P Tank Construction



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Date 12/11/2018  
Case No. 12/11/2018  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob: 7895872139, 9412143346



| S.NO     | DSR-2022 | ITEM DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | UNIT | QTY    | RATE      | AMOUNT     |
|----------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|--------|-----------|------------|
| 2.1      |          | EARTHWORK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |      |        |           |            |
| 2.10.1.2 |          | Excavation in trench in all kinds of soil or required width for pipes with working space including excavation for sockets, and dressing of slides, ramming of bottoms, depth upto 1.5m including getting out the excavated soil, and then returning the soil as required in layers not exceed 20cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, wherever required within the site area/boundary item including shorting, strutting, dewatering (except sub-soil water) all complete as per direction of the Project manager at site | Rm   | 3771   | 417.35    | 1573826.85 |
| 2.10.1.3 |          | Pipes, cables etc. exceeding 300 mm dia but not exceeding 600 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Rm   | 19     | 651.55    | 12379.45   |
| 2.11     |          | Extra for excavating trenches for pipes, cables etc. in all kinds of soil for depth exceeding 1.5 m, but not exceeding 3 m. (Rate is over corresponding basic item for depth upto 1.5 metre).                                                                                                                                                                                                                                                                                                                                                                                                                                | Rm   | 1425   | 127       | 180975     |
| 19.1     |          | Providing, laying and jointing glazed stoneware pipes class SP-1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :                                                                                                                                                                                                                                                                                                                                                                                                                           | Rm   | 3477.1 | 830.4     | 2887383.84 |
| 19.1.3   |          | 200 mm diameter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Rm   | 157.51 | 1293.9    | 203802.18  |
| 19.1.4   |          | 250 mm diameter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Rm   | 1774.5 | 241190.04 |            |
| 19.1.5   |          | 300 mm diameter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Rm   | 135.92 | 1774.5    |            |
| 19.2     |          | Providing and laying cement concrete 1:5:10 (1 cement:5 coarse sand:10 graded stone aggregate 20 mm nominal size) all-round design:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Rm   | 3477   | 830.4     | 2887300.8  |
| 19.2.3   |          | 200 mm dia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Rm   | 3477   | 830.4     | 2887300.8  |
| 19.3     |          | Providing and laying cement concrete 1:5:10 (1 cement:5 coarse sand:10 graded stone aggregate 20 mm nominal size) up to haunches of S.W. Pipes including 150 mm thick bed concrete as per standard design:                                                                                                                                                                                                                                                                                                                                                                                                                   | Rm   | 135.92 | 1089.1    | 148030.47  |
| 19.3.5   |          | 300 mm dia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Rm   | 135.92 | 1089.1    | 148030.47  |
| 19.4     |          | Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design :                                                                                                                                                                                                                                                                                                                             |      |        |           |            |
| 19.4.1   |          | 100x100 mm size P type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |      |        |           |            |
| 19.4.1.1 |          | With common burnt clay F.P.S. (non modular) bricks of class designation 7.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Each | 886    | 2453.55   | 2173845.3  |
| 19.9     |          | Constructing brick masonry circular type manhole 0.91 m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand), inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design              |      |        |           |            |
| 19.9.1   |          | 0.91 m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560 mm internal diameter con forming to I.S. 12592, total weight of cover and frame to be not less than 182 kg., fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately)                                                                                                                                                           | Each | 360    | 11886.45  | 4279140    |
| 19.9.1.1 |          | With common burnt clay F.P.S. (non modular) bricks of class designation 7.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Each | 360    | 11886.45  | 4279140    |
| 19.11    |          | Constructing brick masonry circular manhole 1.22 m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand) inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design                         |      |        |           |            |
| 19.11.1  |          | 1.68 m deep with SFRCC Cover and frame (heavy duty HD-20 grade designation) 560 mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg. fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately) :                                                                                                                                                              | Each |        |           |            |
| 19.11.2  |          | With Sewer bricks conforming IS : 4885                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |      |        |           |            |

DETAILED ESTIMATE OF EXTERNAL SEWERAGE SYSTEM

PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 2281 Date 11/11/2022  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Dehradun (U.K.)  
Mob: 7895872139, 9412143346



PAL ARCHITECT AND ENGINEER  
COA No. CA/2018/96244  
Case No. 111/1991 Date 11/11/2018  
Tapovan Road Infront of PRD Ground  
Near by IDBI Bank, Delradun (G.K.)  
Mob: 7895872139, 9412143346



|           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |       |      |         |             |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|---------|-------------|
| 19.16     | Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910, on 12 mm dia steel bar conforming to IS : 1786, having minimum cross section as 23 mmx25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design. | Each  | 1425 | 487.1   | 694117.5    |
| 19.1      | Extra depth for circular type manhole 0.91m internal dia (at bottom) beyond 0.91 m to 1.67 m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Meter | 117  | 6693.95 | 783192.15   |
| 19.10.2   | With Sewer bricks conforming IS : 4885                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |       |      |         |             |
| 19.3      | Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 fine sand : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design.                                                                                     |       |      |         |             |
| 19.30.1   | Inside dimensions 455x610 mm and 45 cm deep for single pipe line                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |       |      |         |             |
| 19.30.1.1 | With common burnt clay F.P.S. (non modular) bricks of class designation 7.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Each  | 234  | 6431.3  | 1504924.2   |
| Sub Total |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |       |      |         |             |
|           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |       |      |         | 20108528.48 |

**DETAILED ESTIMATE OF EXTERNAL WATER SUPPLY SYSTEM**

| S.NO             | DSR-2022 | ITEM DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | UNIT  | QTY  | RATE    | AMOUNT            |
|------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|---------|-------------------|
| 2.1              |          | Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m :                                                                                                                                                                                                                             |       |      |         |                   |
| 2.10.1           |          | All kinds of soil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |       |      |         |                   |
| 2.10.1.1         |          | Pipes, cables etc, not exceeding 80 mm dia.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |      |         |                   |
| 2.10.1.2         |          | Pipes, cables etc, exceeding 80 mm dia, but not exceeding 300 mm dia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |      |         |                   |
| 18.41            |          | Sand filling                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |       |      |         |                   |
| 18.41            |          | around the G.I. pipes in external work :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |      |         |                   |
| 18.41.9          |          | 100 mm diameter pipe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |      |         |                   |
| 18.41.10         |          | 150 mm diameter pipe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |      |         |                   |
| 18.7             |          | Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and the cost of rubber gasket                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |         |                   |
| 18.70.1          |          | 100 mm dia pipes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |         |                   |
| 18.70.2          |          | 150 mm dia pipes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |         |                   |
| 18.70.3          |          | 200 mm dia pipes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |         |                   |
| 18.72            |          | Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329 :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |       |      |         |                   |
| 18.72.1          |          | 100 mm dia Ductile Iron Class K-7 pipes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Rm    | 655  | 1121.1  | 734320.5          |
| 18.72.2          |          | 150 mm dia Ductile Iron Class K-7 pipes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Rm    | 266  | 1601.3  | 425892.6          |
| 18.72.3          |          | 200 mm dia Ductile Iron Class K-7 pipes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Rm    | 970  | 1975.95 | 1916671.5         |
| 18.8             |          | Disinfecting C.I. water mains by flushing with water containing bleaching powder @ 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory.                                                                                                                                                                                                                                                                                                           |       |      |         |                   |
| 18.80.2          |          | 100 mm diameter C.I. pipe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 100 m | 9.88 | 1596.5  | 19725.42          |
| 18.80.4          |          | 150 mm diameter C.I. pipe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 100 m | 9.18 | 2974.9  | 27309.58          |
| 18.80.5          |          | 200 mm diameter C.I. pipe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 100 m | 0.55 | 3954.45 | 2174.94           |
| 18.31            |          | Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately)                                                                                                                                                                                                                                                                                                                                                                                                                                               |       |      |         |                   |
| 18.31.1          |          | 100 mm diameter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |       |      |         |                   |
| 18.31.2          |          | 150 mm diameter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |       |      |         |                   |
| 18.31.3          |          | 150 mm diameter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |       |      |         |                   |
| 18.31.3.2        |          | Class II                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |      |         |                   |
| 18.31.3.2        |          | Class II                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |      |         |                   |
| 18.31.4          |          | 200 mm diameter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |       |      |         |                   |
| 18.31.4.2        |          | Class II                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |      |         |                   |
| 18.59            |          | Providing and fixing C.I. double acting air valve of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces, tapers etc if required will be paid separately) :                                                                                                                                                                                                                                                                                                                                                                                                              |       |      |         |                   |
| 18.59.1          |          | 50 mm dia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | each  | 2    | 5171.75 | 10343.5           |
| 18.59.2          |          | 80 mm dia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | each  | 1    | 6255.45 | 6255.45           |
| 18.6             |          | Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts, nuts, rubber insertions etc. (The tail pieces if required will be paid separately) :                                                                                                                                                                                                                                                                                                                                                                               |       |      |         |                   |
| 18.60.2          |          | 100 mm dia nominal bore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Each  | 3    | 4995.9  | 14987.7           |
| 18.60.3          |          | 150 mm dia nominal bore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Each  | 2    | 7357.35 | 14714.7           |
| 18.34.1          |          | With common burnt clay F.P.S. (non modular) bricks of class complete as per standard design :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |      |         |                   |
| 18.34            |          | Constructing masonry Chamber 900x900x100 cm inside, in brick work with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with drained lid and RCC top slab 12:4 nominal size) : 2 coarse sand : 4 cement : 1 coarse sand for sluice valve, mix (1 cement : 2 coarse sand : 4 cement : 1 coarse sand) for concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design : | Each  |      |         |                   |
| 18.34.1          |          | With common burnt clay F.P.S. (non modular) bricks of class designation 7.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Each  | 24   | 17577.9 | 421869.6          |
| 19.6             |          | Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :                                                                                                                                                                                                                                                                                                                                                                             |       |      |         |                   |
| 19.6.3           |          | 250 mm dia. R.C.C. pipe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | meter | 100  | 811.15  | 8110.15           |
| 19.6.4           |          | 300 mm dia. R.C.C. pipe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | meter | 100  | 902.05  | 9020.05           |
| 18.61            |          | Providing and fixing C.I. dirt box strainer for bulk type water meter with nuts, bolts, rubber insertions etc. complete conforming to IS : 2373 :                                                                                                                                                                                                                                                                                                                                                                                                                                                        |       |      |         |                   |
| 18.61.3          |          | 150 mm dia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | each  | 2    | 8394.25 | 16788.5           |
| <b>Sub Total</b> |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |       |      |         | <b>5354508.09</b> |

**PAL ARCHITECT AND ENGINEER**  
 COA No. CA/2018/96244  
 Case No. .... Date: ...  
 Tanovan Road Infront of PRD Ground  
 Near by IDBI Bank, Deliradun (U.K)  
 Mob.: 7895872139, 9412143346



# DETAILED ESTIMATE OF CIVIL WORKS OF EXTERNAL DRAINAGE SYSTEM

| S.No. | DSR No. | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                   | UNIT | QTY.     | RATE ( Rs) | AMOUNT(Rs)  |
|-------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|------------|-------------|
|       | 21      | EARTH WORK                                                                                                                                                                                                                                                                                                                                                    |      |          |            |             |
| 1     | 2.8     | Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. |      |          |            |             |
|       | 2.8.1   | All kinds of soil                                                                                                                                                                                                                                                                                                                                             | Cum  | 3325.00  | 286.85     | 953776.25   |
|       | a       | Extra over item no. 1 for depth exceeding 1.5 m but not exceeding 3.0 m                                                                                                                                                                                                                                                                                       | cum  | 475.00   | 286.85     | 136253.75   |
| 2     | 2.25    | Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m.                                                                                                                    | cum  | 631.75   | 253.95     | 160242.45   |
|       |         |                                                                                                                                                                                                                                                                                                                                                               |      |          |            |             |
|       |         |                                                                                                                                                                                                                                                                                                                                                               |      |          |            |             |
|       |         |                                                                                                                                                                                                                                                                                                                                                               |      |          |            |             |
| 4     | 4.1     | Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :                                                                                                                                                                                                            |      |          |            |             |
|       | 4.1.4   | 1:2:4 (1 Cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 40 mm nominal size).                                                                                                                                                                                                                                                                    | cum  | 133.00   | 7226.95    | 961184.35   |
|       | 4.1.11  | 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size).                                                                                                                                                                                                                                                                               | cum  | 332.50   | 5660.45    | 1882099.62  |
| 5     | 6.4     | Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :                                                                                                                                                                                  |      |          |            |             |
|       | 6.4.2   | Cement mortar 1:6 (1 cement : 6 coarse sand)                                                                                                                                                                                                                                                                                                                  | cum  | 2141.3   | 8288.35    | 17747843.85 |
| 6     |         | Centering and shuttering including strutting, propping etc. and removal of form for :                                                                                                                                                                                                                                                                         |      |          |            |             |
|       | 5.9.1   | Foundations, footings, bases of columns, etc. for mass concrete.                                                                                                                                                                                                                                                                                              | Sqm  | 997.50   | 307.95     | 307180.125  |
|       | 5.9.2   | Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.                                                                                                                                                                                                                                                                | Sqm  | 13300.00 | 669.55     | 8905015     |
|       |         |                                                                                                                                                                                                                                                                                                                                                               |      |          |            |             |
|       |         |                                                                                                                                                                                                                                                                                                                                                               |      |          |            |             |
|       | 13.4    | 12 mm cement plaster :                                                                                                                                                                                                                                                                                                                                        |      |          |            |             |
|       | 13.4.2  | 1:6 (1 cement : 6 coarse sand)                                                                                                                                                                                                                                                                                                                                | sqm  | 8179.50  | 294.35     | 2407635.82  |
|       |         |                                                                                                                                                                                                                                                                                                                                                               |      |          |            |             |
|       | 13.18   | Neat cement punning                                                                                                                                                                                                                                                                                                                                           | sqm  | 9310.00  | 67.80      | 631218      |

Total for Civil work

34092449.21

PAL ARCHITECT AND ENGINEER

COA No. CA/2018/96244

Case No. 5881 Date: 11/11/2019

Tapovan Road Infront of PRD Ground Near by IDBI Bank, Dehradun (U.K.)

Mob: 7895872139, 9412143346

**DETAILED ESTIMATE OF CC ROAD & PAVING**

| sno     | DSR - 21 | CODE NO. | Description of work                                                                                                                                                                                                                                                                                                                                                                                                                                               | Item | Measurement | Qty   | No     | Total Qty | Unit       | Rate | Amount     |
|---------|----------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------|-------|--------|-----------|------------|------|------------|
| 12      | 2.27     |          | Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.                                                                                                                                                                                                                                                                                                                                         |      | 5402        | 0.03  | 162.06 | 1         | 162.06     | cum  | 2161.2     |
| 4.3     |          |          | Centering and shuttering including strutting, propping etc. and removal of form work for :                                                                                                                                                                                                                                                                                                                                                                        |      |             |       |        |           |            |      |            |
| 4.3.1   |          |          | Foundations, footings, bases for columns                                                                                                                                                                                                                                                                                                                                                                                                                          |      | 1500        | 0.12  | 180    | 2         | 360        | cum  | 307.95     |
| 16.1    |          |          | Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth with lead upto 50 metres.                                                                                                                          |      | 15112       |       |        | 1         | 15112      | sqm  | 180.5      |
| 16.78   |          |          | Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mixer plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. |      |             |       |        |           |            |      |            |
| 16.78.1 |          |          | With material conforming to Grade-I (size range 75 mm to 0.075 mm) having CBR Value-30                                                                                                                                                                                                                                                                                                                                                                            |      |             |       |        |           |            |      |            |
| P1      |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      | 101.98      | 0.125 |        | 1         | 12.7475    |      |            |
| P2      |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      | 19.77       | 0.125 |        | 1         | 2.47125    |      |            |
| P3      |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      | 341.89      | 0.125 |        | 1         | 42.73625   |      |            |
| P4      |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      | 208.8       | 0.125 |        | 1         | 26.1       |      |            |
| P5      |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      | 557.42      | 0.125 |        | 1         | 69.6775    |      |            |
| P6      |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      | 842.32      | 0.125 |        | 1         | 105.29     |      |            |
| P7      |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      | 438.08      | 0.125 |        | 1         | 54.76      |      |            |
| P8      |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      | 389.44      | 0.125 |        | 1         | 48.68      |      |            |
| P9      |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      | 254.84      | 0.125 |        | 1         | 31.855     |      |            |
|         |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |             |       |        |           | 394.3175   | cum  | 2658.1     |
|         |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |             |       |        |           | 1048135.35 |      |            |
| 16.75   |          |          | Providing and laying C.C. pavement of mix M-25 with ready mixed concrete from batching plant. The ready mixed concrete shall be laid and finished with screed board vibrator, vacuum dewatering process and finally finished by floating, brooming with wire brush etc. complete as per specifications and directions of Engineer-in-Charge. (The panel shuttering work shall be paid for separately).                                                            |      | 15112       | 0.125 |        | 1         | 1889       | cum  | 8277.55    |
|         |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |             |       |        |           | 15636292   |      |            |
| 5.22    |          |          | STEEL REINFORCEMENT<br>Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level                                                                                                                                                                                                                                                                                              |      |             |       |        |           |            |      |            |
| 5.22.6  |          |          | Thermo-Mechanically Treated bars of grade Fe-500D or more.                                                                                                                                                                                                                                                                                                                                                                                                        |      | 25          | 1889  |        | 1         | 47225      | kg   | 89.65      |
|         |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |             |       |        |           |            |      | 4233721.25 |
| 16.47   |          |          | Painting runway/taxi track/apron marking with adequate nos of coats to give uniform finish with road marking paint of superior make as approved by the Engineer-in-Charge, i/c cleaning the surface of all dirt, scales, oil, grease and other foreign material etc. and lining out complete.                                                                                                                                                                     |      |             |       |        |           |            |      |            |
| 16.47.1 |          |          | New work (Two or more coats)                                                                                                                                                                                                                                                                                                                                                                                                                                      |      | 2518.97     | 1     |        | 1         | 2518.97    | sqm  | 158.5      |
|         |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |             |       |        |           |            |      | 399258.33  |
| 16.68   |          |          | Providing and laying 50mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction, required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with line sand etc. all complete as per the direction of Engineer-in-Charge.                                                                                                        |      |             |       |        |           |            |      |            |
| P1      |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      | 101.98      |       |        | 1         | 101.98     |      |            |
| P2      |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      | 19.77       |       |        | 1         | 19.77      |      |            |
| P3      |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      | 341.89      |       |        | 1         | 341.89     |      |            |
| P4      |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      | 208.8       |       |        | 1         | 208.8      |      |            |
| P5      |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      | 557.42      |       |        | 1         | 557.42     |      |            |
| P6      |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      | 842.32      |       |        | 1         | 842.32     |      |            |
| P7      |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      | 438.08      |       |        | 1         | 438.08     |      |            |
| P8      |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      | 389.44      |       |        | 1         | 389.44     |      |            |
| P9      |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      | 254.84      |       |        | 1         | 254.84     |      |            |
|         |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |             |       |        |           | 3154.54    | sqm  |            |
|         |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |             |       |        |           |            |      | 27506196.5 |
|         |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |             |       |        |           |            |      | 2999967.54 |

**PAL ARCHITECT AND ENGINEER**

COA No. CA/2018/96244

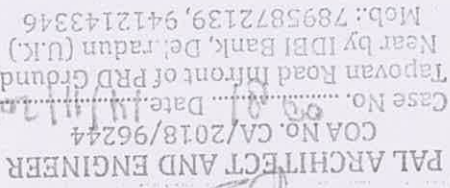
Case No. ... Date: 14/11/2018

Tapovan Road Infront of PRD Ground

Near by IDBI Bank, Delradun (U.K.)

Mob.: 7895872139, 9412143346





| Sno | DSR - 21 | Description of work                                                                                                                                                                                                                                                                                                 | Item  | Measurement |       |        | Qty   | No     | Total Qty | Unit     | Rate      | Amount |
|-----|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------|-------|--------|-------|--------|-----------|----------|-----------|--------|
|     |          |                                                                                                                                                                                                                                                                                                                     |       | L           | B     | H      |       |        |           |          |           |        |
|     |          | ALL WORK FROM 30 M LENGTH                                                                                                                                                                                                                                                                                           |       |             |       |        |       |        |           |          |           |        |
| 12  | 2.6      | Earth work in excavation by mechanical means (hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge.                       |       |             |       |        |       |        |           |          |           |        |
|     | 2.6.1    | All kinds of soil                                                                                                                                                                                                                                                                                                   | 30    | 0.9         | 0.75  | 20.25  | 1     | 20.25  | CUM       | 205.45   | 4160.36   |        |
|     | 4.1      | Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :                                                                                                                                                                  |       |             |       |        |       |        |           |          |           |        |
|     | 4.1.10   | 1:5:10 (1 cement : 5 coarse sand (zone-III) derived from natural sources : 10 graded stone aggregate 40 mm nominal size derived from natural sources)                                                                                                                                                               | 30    | 0.9         | 0.15  | 4.05   | 1     | 4.05   | CUM       | 6050.65  | 24505.13  |        |
|     | 4.1.13   | 1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)                                                                                                                                                                 | 30    | 0.46        | 0.05  | 0.69   | 1     | 0.69   | CUM       | 7365.15  | 5081.95   |        |
|     | 5.2      | Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. above plinth level up to floor five level, excluding cost of centering, shuttering, finishing and reinforcement : |       |             |       |        |       |        |           |          |           |        |
|     | 5.2.2    | 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)                                                                                                                                                              | 30    | 0.23        | 0.15  | 1.035  | 1     | 1.035  | CUM       | 10185.05 | 10541.475 |        |
|     | 5.2.2A   | Fe-500D or more                                                                                                                                                                                                                                                                                                     | 1.035 |             |       | 120    | 1     | 124.2  | KG        | 89.65    | 11134.53  |        |
|     | 5.2.2A.6 | Thermo-Mechanically Treated bars of grade                                                                                                                                                                                                                                                                           |       |             |       |        |       |        |           |          |           |        |
|     | 6.2      | Brick work with common burnt clay modular bricks of class designation 7.5 in foundation and plinth in:                                                                                                                                                                                                              |       |             |       |        |       |        |           |          |           |        |
|     | 6.2.2    | Cement Mortar 1:6 (1 cement : 6 coarse sand).                                                                                                                                                                                                                                                                       | 30    | 0.68        | 0.15  | 3.1    | 1     | 3.1    |           |          |           |        |
|     |          |                                                                                                                                                                                                                                                                                                                     | 30    | 0.575       | 0.15  | 2.6    | 1     | 2.6    |           |          |           |        |
|     |          |                                                                                                                                                                                                                                                                                                                     | 30    | 0.46        | 0.15  | 2.1    | 1     | 2.1    |           |          |           |        |
|     |          |                                                                                                                                                                                                                                                                                                                     | 30    | 0.345       | 0.15  | 1.6    | 1     | 1.6    | CUM       | 5549.95  | 52169.53  |        |
|     | 6.4      | Brick work with common burnt clay F.P.5. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :                                                                                                                                        |       |             |       |        |       |        |           |          |           |        |
|     | 6.4.2    | Cement mortar 1:6 (1 cement : 6 coarse sand)                                                                                                                                                                                                                                                                        | 24.94 | 0.23        | 0.15  | 0.8604 | 1     | 0.8604 |           |          |           |        |
|     |          | Length of wall=30-0.46*11 (below RCC band)                                                                                                                                                                                                                                                                          | 24.94 | 0.23        | 1.2   | 0.6883 | 1     | 6.88   |           |          |           |        |
|     |          | Above RCC Band                                                                                                                                                                                                                                                                                                      | 0.46  | 0.46        | 1.8   | 0.3808 | 11    | 4.189  | CUM       | 8288.35  | 98875.04  |        |
|     | 13.4     | 12 mm cement plaster of mix :                                                                                                                                                                                                                                                                                       |       |             |       |        |       |        |           |          |           |        |
|     | 13.4.1   | 1:4 (1 cement:4 coarse sand)                                                                                                                                                                                                                                                                                        | 24.94 | 1.2         | 29.28 | 1      | 29.28 |        |           |          |           |        |
|     |          |                                                                                                                                                                                                                                                                                                                     | 0.46  | 1.8         | 0.828 | 11     | 9.108 |        |           |          |           |        |
|     |          |                                                                                                                                                                                                                                                                                                                     | 0.115 | 1.8         | 0.207 | 22     | 4.554 | sqm    | 307.25    | 13193.92 |           |        |
|     | 13.5     | 15 mm cement plaster on rough side of single or half brick wall of mix:                                                                                                                                                                                                                                             |       |             |       |        |       |        |           |          |           |        |
|     | 13.5.1   | 1:4 (1 cement: 4 coarse sand)                                                                                                                                                                                                                                                                                       | 24.94 | 1.2         | 29.28 | 1      | 29.28 |        |           |          |           |        |
|     |          |                                                                                                                                                                                                                                                                                                                     | 0.46  | 1.8         | 0.828 | 11     | 9.108 |        |           |          |           |        |
|     |          |                                                                                                                                                                                                                                                                                                                     | 0.115 | 1.8         | 0.207 | 22     | 4.554 | sqm    | 354.5     | 15222.93 |           |        |

DETAILED ESTIMATE OF BOUNDARY WALL CIVIL CONSTRUCTION

Case No. 2018/96244  
COA No. CA/2018/96244  
DATE 11/11/2018  
Japovan Road Infront of PRD Ground  
Near by IDBI Bank, Deliradun (U.K.)  
Mob: 7895872139, 9412143346

[illegible]



PAL ARCHITECT AND ENGINEER  
 COA No. CA/2018/96244  
 Date: 15/11/2022  
 Case No. 30881  
 Tapovan Road Infront of PRD Ground  
 Near by IDBI Bank, Deliradun (U.K.)  
 Mob: 7895872139, 9412143346

Handwritten signature and stamp.

| S.NO                                           | DSR-2022 | ITEM DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | UNIT  | QTY  | RATE    | AMOUNT    |
|------------------------------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|---------|-----------|
| 23.1                                           |          | Boring/drilling bore well of required dia for casing/strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer-in-charge, upto 50 metre depth below ground level.                                                                                                                                                                                                    |       |      |         |           |
| 23.1.1                                         |          | All types of soil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |      |         |           |
| 23.1.1.1                                       |          | 300 mm dia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | metre | 50   | 592.05  | 29602.5   |
| 23.2                                           |          | Boring/drilling bore well of required dia for casing/strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer-in-charge, beyond 50 metre & upto 150 metre depth below ground level.                                                                                                                                                                                 |       |      |         |           |
| 23.2.1.1                                       |          | 300 mm dia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | metre | 100  | 690.7   | 69070     |
| 23.1                                           |          | Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/plain ended casing pipes of required dia, conforming to IS: 4270, of reputed & approved make, including painted with outside surface with two coats of anticorrosive paint of approved brand and manufacturer, fittings & accessories, all complete, for all depths, as per direction of Engineer-in-charge.                                                                                                                                                                |       |      |         |           |
| 23.1                                           |          | Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 plain slotted (having slot of size 1.6/3.2 mm) mild steel threaded and socketed/plain ended pipe (type A) of required dia, conforming to IS: 8110, of reputed & approved make, having wall thickness not less than 5.40 mm, including painted with outside surface with two coats of anticorrosive paint of approved brand and manufacturer, fittings & accessories, all complete, for all depths, as per direction of Engineer-in-charge.                                                                  |       |      |         |           |
| 23.1.3                                         |          | 200 mm nominal size dia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | metre | 50   | 2194.85 | 109742.5  |
| 23.6                                           |          | Supplying, filling, spreading & leveling gravels of size range 5 mm to 10 mm, in the recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.                                                                                                                                                                                                                                                                                                                                                                                        | cum   | 3.92 | 1309    | 5131.28   |
| 23.12                                          |          | Development of tube well in accordance with IS: 2800 (part I) and IS: 11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level & draw down etc. by step draw down method, collecting water samples & getting tested in approved laboratory, I/C disinfection of tubewell, all complete, including hire & labour charges of air compressor, tools & accessories etc. | hour  | 20   | 916.8   | 18336     |
| 23.13                                          |          | Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for borewell of:                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |         |           |
| 23.13.3                                        |          | 200 mm dia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | each  | 1    | 280.95  | 280.95    |
| 23.14                                          |          | Providing and fixing M.S. clamp of required dia to the top of casing/ housing pipe of tubewell as per IS: 2800 (part I), including necessary bolts & nuts of required size complete.                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |      |         |           |
| 23.14.3                                        |          | 200 mm clamp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | each  | 1    | 1827    | 1827      |
| 23.15                                          |          | Providing and fixing Bail plug/ Bottom plug of required dia to the bottom of pipe assembly of tubewell as per IS: 2800 (part I).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |       |      |         |           |
| 23.15.3                                        |          | 200 mm dia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | each  | 1    | 308.55  | 308.55    |
| TOTAL DRI of Tube well civil + Electrical cost |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |       |      |         |           |
| Total 1 No Drilling of Tube well               |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |       |      |         | 338403.78 |

Case No. 1111/2018  
 COA No. CA/2018/96244  
 Date 14/11/2018  
 Near by IDBI Bank, Dehradun (U.K.)  
 Tapovan Road Infront of PKD Ground  
 Mob: 7895872139, 9412143346



| S.NO    | DSR-2022 | ITEM DESCRIPTION                                                                                                                                                                                                                                                                                                                      | UNIT | QTY      | RATE      | AMOUNT      |
|---------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|-----------|-------------|
| 4.1     |          | P/L cement concrete - all works upto plinth level:                                                                                                                                                                                                                                                                                    |      |          |           |             |
| 4.1.10  |          | natural sources : 10 graded stone aggregate 40 mm nominal size derived from natural sources)                                                                                                                                                                                                                                          | cum  | 25.12    | 6050.65   | 151992.328  |
| 9.71    |          | Providing and fixing IS : 12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :                                                                                                                                                                                                         |      |          |           |             |
| 9.71.2  |          | 100x60x2.50 mm                                                                                                                                                                                                                                                                                                                        | each | 6        | 85.45     | 512.7       |
| 10.16   |          | Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolting with special shaped washers etc. complete.                                                          |      |          |           |             |
| 10.16.1 |          | Hot finished welded type tubes                                                                                                                                                                                                                                                                                                        |      |          |           |             |
|         |          | HollowSSBOsection 80x40x2mm                                                                                                                                                                                                                                                                                                           | kg   | 76.8712  |           |             |
|         |          | HollowSSBOsection 40x20x1.5mm                                                                                                                                                                                                                                                                                                         | kg   | 134.4244 |           |             |
|         |          | TOTAL                                                                                                                                                                                                                                                                                                                                 |      | 211.2956 | 154.9     | 32729.68844 |
|         |          | Providing and fixing carbon steel galvanised ( minimum coating 5 micron) dash fastener of 10 mm dia double threaded 6.8 grade (yield strength 480 N/mm2), counter sunk head, comprising of 10 m dia polyamide PA 6 grade sleeve, including drilling of hole in frame, concrete/ masonry, etc. as per direction of Engineer-in-charge. |      |          |           |             |
| 10.27.2 |          | 10 x 80 mm                                                                                                                                                                                                                                                                                                                            | each | 36       | 117.3     | 4222.8      |
|         |          | MAIN ENTRANCE GATE                                                                                                                                                                                                                                                                                                                    |      |          |           |             |
| 4.1     |          | Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:                                                                                                                                                                                     |      |          |           |             |
| 4.1.10  |          | 1.5:10 (1 cement : 5 coarse sand (zone-III) derived from natural sources : 10 graded stone aggregate 40 mm nominal size derived from natural sources)                                                                                                                                                                                 | cum  | 0.072    | 6050.65   | 435.6468    |
| 9.71    |          | Providing and fixing IS : 12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :                                                                                                                                                                                                         |      |          |           |             |
| 9.71.2  |          | 100x60x2.50 mm                                                                                                                                                                                                                                                                                                                        | each | 6        | 85.45     | 512.7       |
| 10.16   |          | Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolting with special shaped washers etc. complete.                                                          |      |          |           |             |
| 10.16.1 |          | Hot finished welded type tubes                                                                                                                                                                                                                                                                                                        |      |          |           |             |
|         |          | HollowSSBOsection 80x40x2mm                                                                                                                                                                                                                                                                                                           | kg   | 76.8712  |           |             |
|         |          | HollowSSBOsection 40x20x1.5mm                                                                                                                                                                                                                                                                                                         | kg   | 134.4244 |           |             |
|         |          | TOTAL                                                                                                                                                                                                                                                                                                                                 |      | 211.2956 | 154.9     | 32729.68844 |
|         |          | Providing and fixing carbon steel galvanised ( minimum coating 5 micron) dash fastener of 10 mm dia double threaded 6.8 grade (yield strength 480 N/mm2), counter sunk head, comprising of 10 m dia polyamide PA 6 grade sleeve, including drilling of hole in frame, concrete/ masonry, etc. as per direction of Engineer-in-charge. |      |          |           |             |
| 10.27.2 |          | 10 x 80 mm                                                                                                                                                                                                                                                                                                                            | each | 36       | 117.3     | 4222.8      |
|         |          | Total cost of 2 Main gate                                                                                                                                                                                                                                                                                                             |      |          |           |             |
|         |          | each                                                                                                                                                                                                                                                                                                                                  | each | 2        | 239627.11 | 479254.22   |
|         |          | each                                                                                                                                                                                                                                                                                                                                  | each | 36       | 117.3     | 4222.8      |



P.A.L ARCHITECT AND ENGINEER  
 COA No. CA/2018/96244  
 Date: 11/11/2018  
 Case No. 81  
 Near by IDBI Bank, Delradun (U.K.)  
 Tapovan Road Infront of PRD Ground  
 Mob: 7895872139, 9412143346



| S.NO    | BSR-2022 | ITEM DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | UNIT  | QTY      | RATE    | AMOUNT      |
|---------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------|---------|-------------|
| 2.6     |          | Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth (lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |       |          |         | 191479.4    |
| 2.6.1   |          | All kinds of soil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | cum   | 932      | 205.45  | 191479.4    |
|         |          | Extra over item no. 1 for depth exceeding 1.5 m but not exceeding 3.0 m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | cum   | 558      | 205.45  | 114641.1    |
|         |          | Extra over item no. 1 for depth beyond 3.0 m.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | cum   | 36       | 205.45  | 7396.2      |
| 2.25    |          | Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | cum   | 388.5    | 253.95  | 98659.575   |
| 4.1     |          | Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | cum   |          |         |             |
| 4.1.3   |          | 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | cum   | 2.54     | 7365.15 | 18707.481   |
| 4.1.11  |          | 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | cum   | 64.24    | 5660.45 | 363637.308  |
| 5.33    |          | Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but, excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. (Note - Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately).                                                                                                                                                                             |       |          |         |             |
| 5.33.1  |          | All works up to plinth level.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | cum   | 478.79   | 7997.3  | 3829027.267 |
| 5.9.1   |          | Foundations, footings, bases of columns, etc. for mass concrete.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Sqm   | 41       | 307.95  | 12625.95    |
| 5.9.2   |          | Walls (any thickness) including attached plaster, buttresses, plinth and string courses etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Sqm   | 1370     | 669.55  | 917283.5    |
| 5.9.3   |          | Suspended floors, roofs, landings, balconies and access platform.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Sqm   | 399.03   | 766.55  | 305876.4465 |
| 5.22    |          | Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Kg    | 56377.02 | 89.65   | 5054199.843 |
| 5.22A.6 |          | Thermo-Mechanically Treated bars                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |          |         |             |
|         |          | Providing and fixing in recommended proportion admixtures as per IS code for water proofing concrete as per manufacturer specification and direction of Construction manager                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |       |          |         |             |
| 22.4.1  |          | Severed with central bulb (225 mm wide, 8-11 mm thick)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | metre | 73.3     | 285.6   | 20934.48    |
| 11.26   |          | Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |       |          |         |             |
| 22.14   |          | Grading roof for water proofing treatment with 25 mm thick                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Sqm   | 42       | 0.1491  | 6.2622      |
| 22.14.1 |          | Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | cum   | 17.5     | 3.2     | 56          |
| 22.1    |          | Providing and laying integral cement based treatment for water proofing on horizontal surface at all depth below ground level for under ground structures as directed by Engineer-in-Charge and consisting of : i) 1st layer of 22mm to 25mm thick approved and specified rough stone slab over a 25mm thick base of cement mortar 1:3 (1 cement : 3 coarse sand) recommended proportion over the leveling course (leveling course to be paid separately). ii) joints sealed and grouted with cement slurry mixed with water proofing compound. iii) 2nd layer of 25mm thick cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound. iv) Finishing top with stone aggregate of 10mm to 12mm nominal size spreading @ 8 cum/m/sqm thoroughly embedded in the 2nd layer. | Sqm   | 375      | 0.342   | 128.25      |
|         |          | Using rough kota stone sqm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |       |          |         |             |
|         |          | Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25 mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20 mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20 mm thick with neat cement punting mixed with water proofing compound in recommended proportion complete all levels and as directed by Engineer-in-charge :                                                                                                                     |       |          |         |             |

DETAILED ESTIMATE OF UNDER GROUND TANK AND PUMP ROOM



101, A, CHENNAI  
 600 006  
 Mob.: 7695872139, 9412143346  
 02/11/2017

| TOTAL COST |                                                                                                                                                                                                                                    |     |        |             |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------|-------------|
| 22.2.1     | Using rough Kota stone                                                                                                                                                                                                             | sqm | 195    | 0.443       |
| 6.3        | Brick work with common burnt clay machine moulded perforated bricks of class designation 12.5 conforming to IS: 2222 in superstructure above plinth level up to floor five level in cement mortar 1:6 (1 cement : 6 coarse sand) : |     |        |             |
| 6.3.1      | With F.S. (non modular) bricks                                                                                                                                                                                                     | cum | 13.56  | 8030.6      |
| 13.4.2     | 1:6 (1 cement: 6 coarse sand)                                                                                                                                                                                                      | sqm | 202.33 | 294.35      |
| 13.3.7     | White washing with lime to give an even shade :                                                                                                                                                                                    | sqm | 202.33 | 32.45       |
| 13.3.7.1   | New work (three or more coats)                                                                                                                                                                                                     | sqm | 202.33 | 32.45       |
|            |                                                                                                                                                                                                                                    |     |        | 6565.6085   |
|            |                                                                                                                                                                                                                                    |     |        | 108894.936  |
|            |                                                                                                                                                                                                                                    |     |        | 59555.8355  |
|            |                                                                                                                                                                                                                                    |     |        | 11109751.83 |
|            |                                                                                                                                                                                                                                    |     |        | 86.385      |



**DETAILED ESTIMATE OF SEWAGE TREATMENT PLANT FOR CONSTRUCTION OF 1088 HOUSES**

| SR NO   | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | UNIT                    | QTY.     | RATE (RS) | AMOUNT (RS) |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------|-----------|-------------|
| DSR-21  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                         |          |           |             |
| 1       | Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge.                                                                                                                                                                                                                                                                                                                                                                                                  |                         |          |           |             |
| 2.6.1   | All kinds of soil.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | cum                     | 932.40   | 205.45    | 191561.58   |
| a       | Extra over item no. 1 for depth exceeding 1.5 m but not exceeding 3.0 m.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | cum                     | 941.63   | 205.45    | 193457.88   |
| b       | Extra over item no. 1 for depth beyond 3.0 m.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | cum                     | 1255.50  | 205.45    | 257942.47   |
| 2       | Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m.                                                                                                                                                                                                                                                                                                                                                                                                                                                    | cum                     | 202.50   | 253.95    | 51424.875   |
|         | <b>CEMENT CONCRETE WORKS</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                         |          |           |             |
| 4       | Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                         |          |           |             |
| 4.1.1   | 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | cum                     | 94.16    | 6050.65   | 569729.04   |
| 5.5     | Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but, excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately). |                         |          |           |             |
| 5.3.1   | All works up to plinth level.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                         |          |           |             |
|         | using M20 grade instead                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | cum                     | 652.60   | 8320.05   | 5429664     |
| 6       | Centering and shuttering including strutting, propping etc. and removal of form for:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                         |          |           |             |
| 5.9.1   | Foundations, footings, bases of columns, etc. for mass concrete.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Sqm                     | 59.20    | 307.95    | 18230.64    |
| 5.9.2   | Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Sqm                     | 2320.00  | 669.55    | 1553356     |
| 5.9.3   | Suspended floors, roofs, landings, balconies and access platform.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Sqm                     | 598.50   | 766.55    | 458780.175  |
| 7       | Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                         |          |           |             |
| 5.22A.6 | Thermo-Mechanically Treated bars.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Kg                      | 63578.00 | 89.65     | 5699767.7   |
| 8       | Providing and fixing in recommended proportion admixtures as 50per IS code for water proofing concrete as per manufacturer specification and direction of Construction manager used in the mix                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Per bag of Kg of cement |          |           |             |
| 8       | Providing and Placing in position suitable PVC water stops conforming to IS:12200 for construction/ expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete:                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                         |          |           |             |
| 22.4    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                         |          |           |             |
| 22.4.1  | Servated with central bulb (225mm wide, 8-11mm thick).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | M                       | 234.00   | 285.60    | 66830.4     |



PAL ARCHITECT AND ENGINEER  
 COA No. CA/2018/96244  
 Case No. 8/2018  
 Date: 11/11/2018  
 Near by IDBI Bank, Dehra Dun (U.K.)  
 Tapovan Road Infront of PWD Ground



**DETAILED ESTIMATE OF SEWAGE TREATMENT PLANT FOR CONSTRUCTION OF 1088 HOUSES**

| SR NO | DSR-21 | DESCRIPTION | UNIT | QTY. | RATE (RS) | AMOUNT (RS) |
|-------|--------|-------------|------|------|-----------|-------------|
|-------|--------|-------------|------|------|-----------|-------------|

|    |         |                                                                                                                                                                                                                                                                  |     |        |         |           |
|----|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------|---------|-----------|
| 9  |         | Providing and fixing 500 mm dia CI manhole cover and frame (medium duty). Weight of cover not less than 58 Kg.                                                                                                                                                   |     |        |         | -         |
| 10 | 11.26   | Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) : |     |        |         |           |
| 11 | 22.14   | Grading roof for water proofing treatment with 25 mm thick                                                                                                                                                                                                       | sqm | 178.70 | 1706.60 | 304969.42 |
| 12 | 22.14.1 | Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)                                                                                                                                                                   | cum | 8.94   | 3.20    | 28.608    |

|    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |        |       |         |
|----|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------|-------|---------|
| 13 | 22.1   | Providing and laying integral cement based treatment for water proofing on horizontal surface at all depth below ground level for under ground structures as directed by Engineer-in-Charge and consisting of : i) 1st layer of 22mm to 25mm thick approved and specified rough stone slab over a 25mm thick base of cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound conforming to IS:2645 in the recommended proportion over the leveling course (leveling course to be paid separately). joints sealed and grouted with cement slurry mixed with water proofing compound. ii) 2nd layer of 25mm thick cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportions. iii) Finishing top with stone aggregate of 10mm to 12mm nominal size spreading @ 8 cum/sqm thoroughly embedded in the 2nd layer. |     |        |       |         |
|    | 22.1.1 | Using rough kota stone.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Sqm | 626.22 | 0.342 | 214.167 |

|  |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |     |        |       |         |
|--|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------|-------|---------|
|  | 22.2   | Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25 mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20 mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20 mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge : |     |        |       |         |
|  | 22.2.1 | Using rough Kota stone                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | sqm | 311.10 | 0.443 | 137.817 |

|       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |  |  |  |
|-------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| 22.23 |  | Providing and applying integral crystalline slurry of hydrophilic in nature for waterproofing treatment to the RCC structures like retaining walls of the basement, water tanks, roof slabs, podiums, reservoir, sewage & water treatment plant, tunnels/subway and bridge deck etc, prepared by mixing in the ratio of 5 : 2 (5 parts integral crystalline slurry : 2 parts water) for vertical surfaces and 3 : 1 (3 parts integral crystalline slurry : 1 part water) for horizontal surfaces and applying the same from negative (internal) side with the help of synthetic fiber brush. The material shall meet the requirements as specified in ACI-212-3R-2010 i.e by reducing permeability of concrete by more than 90% compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline slurry shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all in-charge. The product performance shall carry guaranteed for 10 years against any leakage. |  |  |  |  |
|-------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|



**PAL ARCHITECT AND ENGINEER**  
 COA No. CA/2018/96244  
 Case No. 18/11/18  
 Date 18/11/18  
 Near by IDBI Bank, Del. radun (U.K.)  
 Mob.: 7895872139, 9412143346  
 Japovan Road In front of PND Ground



# DETAILED ESTIMATE OF SEWAGE TREATMENT PLANT FOR CONSTRUCTION OF 1088 HOUSES

| SR.NO                   | DESCRIPTION                                                                                                                                                                                                                        | UNIT             | QTY    | RATE    | AMOUNT      |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------|---------|-------------|
| 15                      | Brick work with common burnt clay machine moulded perforated bricks of class designation 12.5 conforming to IS: 2222 in superstructure above plinth level up to floor five level in cement mortar 1:6 (1 cement : 6 coarse sand) : |                  |        |         |             |
| 6.3                     | With F.P.S.(non modular) bricks.                                                                                                                                                                                                   | CUM              | 13.56  | 8030.60 | 108894.93   |
| 13.4                    | 12 mm cement plaster of mix :                                                                                                                                                                                                      |                  |        |         |             |
| 13.4.2                  | 1:6 (1 cement: 6 coarse sand)                                                                                                                                                                                                      | Sqm              | 152.40 | 294.35  | 44858.94    |
| 16                      | White washing with lime to give an even shade :                                                                                                                                                                                    |                  |        |         |             |
| 13.37                   | New work (three or more coats)                                                                                                                                                                                                     | One Square Metre | 195.34 | 32.45   | 6338.78     |
| 13.37.1                 |                                                                                                                                                                                                                                    |                  |        |         |             |
| TOTAL CIVIL WORK OF STP |                                                                                                                                                                                                                                    |                  |        |         | 14956187.42 |

PAL ARCHITECT AND ENGINEER  
 COA No. CA/2018/96244  
 Case No. 2018/96244 Date 14/11/2018  
 Near by IDBI Bank, Del. radu  
 Mob.: 7895872139, 94121





PAL ARCHITECT AND ENGINEER  
 COA No. CA/2011/952-12  
 Case No. 0.0.51  
 Taperan Road Infront of MID Ground  
 Near by IDBI Bank, Dehradun (U.K.)  
 Mob: 7895872139, 9412143356

| OTHER SERVICES                                     |                                      |  |  |             |
|----------------------------------------------------|--------------------------------------|--|--|-------------|
| 41                                                 | External sewerage system             |  |  | 20108528    |
| 42                                                 | External water supply system         |  |  | 5354508.09  |
| 43                                                 | External Drainage system             |  |  | 34092449.21 |
| 44                                                 | C.C Paving work cost                 |  |  | 27506196.49 |
| 45                                                 | Boundary wall construction 833.575 M |  |  | 8853016.63  |
| 46                                                 | Tube well cost                       |  |  | 338403.78   |
| 47                                                 | Main Entrance gate                   |  |  | 479254.22   |
| 48                                                 | U.G Tank and Pump Room               |  |  | 11109171.14 |
| 49                                                 | S.T.P Construction                   |  |  | 14956187.42 |
|                                                    | other service                        |  |  | 1222797715  |
| Grand Total amount for 15 Tower A, B, F, G, H TO S |                                      |  |  |             |
| Grand total amount for 4 Tower C, D, E & T         |                                      |  |  |             |
| Grand Total other service                          |                                      |  |  |             |
| Grand total project cost                           |                                      |  |  |             |
| 620819842.9                                        |                                      |  |  |             |
| 80704224.32                                        |                                      |  |  |             |
| 1222797715                                         |                                      |  |  |             |
| 824321782.2                                        |                                      |  |  |             |