



**PROPOSED “RETROFITTING/REDEVELOPMENT OF
CAR STREET AND AREAS OF
SRI VENKATRAMANA TEMPLE AS RELIGIOUS ZONE”**

DETAILED PROJECT REPORT

ESTIMATED COST - Rs. 4,95,00,000/-

AEC -PAILANDS ASSOCIATES



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1 SALIENT FEATURES

1	Title of the project	Proposed Retrofitting/Redevelopment of Carstreet and Areas of Sri Venkataramana Temple as Religious Zone
2	Details of the project	
	i. District	Dakshina Kannada
	ii. Taluk	Mangaluru
	iii. Corporation	Mangaluru
	iv. Assembly Constituency	Mangaluru South
3	Implementing agency/SPV	Mangaluru Smart City Limited
4	DPR prepared by	Pailands Associates
5	Project outlay	Rs. 14,59,00,000.00
5	Budget provision	Rs. 14,59,00,000.00
7	Administrative sanction	From Mangaluru Smart City Limited (MSCL)
8	Nature of the project	Upgradation of the Road and construction of underground services lines. Upgradation of footpath and provide architectural features which enhances the heritage value of the street.
10	Need for the project	Refer Introduction
11	Details of the Proposal	
	Length of Road	0.8 KM
12	Total estimated cost with item wise cost break up and details of Schedule of Rates	Attached
13	Whether detailed estimate attached ?	Yes

2 INTRODUCTION

2.1 Project Introduction

Car Street is an area in Mangalore which is synonymous with culture and heritage. This stretch of the road is located in the north western part of Mangalore city and is adorned by temples and old buildings which highlights the cultural significance of the street. This road is presently used by various modes of transport and acts as a link between major roads of the city like K.S.Rao road , Kulur ferry road, Azizuddin road etc.

During festivals, this street becomes the centre point of celebrations. A large number of processions take place on this street for various occasions. In order to develop this street, it is proposed to upgrade the road and underground infrastructure for the entire stretch which begins from KS Rao road and the proposed minor intervention of heritage development terminates at the junction of Kuloor Ferry Road and Car Street. A minor interventions of Heritage style development is considered from KS Rao Road upto junction of Kuloor Ferry Road and Car Street only, which is the scope of this project. Infrastructure development of the road from KS Rao Road upto junction of Car Street & Kulur Ferry Road and continuing further up to Sujirkar tile factory & waterfront development is proposed in phases which is not in the scope of this development.

2.2 Project Purpose

The street is known for its rich heritage value as there are age-old Temples and Maths which attract a large number of people during festivals and annual celebrations. It has become a symbol of religious and cultural hub. Hence, conservation of such valuable structures is one of the purposes.

The vehicular and pedestrian movement is very dense in this area on normal days. The street is busiest during festivals and celebrations. To provide sufficient infrastructure for vehicular and pedestrian movements is essentially another purpose of this project.

We are aiming to create a balanced design proposal with infrastructure for vehicular and pedestrian movement and aesthetic heritage value.

2.3 Project Brief

The Mangaluru Smart City Limited (MSCL, the Client), under the Government of Karnataka (GoK), has proposed the 'Proposed Retrofitting/Redevelopment of Carstreet and Areas of Sri Venkataramana Temple as Religious Zone' (the Project) with the allocation of INR 14.59 Crores from the Smart City Mission Fund. As a part of

the development, the stretch of around 1.2 kilometers is to be redeveloped and retrofitted, starting from the KS Rao Road junction and extending till the waterfront. The aim is to provide adequate infrastructure and incorporate urban design measures to redevelop Car Street as a heritage precinct.

The scope of this project/DPR is to add minor heritage interventions value to streetscape using streetlights, seating, handrails, bollards etc. for 0.8 Km of this development.

This heritage addition will be done above road/pavement/stormwater drain/ electrical and plumbing infrastructure developed by MSCL under separate project.

2.4 Project Deliverables

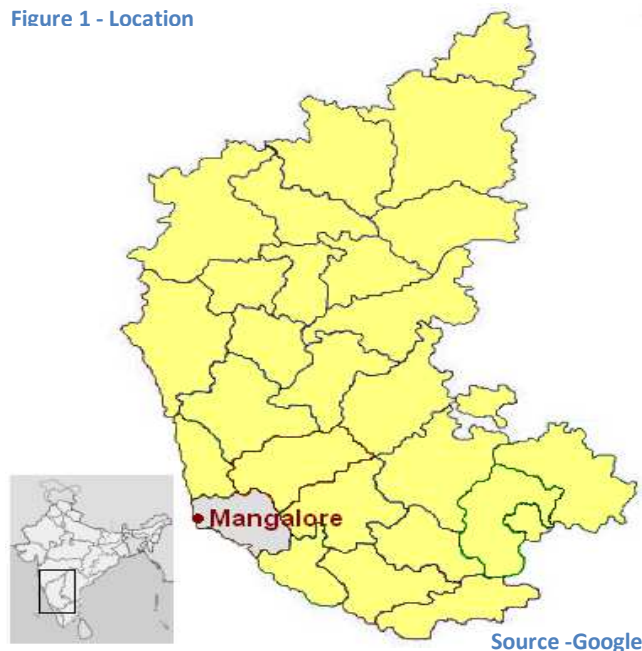
The Project deliverables are broadly

1. Preparation of the Concept Report for Proposed Retrofitting/Redevelopment of Carstreet and Areas of Sri Venkataramana Temple as Religious Zone
2. Preparation of Detailed Project Reports
3. Bid Process Management including preparation of RFP/Concession agreements, Bid evaluation, finalization of contractor for implementation
4. Implementation of works including Quality Assurance, Quality Control and Certification

3 INTRODUCTION TO THE CITY - MANGALURU

3.1 Contextual Study of the City

Figure 1 - Location



Mangaluru, the headquarters of Dakshina Kannada district, is a chief port city in the state of Karnataka and is known as the gateway to Karnataka. It is the fourth largest city in the state. It is located at 12 deg 52' Latitude and 74 deg 53' longitude and is at a distance of 357 km from the state capital Bengaluru.

The city is situated on the west coast of the country. It is bounded by the state of Kerala at the south, Udupi district on the north, Bantwal Taluk on the east and Arabian Sea towards the west. The Western Ghats span

the city of Mangalore on its eastern side. It lies on the backwaters formed by the Gurupura River and Netravati river.

Mangalore derives its name from the local Hindu Goddess Mangaladevi. It developed as a port on the Arabian Sea – remaining, to this day, a major port of India. Lying on the backwaters of the Netravati and Gurupura rivers, Mangalore is often used as a staging point for sea traffic along the Malabar Coast.

Mangalore is spread over an area of 184.85 sq.km and houses about a population of approximately 8 lakhs. A rich history of trade coupled with industrial growth has led to the formation of dynamic civic and economic zones historically within the city core. In Mangalore, the people, culture and its festivals form an integral part of the city.

Mangalore is well connected by road, rail and air. It is accessed by National & State Highways (NH & SH). NH-17, NH-48 and NH-13 pass through the city which connect it with important cities such as Mumbai, Bengaluru, Sholapur, etc. International link is also established to gulf region of the Middle East. The Mangalore International airport is located near Bajpe around 20 km north-east of the city. Mangalore is a major all-weather harbour linked to other major national and international harbours. The harbour also links areas served by the inland transport facility in Netravathi and Gurpur Rivers. The Old Bunder (port) is a relatively small-scale freight and fishing harbour. New Mangalore Port is also an all-weather port situated at Panambur handling imports and exports.

The topography of the city is plain up to 30 km inside the coast and changes to undulating hilly terrain sharply towards the east in Western Ghats. The city is characterized by highly undulating topography with laterite rock at many places. It has an average elevation of 22 m above mean sea level.

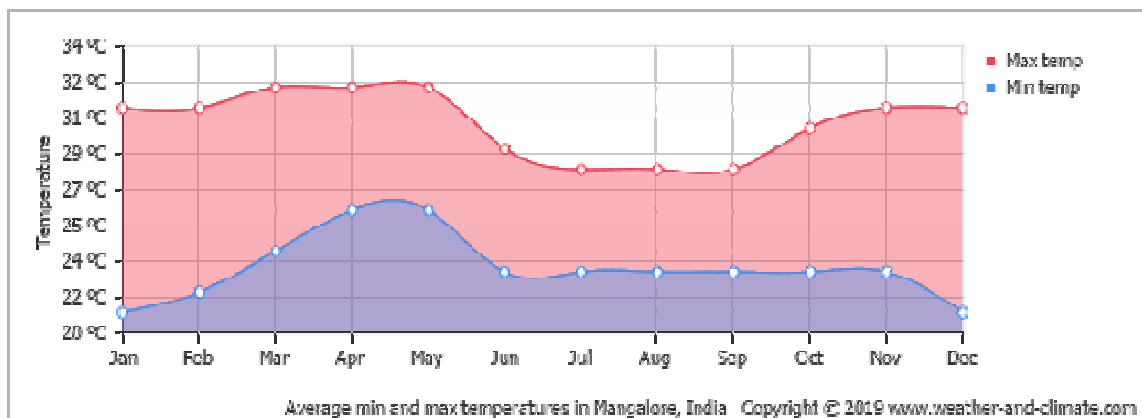
3.2 Climate

Mangaluru belongs to the tropical/ mega thermal zone and is under the direct influence of the Arabian Sea branch of the south- west monsoon.

Temperature

Mangaluru has a tropical climate; summer and winter months experience similar temperature conditions, with average temperature ranging from 27 deg C (81 deg F) to 34 deg C (93 deg F).

Figure 2 - Average temperature



Source - www.weather-and-climate.com

Wind

Moderate to gusty winds occur during the day time and gentle winds at night. Winds are strong and are mainly westerly and south-westerly in the southwest monsoon months. In the rest of the year, winds are mainly from north-east in the fore-noon and westerly and north-westerly in the afternoon.

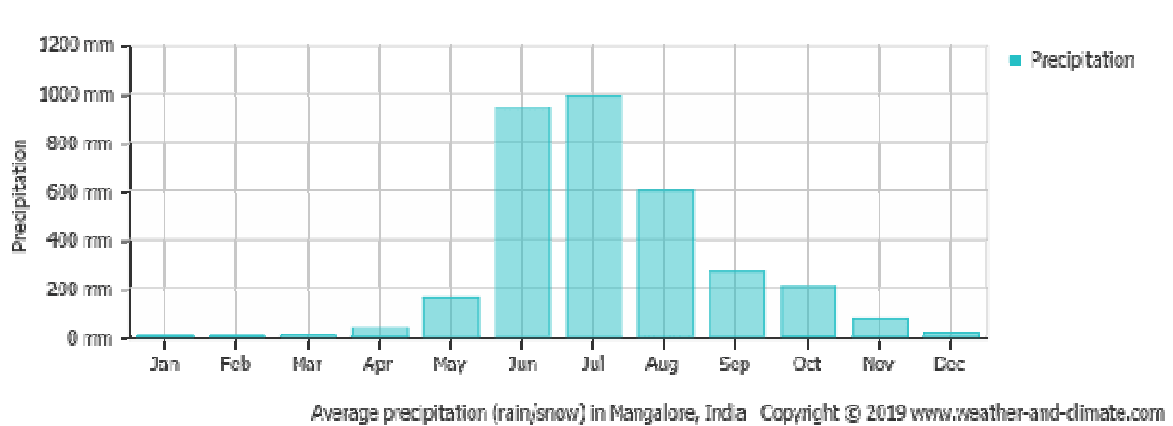
Precipitation

Mangalore receives about 90 per cent of its total annual rainfall within a period of about six months from May to October, while remaining relatively dry from December to March.

The annual precipitation in Mangalore is 4,242.5 millimetres (167 inches). Humidity is approximately 78 per cent on an average, and peaks during May, June and July. The maximum average humidity is 93 per cent in July and average minimum

humidity is 56 per cent in January. The relative humidity is generally very high reaching saturation levels during the summer period.

Figure 3- Average precipitation



Source - www.weather-and-climate.com

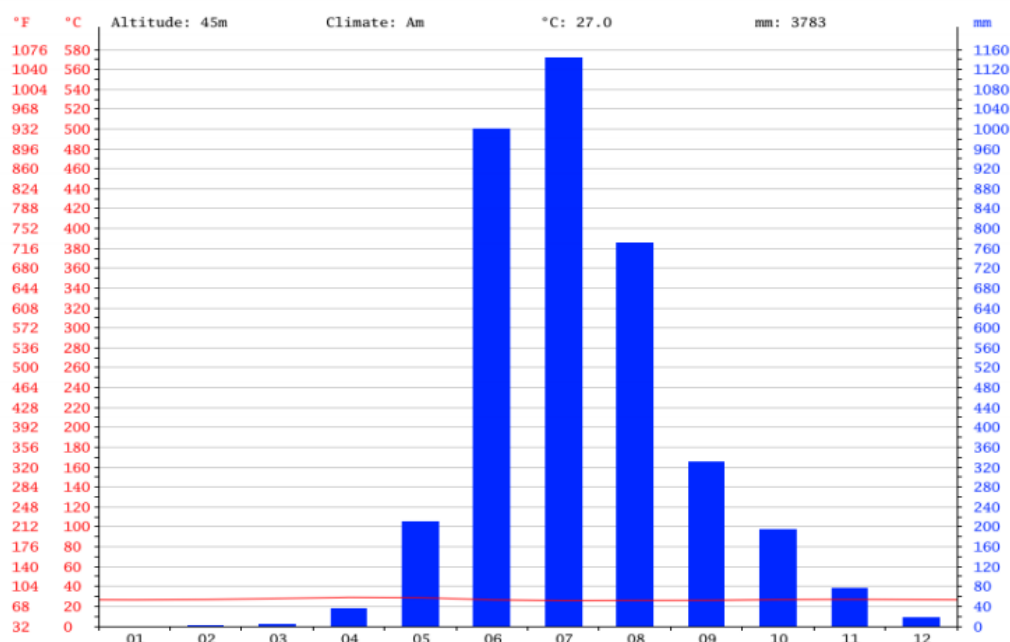
Wind Direction

From the month of January 2019 to December 2019, 38% of winds travels from east to west, whereas, 28% of winds travels from west to east. These have been considered as the prominent wind directions for the site.

Average Temperature of Mangaluru

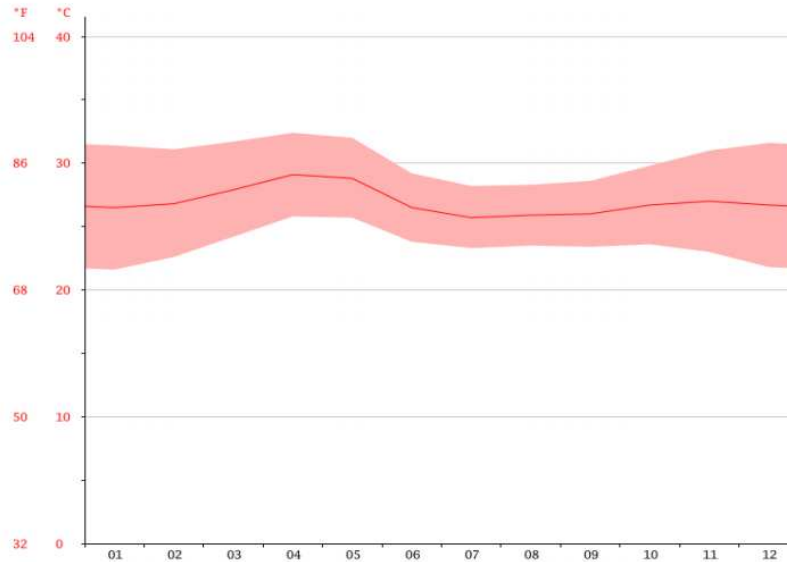
The driest month is January. There is 0 mm of precipitation in January. With an average of 1143 mm, the most precipitation falls in July.

Figure 4 - Average Temperature



With an average of 29.1 °C, April is the warmest month. July has the lowest average temperature of the year. It is 25.7 °C.

Figure 5 - Average Temperature



3.3 Demography and Sex Ratio

Mangalore is the highest populated town in Dakshina Kannada District with 22 per cent of the total district population residing in the town. About two-thirds of the district urban population and about half of the taluks urban population is concentrated in the town, making it the highest populated town in the taluk. The total population of Mangalore recorded as per Census 2001 was 419306, while in 2011 it was recorded as 499487. The population trend of Mangalore records the highest growth rate in the year 2011. The increase in population can be attributed to the increase in population of the outgrowths of Mangalore town.

Table 1 - Census data

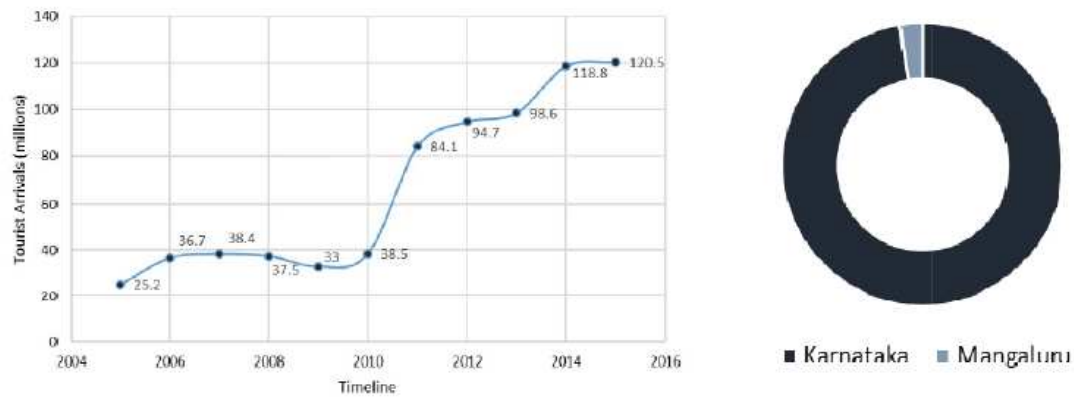
Factor	Total	Male	Female
City + Outgrowths	499487	247903	251584
City Population	488968	242512	246546
Children (0-6)	43340	22323	21017

Source - MSCL / census2011.co.in

3.4 Tourism Demand

Karnataka state attracted a significant number of 119.86 million domestic tourists and 0.64 million international tourists in 2015. There is an increase in the tourist places and facilities provided which attracts the large tourist crowd. In spite of having such rich history and culture, Mangaluru hasn't reached its full potential in terms of Tourism.

Figure 6-Tourists numbers in Karnataka and in comparison to Mangaluru



Source - IBEF Karnataka Report March 2017 and AC Neilson Survey 2005-2006/MSCL

3.5 Festivals of Mangaluru

Mangaluru Dasara is considered as one of the biggest festival in Mangalore and stands second place after Mysore Dasara in state of Karnataka. The Ganesh Chaturthi festival is celebrated every year by erecting statues, worshipping them and immersing them in water bodies. Kodial Teru or Mangaluru Rathotsava (Mangalore Car Festival) is one of the major festivals of the GSB community, which celebrates the car festival of the Sri Venkatramana Temple.

Figure 7-Shri Gokarnatheshwar Temple during Dasara



Source - Wikipedia

Figure 8- Kodial Teru in Carstreet



Source - Google Images/ Mangalore Today

Figure 9 - Monti Fest



Source - Google Images/ Times of India

Monti Fest is one of the major festivals of the Mangalorean Catholic community, celebrating the Nativity feast and the blessing of new crops. The Jain Milan, a committee of the Jain families of Mangalore, organise the Jain Food Festival annually with a view to bring together all the members of the Jain community.

People of all faiths participate in the Mosaru Kudike, which is a part of the celebrations to mark the Krishna Janmashtami festival.

Annual festivals are promoted during summer each year, to promote Karavali Utsav and Kudlostava which encourages the local cultural events.

4 SITE CONTEXT

4.1 Character of the Site

Mangaluru, being one of the prime cities in the state of Karnataka, is strategically located on the coast of the Arabian Sea. Mangaluru has always been a city of temples, with numerous temples located within close proximities. The city has a history of rich tradition and culture, which provided a sense of pride to the residents of Mangaluru.

Rapid urbanisation has lead to need of modernization over the years in this region. This has lead to construction of high-rise commercial and residential complexes which caters to the ever-increasing rise in population due to significant economic, technological and industrial development of the region.

The old core areas of the city, which provided this heritage character, started to be encroached upon. Buildings made from glass and steel replaced those which were constructed using vernacular materials. The character for which the city was known had slowly begun to disappear over the years.

One of these religious and cultural hotspots, the 'Car Street', stands as a prime example, which still holds onto the religious and cultural character for which this city was known. Along this stretch of around a kilometer a great variance in the architectural form can be seen. There are multiple temples and schools, retaining this old character, while lack of area specific development guidelines has resulted in creation of modern structures whose form and character is diametrically opposite to the ones which already existed.

Figure 7 - Flower Market



Figure 8 - Contrasting Architectural style



Source - MSCL

Figure 10 - Sharavu Temple road and Lower Carstreet



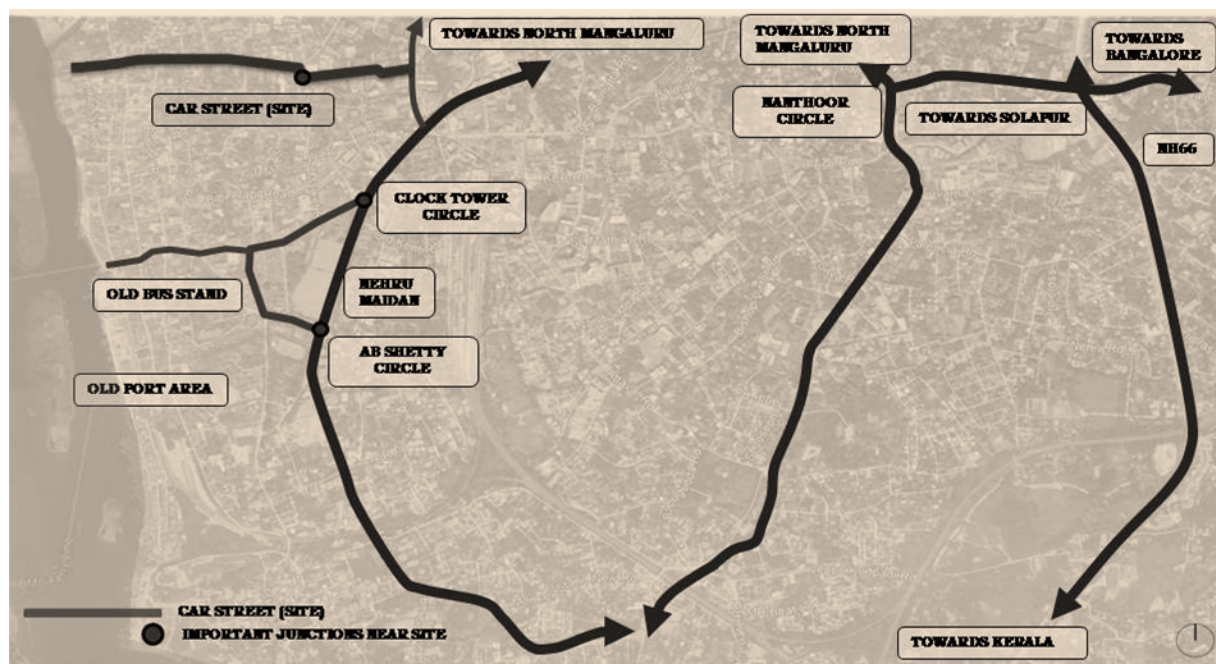
Source - MSCL

4.2 Regional and City Connectivity

The Car Street is located towards the north western part of the city. The lower Car Street terminates almost at the Gurupura riverfront, while the Sharavu Temple road terminates at the KS Rao Road. The Carstreet is a major connector road at city scale perspective. Major junctions and landmarks like PVS Circle, Mannagudda Circle, Hampankatta, Central Market etc., are located with close proximity of Carstreet. This area is always buzzing with commercial and religious activities.

Transport hubs like Mangaluru Central Railway Station, Service Bus-stand are situated very close to the site under consideration for the proposal. Carstreet also is connected by various roads of secondary class of varying widths.

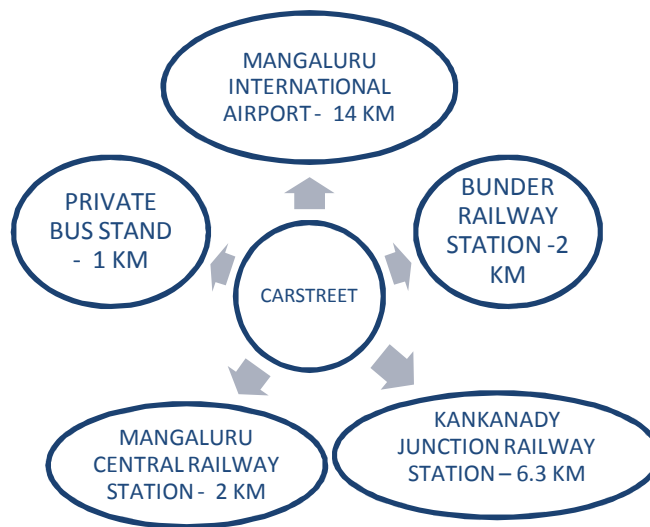
Figure 11- Site Surrounding



Source - Pailands Analysis

4.3 Site Context

Figure 12- Connectivity Chart



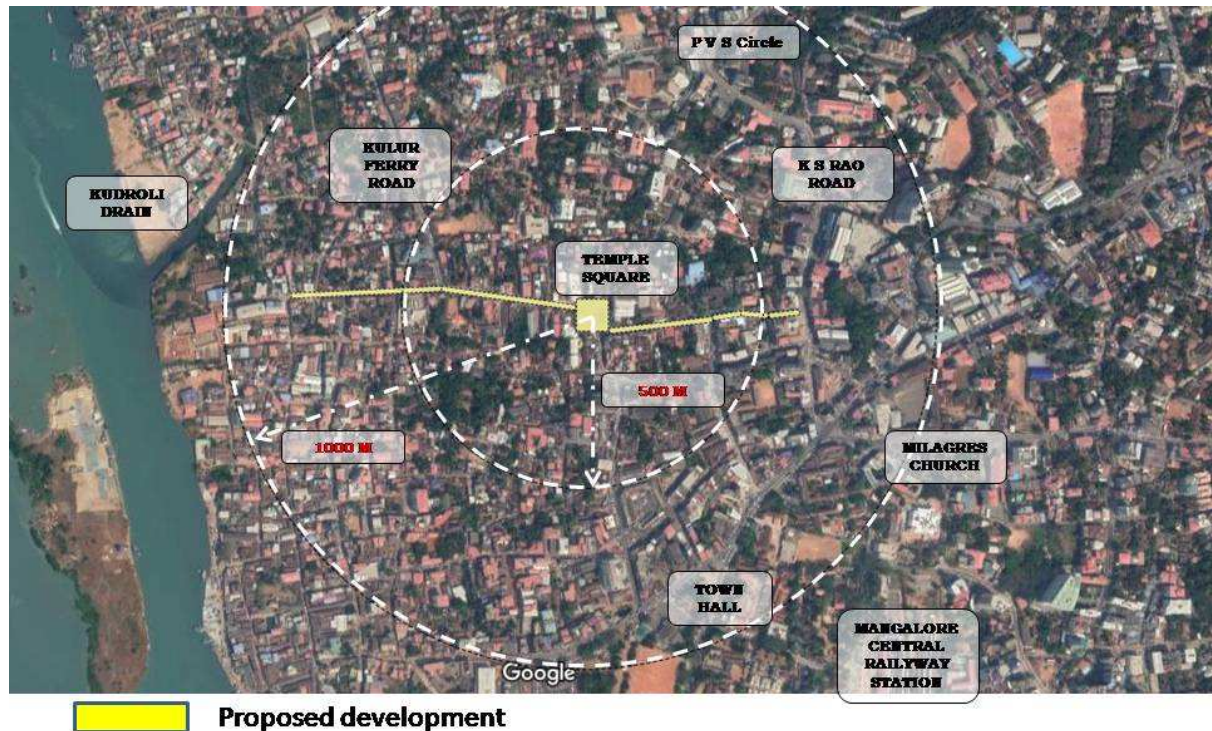
Source - Google Maps/ Pailands Analysis

Carstreet is in close proximity to the Private Bus stand which is like the nerve centre of the local transportation network. Majority of the local residents rely on the bus transport to reach their workplaces and residences. Several buses ply between Mangaluru and nearby satellite cities and urban hubs on daily basis for students and workers benefit.

The tourist and general public rely on the train network connected to Central Railway station and Kankanady Junction railway station to travel near and far for business and tourism. The goods are transported via the Bunder railway station. Major source of tourist crowd from international destination is catered by the Airport and Port.

Many government infrastructure like Town Hall, Wenlock District Hospital, Lady Goshan Hospital etc., are also located in the close proximity. Entertainment and shopping infrastructure like City Centre mall, Excel Mischief Mall, are also with a range of 200 to 500 meters from the site under consideration.

Figure 13- Proximity Analysis



Source - Pailands Analysis

4.4 Landuse Analysis

Figure 14 - Landuse analysis as per Master Plan 2021



Source - MSCL/ MUDA

As per Masterplan 2021, Residential component of Land use is the principal component (36%), followed by Roads (26%) and Commercial (24%).

As per Master Plan 2021, the proposed width of the road is greater, hence the area under roads come to a considerable figure.

The existing and proposed Land uses are quite similar, though building wise usage differs considerably.

5 EXISITING SITY STUDY

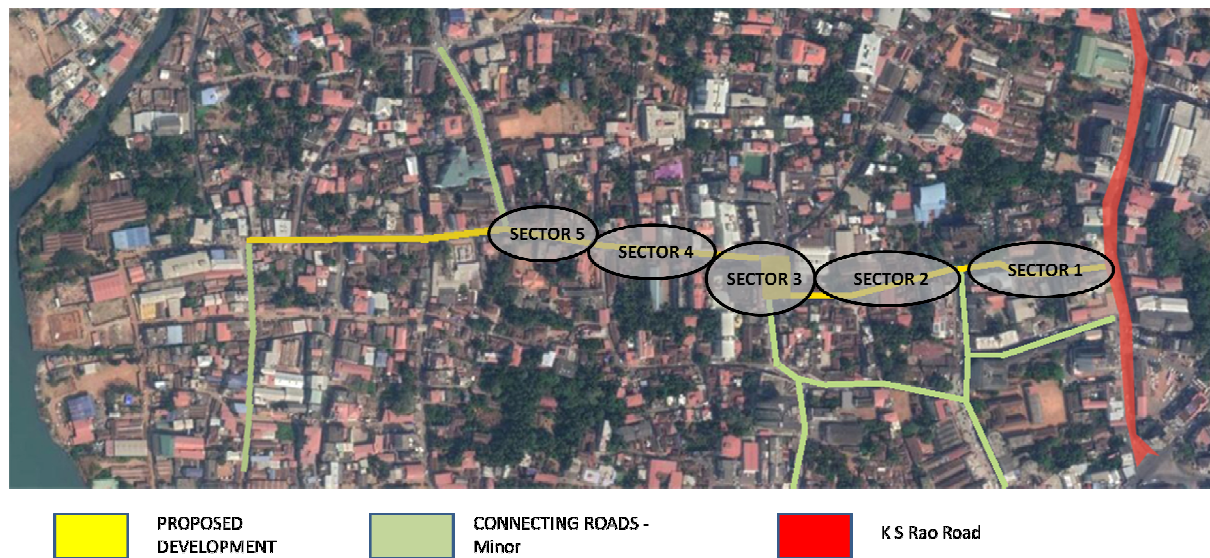
5.1 Site Layout

Car Street is named after the Mangaluru Car Festival, which is popularly called as Kodial Teru in Dakshina Kannada region. It is held during the time of Magha Masa, specifically the Ratha Saptami period. This period is usually the last week of January or the first week of February. The festival has various religious activities spanned across the 6 days. It is a festival that is conducted at Sri Venkataramana Temple situated in the Temple Square. Similar festival is also conducted by Shri Mahamaya Temple within a month's time after the former's car festival celebration.

The proposed street heritage development is for a series of roads with a “town square” in the middle which extends from East to West, starting from K. S. Rao Road in the east through Sharavu Temple Road, Krishna Math Road, Temple Square and ending at Car Street (upper and lower portions) in the west.

The Carstreet is the widest road in the stretch which allows the major traffic movement. The lower Carstreet comes next in the hierarchy that allows major truck movement to and from Bunder area which is known for its wholesale businesses and is one of the major commercial hub on the city.

Figure 15 - Zoning of the Proposal



Source - Pailands Associates

The Sharavu Temple road starts from KS Rao road and terminates at the Temple Square. The Carstreet starts at the Temple Square and terminates at the Kulur Ferry road junction and Lower Carstreet starts at the Kulur Ferry road junction and ends at the waterfront.

The proposal has mention of 5 SECTORS , namely Sector 1 to 5 spanning from KS Rao Road to Carstreet at Kalikamba Temple Junction.

Figure 16 - Comparative parameters for analyzing street sections

Parameters	Lower Car Street (Kulur Ferry Road Junction to Waterfront)	Car Street (Temple Square to Kulur Ferry Road Jn.)	Upper Car Street (KSR Road Jn. to Temple Square)
Total length of road	387.78 m	331.37 m	454 m
Min. Width	6.66 m (Narrow)	15.19 m (Wide)	7.54 m (Narrow)
Max. Width	12.29 m	22.91 m	14.59 m
Proposed ROW (As per MUDA Master plan)	24 m	18 m	18 m
Slope	2%	0.5%	2%
Type of Carriage Way	Bituminous	Bituminous	Bituminous
Existing land use	Commercial, Institutional and Residential (Interior parts), Mixed	Commercial & Institutional. Mixed	Commercial & Institutional, Mixed
Storm Water Drains	Not Continuous (On one side of road)	Continuous (On both sides of the road)	Continuous (On both sides of the road)
Electrical Utilities	Present (Overhead)	Present (Overhead)	Present (Overhead)
Pedestrian Footfall	Moderate	Heavy	Heavy

Source - MSCL

5.2 Observations and Analysis

Observations and Analysis (Sharavu Temple Road)

- Right of Way is extremely narrow.
- The Upper Car Street presently allows One-way traffic.
- The land use observed along this street is commercial and institutional.
- Electrical utilities are present overhead.
- Storm water drains are present on both the sides of the road but is not continuous in places.

Observations and Analysis (Car Street)

- The Right of Way is quite wide & is one of the thoroughfares for bus routes.
- The land use observed is commercial and institutional and mixed.
- Heavy pedestrian footfall is observed as the temple square is starting point for the Rath.
- Temple square is present in front of the temple showcasing the giant Rath.
- Parking is observed in the Temple Square.
- Electrical utilities are present overhead.

□ Storm water drains are present on both the sides of the road, but their existing level is around one foot from the road top level.

Observations and Analysis (Lower Car Street)

- Right of Way varies: In places it is wide while in places it is quite narrow.
- The land use observed is commercial, institutional and mixed. But residences are observed in the interior parts.
- Electrical utilities are overhead & Storm water drain is on one side of road.
- At the end of Lower Car Street, tile factory is present which is defunct.
- Pedestrian footfall is high, but lesser as compared to the middle Car Street but quite more as compared to the upper car street.

Figure 18- Sharavu Temple and Ideal Towers



Source - MSCL

Figure 17- Sharavu Temple road



Figure 19- Carstreet



Source –Pailands analysis



Figure 20- Lower Carstreet



Source - MSCL

Figure 22 - View of Temple Square from Carstreet



Source - MSCL

Figure 21-Temple Square



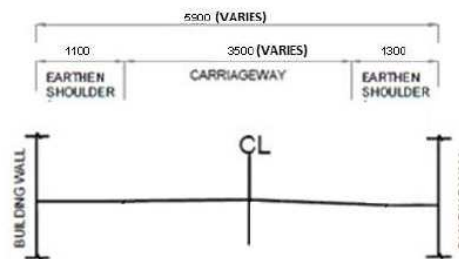
Source - MSCL

5.3 Existing Road Sections

Sharavu Temple Road

The Sharavu Temple road is the narrowest street in the proposal. The bituminous road has earthen shoulders with intermittent paving on sides. Drain is present on one side only. Carriageway is effectively around 3-3.5 m. This is used for one-way traffic only.

Figure 23- Schematic Section of the Sharavu Temple road

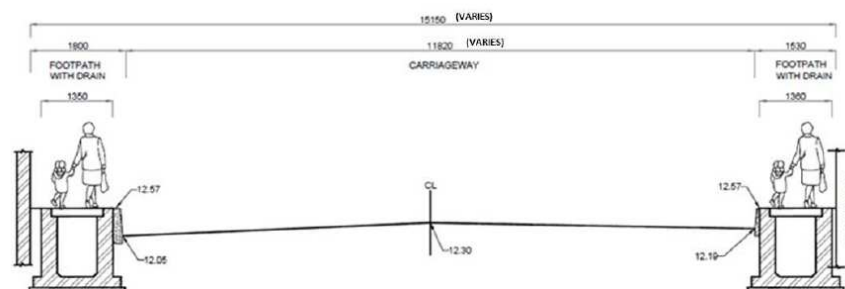


Source - MSCL

Carstreet

The central stretch of the proposal, Carstreet, is wide enough to accommodate up and down traffic. Presently, the road is bituminous in nature, while the footpath is integrated on top of the drain, which is raised by almost half a meter with respect to the top of the road. The road cambers on both sides.

Figure 24- Schematic section of the Carstreet

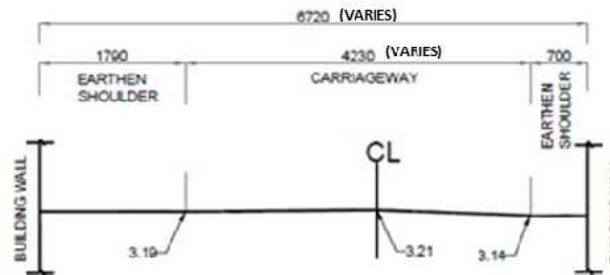


Source - MSCL

Lower Carstreet

This stretch is quite narrow when compared to Carstreet. The bituminous road has earthen shoulders and intermittent paving on sides. Drain is present on one side with effective width for carriageway to be around 4-4.5 m. This road has 2-way traffic. The movement of trucks is relatively a major contributor in traffic density.

Figure 25- Schematic section of Lower Carstreet



Source - MSCL

5.4 Building Mapping Analysis

The analysis is drawn in terms of building heights, building use and building typology.

Building Height Analysis

The Sharavu Temple road has mostly Ground and Ground+ 1 structures. Only few buildings are above the height of Ground +1. The Carstreet has buildings ranging from Ground to Ground +5 structures. Most of them are Ground+1 or Ground+2 high. The Lower Carstreet has buildings of Ground and Ground+1 height.

Figure 26- Building Height Analysis

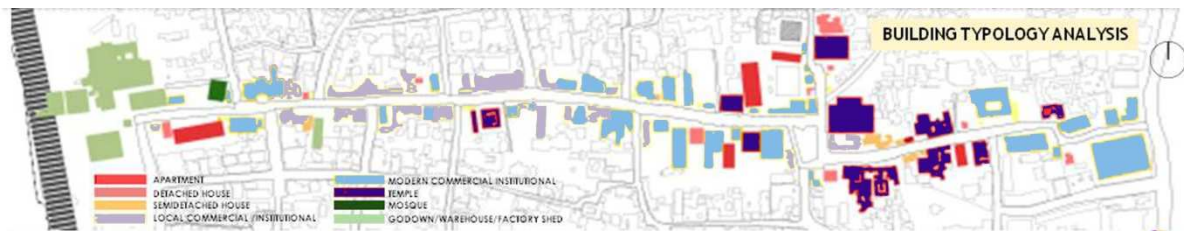


Source - MSCL

Building Typology Analysis

It is found that buildings adjoining Carstreet has the following typologies : Apartments, detached and semi-detached houses, local/modern commercial/institutional, temple, mosques and godowns. Out of these, local commercial/institutional forms the majority of building typology followed by modern commercial/institutional. The Lower Carstreet mainly has local commercial/institutional typology while central and upper parts have modern commercial/institutional and temples as the major buildings typologies respectively.

Figure 27- Building Typology Analysis

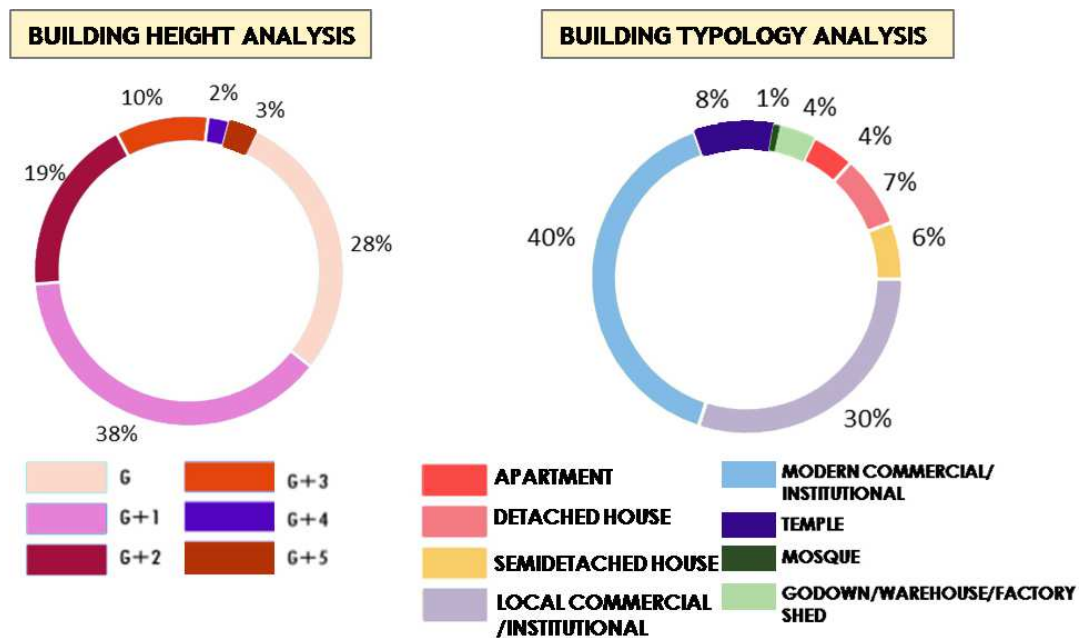


Source - MSCL

Comparison in the Building Analysis

The graphical analysis of the buildings are done below -

Figure 28 - Graphical Analysis of the Buildings



Source -MSCL

Table 2 - Section wise Analysis of the Proposal

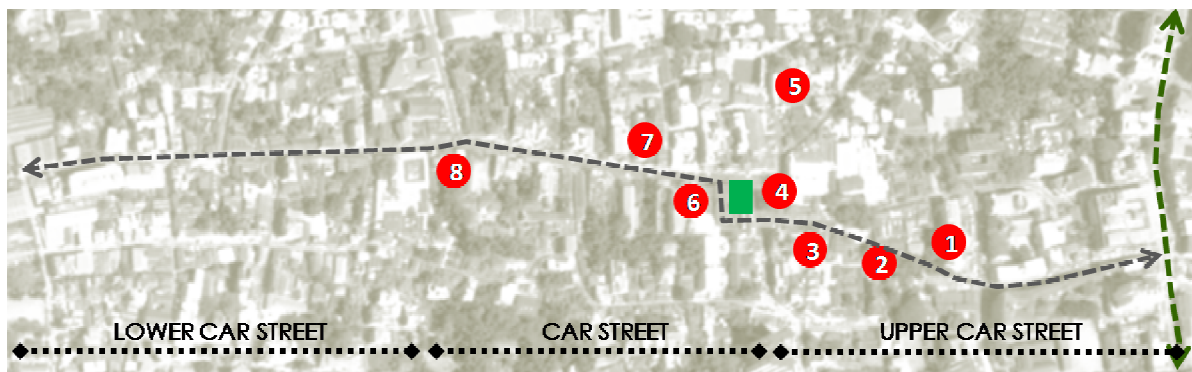
Parameters	Lower Car Street	Car Street	Sharavu Temple Road	Overall
Major Building Use	Mixed	Institutional	Commercial	Mixed Use
Major Building Height	Ground + 1	Ground + 1 & Ground + 2	Ground, Ground + 1	Ground + 1
Major Building Typology	Local Commercial / Institutional	Modern Commercial / Institutional	Temples	Modern commercial / institutional

Source - MSCL

5.5 Existing Temple Analysis

The Car Street is known for its temples, which adds onto the cultural heritage of the street. There are multiple major and minor temples. There are around nine major temples observed along the Car Street stretch. The Venkatramana Temple located on the Temple Square is the most popular temple in the area with maximum footfall. As a part of the festival celebrations, rathas are pulled up and down the central Car Street. The location and list of temples are highlighted below:

Figure 29- Location of Temples



Source - MSCL

Figure 30- List of Temples



Source - MSCL

Each of these temples has unique architectural characteristics & is dedicated to various Hindu Gods. These are characterized through per day and annual footfall of devotees. This is highlighted in the table below:

Table 3- Details of Temples

Name	Community Associated with Deity	Average Daily Footfall	Festival time average daily footfall	Availability of Parking Space
Shree Sharavu Mahaganapathi Temple	Brahmin	500	50,000	Yes
Shree Kathyayani Temple	Temple House			
Umamaheshwara Temple	Saraswath Brahmin	75	>2,000	No
Shri Venkataramana Temple	Gowda Saraswath Brahmin	500-1000	>50,000	No
Kudtheri Shree Mahamaya Temple	Gowda Saraswath Brahmin	300	2,000	No
Shree Saunsthan Gokarna Parthagali Jivothana Math	Gowda Saraswath Brahmin	200	700	Yes
Shree Kaliya Mardana Krishna Mahalasa Narayani Temple	Temple House			
Shree Kalikamba Vinayaka Temple	Vishwa Brahmin	50-100	2,000	Yes

Source - MSCL

Figure 31 - Car Festival of Sri Venkataramana Temple

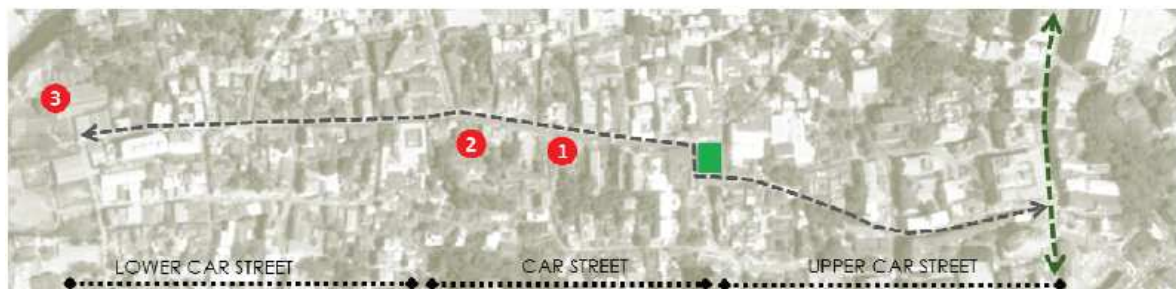


Source - Google Images

5.6 Existing Heritage Building Analysis

The Car Street houses several old buildings which hold a considerable heritage value. Most of these buildings are in a dilapidated state. While some of these have been categorized and listed as a heritage structure there are some which does not have the heritage status. Despite the categorization, these buildings hold a significant cultural value and provide the identity to the street.

Figure 32 - Existing Heritage Buildings on the street



Source - MSCL

Figure 33- Photographs of existing heritage buildings



Source - MSCL

Figure 34 - Existing non-heritage buildings

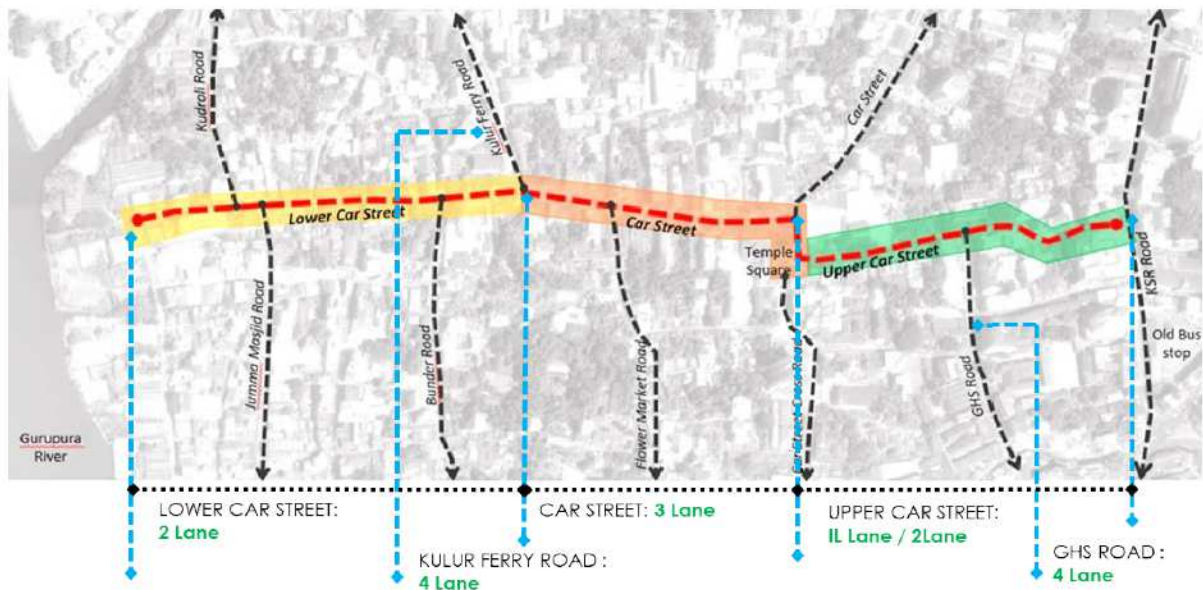


Source - MSCL

5.7 Existing Road Lane Analysis

The variation in the number of lanes along the entire stretch of Car Street is huge. The major part of the upper Car Street is extremely narrow. The number of lanes for most part is one, while towards the end two lanes can be accommodated. The central section of the Car Street is wide enough to accommodate the existing three lanes, though the lane widths are presently not defined.

Figure 35 - Road lane analysis



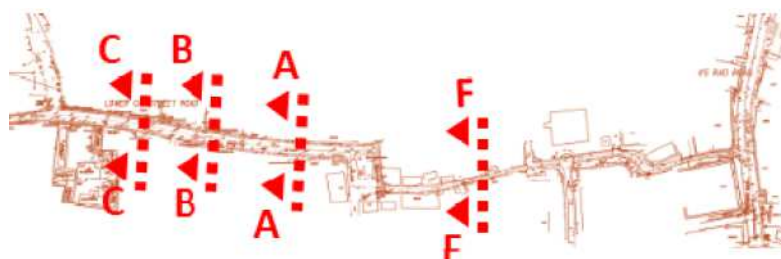
Source - MSCL

The lower Car Street is narrow, but not as narrow as the upper Car Street. For most of the section space for one and half lane is existent, which widens to two lanes and even narrows down to one lane in places. The existing lane mapping is shown in the following figure.

5.8 Analysis of Existing Road Sections

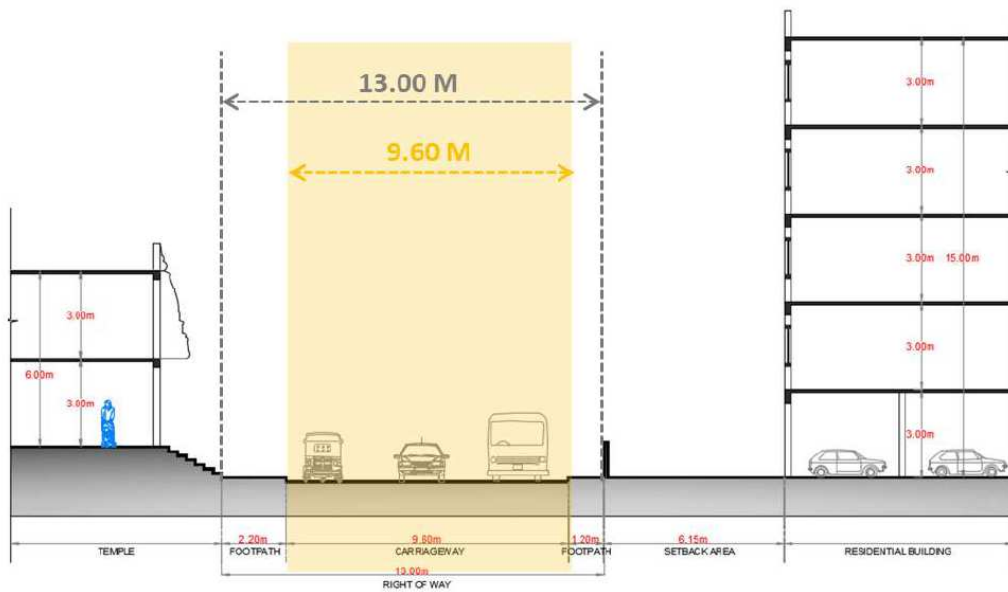
The following sections have been cut at different locations across various sections of Car Street. The sections highlight the variation in Right of Way and carriage widths and reflect the existing form along the stretch.

Figure 36 - Plan showing Section lines



Source - MSCL

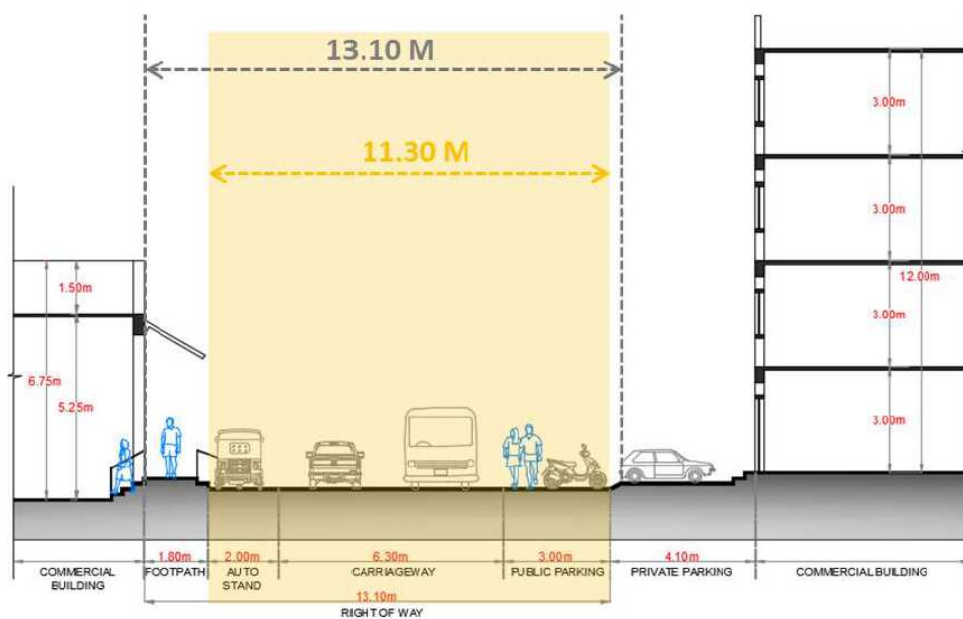
Figure 37- Section AA



Source - MSCL

The above section shows the existing right of way to be around 13 meters, while the effective carriageway to be 9.6 meters. This section has been drawn through the new developments having residential land use. It is also seen that the carriageway is wide enough to accommodate three lanes for up and down traffic. Also, the buildings along the road edge have a raised plinth and are accessed through a series of steps.

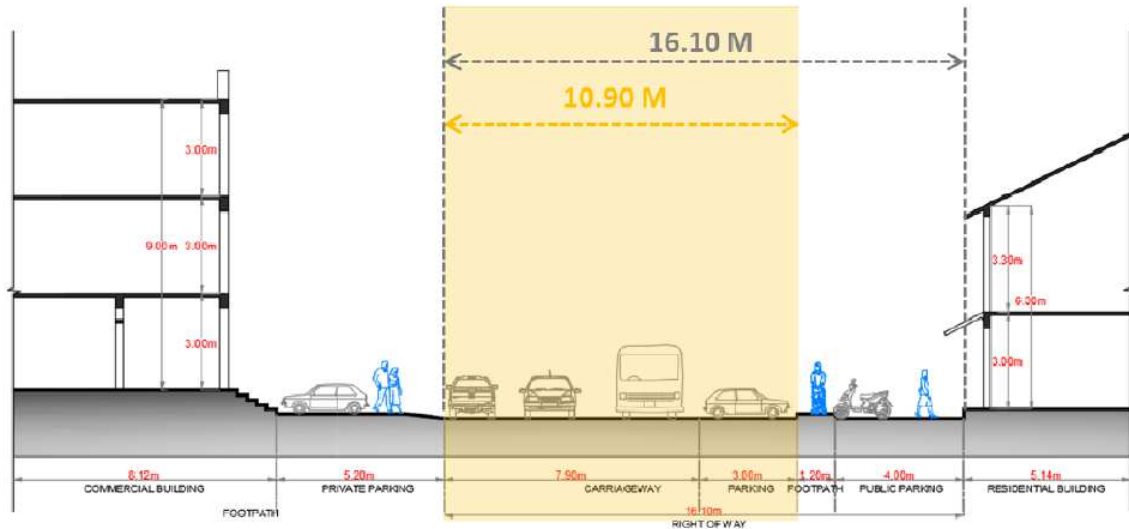
Figure 38 - Section BB



Source - MSCL

The right of way in this section of the street is similar to the above section as this is a part of the similar stretch. The carriageway however varies and is round 11.3 meters. Along this particular section, some vehicles are usually parked. The access to the flower market is through an elevated footpath adjoining the auto stand. The footfall is usually high due to the presence of the flower market.

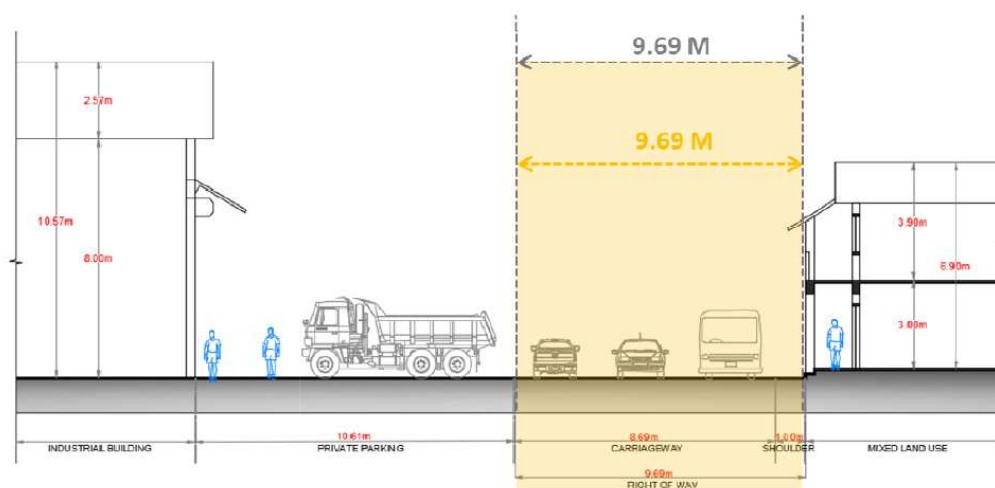
Figure 39 - Section CC



Source - MSCL

The above section shows the right of way to be the widest at 16.10 meter, which takes the carriageway, footpath, parking and public parking into consideration. Out of this total width, the effective carriageway and a layer of parking come to around 11 meters. The carriageway presently accommodates 3-way traffic.

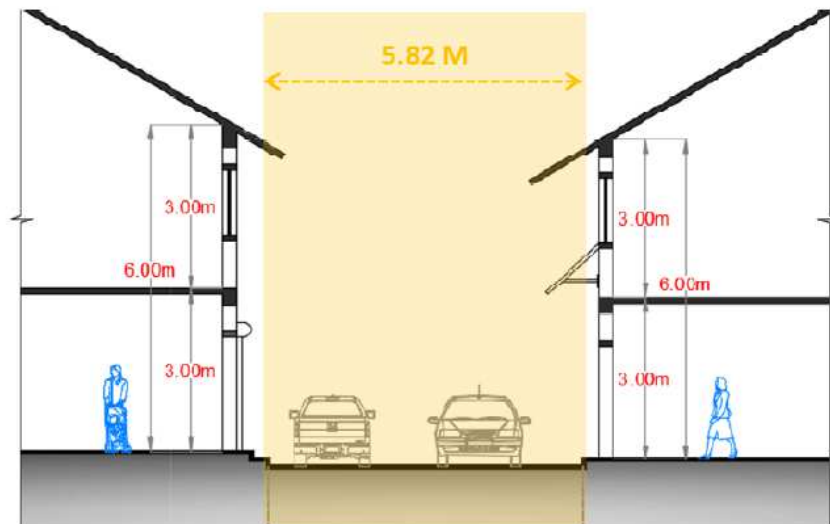
Figure 40 - Section DD



Source - MSCL

This section is through the lower Car Street, where the width of the street drastically reduces as compared to the central Car Street. The buildings start almost on the road edges which make the right of way equal to the extended carriageway, which includes the shoulder. It is to be noted that the building line is not straight, which results in non - uniform carriageway.

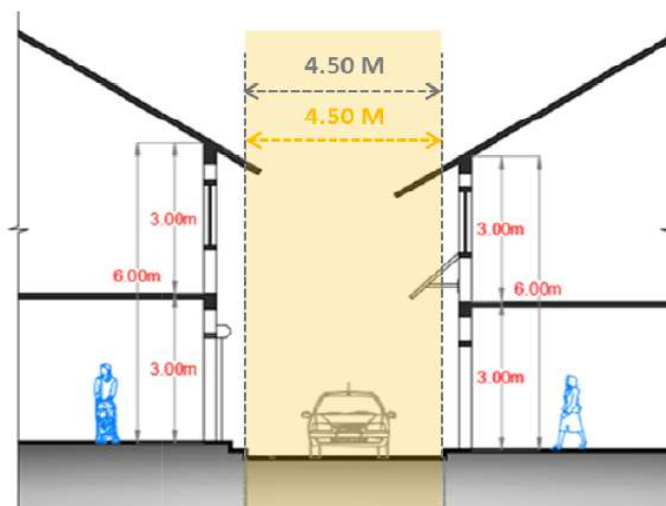
Figure 41 - Section EE



Source - MSCL

This section is drawn through the extreme end of the lower Car Street, where the street gets very narrow. The width of the carriageway and right of way gets below 6 meters and it gets difficult for the up and down traffic to pass together. The projections from the top of buildings project onto the streets.

Figure 42 - Section FF



Source - MSCL

The section across the Sharavu Temple road shows the extremely narrow cross section, which provides access to large buildings. The main carriageway is less than

three meters in width in places, while there are narrow shoulders on both sides. Due to this, the road supports only one-way traffic, which flows from the direction of Temple Square to KS Rao road.

5.9 Temple Square - Analysis

The Temple Square is the major junction which connects the central and upper Car Streets. Other smaller streets also terminate on this square. Adjoining to the Temple Square is the Venkatramana Temple, which acts as a major religious hub for the people in the city. During the festive season, this square is used for parking the rathas and act as a place for congregation. The traditional value attached to this junction is immense.

As the area surrounding the Temple Square is primarily commercial, with small shops and business establishments and predominantly due to the unavailability of parking spaces, this area is used for parking of vehicles all-round the year. There is an existing auto stand on one side of this square. Two large trees are present in the square, which holds a significant cultural value to the people.

Presently, the Temple Square does not serve the purpose for which it was built, except during the festival season. It was built with notion of creating a large public space, right in the centre of the city, which can be used by the people for social and cultural interaction. With the modern-day developments in the area, this whole purpose has been defeated.

Figure 43 - Temple Square - Existing conditions



Source - MSCL

Figure 44- Views from adjacent streets



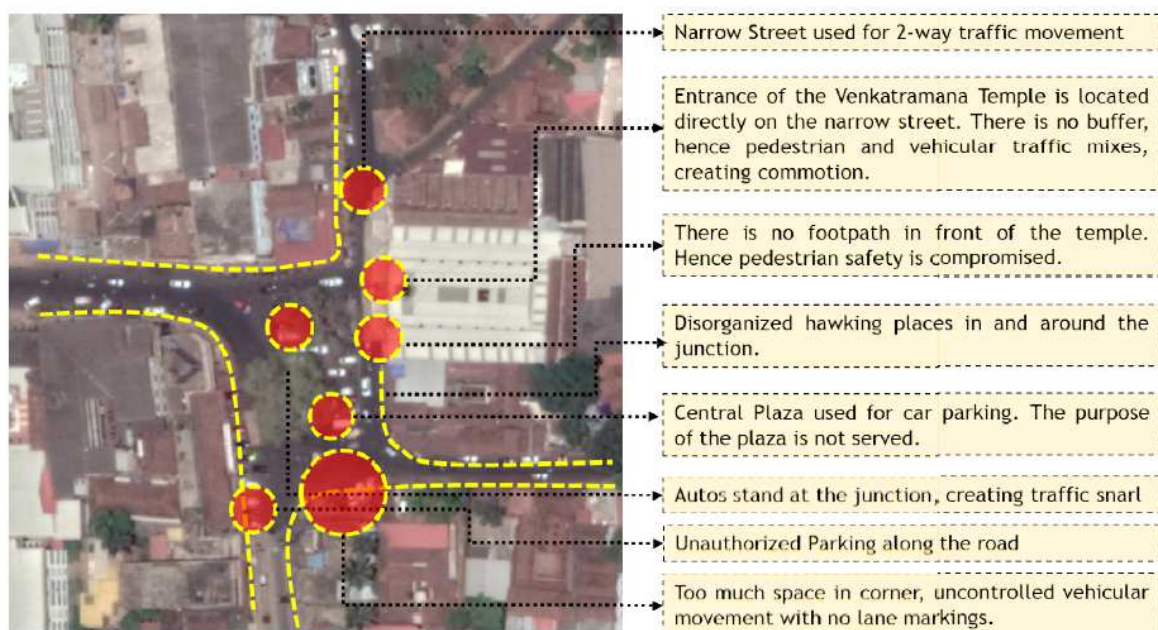
Source - MSCL

After analyzing the present situation of the Temple Square, several problems were identified and are stated below:

1. The main entrance of the Venkatramana Temple is located directly on the street in front of the temple. There is no buffer or lobby that leads to the temple, thereby creating conflict points between the incoming traffic and pedestrian movement. There is an increase in commotion around that point.
2. Pedestrians and devotees have to walk on the street to approach the main entrance of the temple as there is no footpath. Hence, the pedestrian safety is compromised.
3. There are a few narrow streets with 2-way traffic movement that leads onto this square. The carriageway width is not enough for both the vehicles to pass side by side causing a traffic chaos.
4. As already stated, the central plaza is used for parking for most of the time during the year. The plaza was built for cultural interaction between the people and parking in this area defeats this whole purpose.

5. There is an auto stand towards the northwest side of the plaza. This further reduces the width of the carriageway, leading to an unsafe vehicular movement and creates occasional traffic snarls.
6. The sides of the road are used for unauthorized parking. People visiting and working in the local commercial establishments tend to park their cars and 2 wheelers along the sides of the road. The overall carriageway increases considerably due to this.
7. There are quite a few hawkers around this square. There are no defined hawking zones and the hawking scenario is disorganized. The footfall in these shops is quite high and since most of these are located on the sides of streets, people tend to walk on the streets & their safety is compromised.
8. The road and footpath edges are not defined, with too much area under shoulders. Also, lane markings are absent. This creates non uniform carriageways, leading to uncontrolled vehicular movements, especially around the corners of the junctions.
9. There is a considerable level difference between the existing drain on the side of the road and the top level of the existing road. This is visible throughout the length of the central Car Street. This difference is slightly less than two feet, which is very high & compromises on pedestrian safety.

Figure 45 - Design Problems in Temple Square



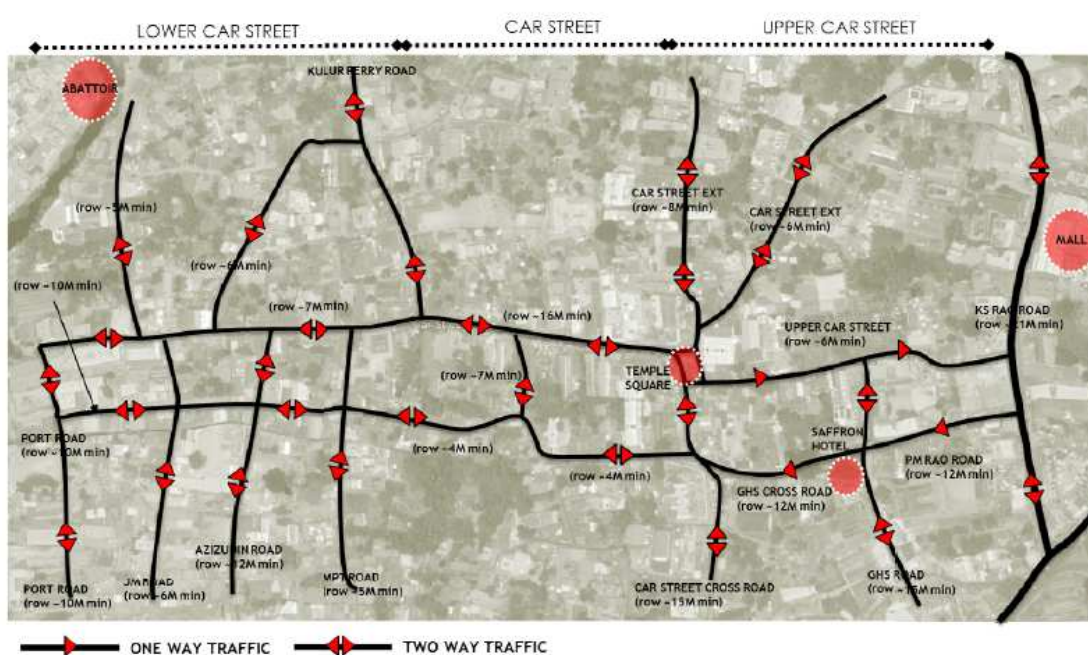
Source - MSCL

6 TRAFFIC ANALYSIS

6.1 Existing Mobility Plan

Presently, the central section of the Car Street allows 2-way traffic. The traffic mainly flows from the southern extension of the Car street and moves onto the Kulur Ferry Road. Though the Lower Car Street is narrow, it supports 2-way traffic movement. All roads which lead to and from the lower and central sections of the Car Street support 2-way traffic flow. The upper Car Street, on the other hand supports one-way traffic. This is due to the fact that this section is too narrow to accommodate traffic from both directions. The temple Square is the central plaza where the Central and Upper Car Street meets along with a few 2-way narrow roads. To supplement the one-way traffic flow along the upper Car Street, traffic flows in the opposite direction along the PM Rao Road and GHS Cross Road, by the side of the Verda Saffron, creating traffic loop.

Figure 46- Existing Mobility Plan



Source - MSCL

6.2 Existing Transport Infrastructure and Bus Routes

The Car Street caters to the movement of a considerable volume of traffic, which includes buses, 4-wheelers, auto rickshaws and 2 wheelers. A number of buses take the route along the car street for daily commute. Buses travelling on 8 routes take this street for up and down movement. The bus numbers commuting daily are: 1, 1B, 7, 13, 13A, 16, 16A & 31B. All these buses originate at the State bank bus stop (Old Bus Stand) and a single bus stand is located towards the western end of the central

Car Street and goes by the name of 'Car Street Stop'. Auto rickshaw stands are present in two locations.

Figure 47 - Location of Bus Stops

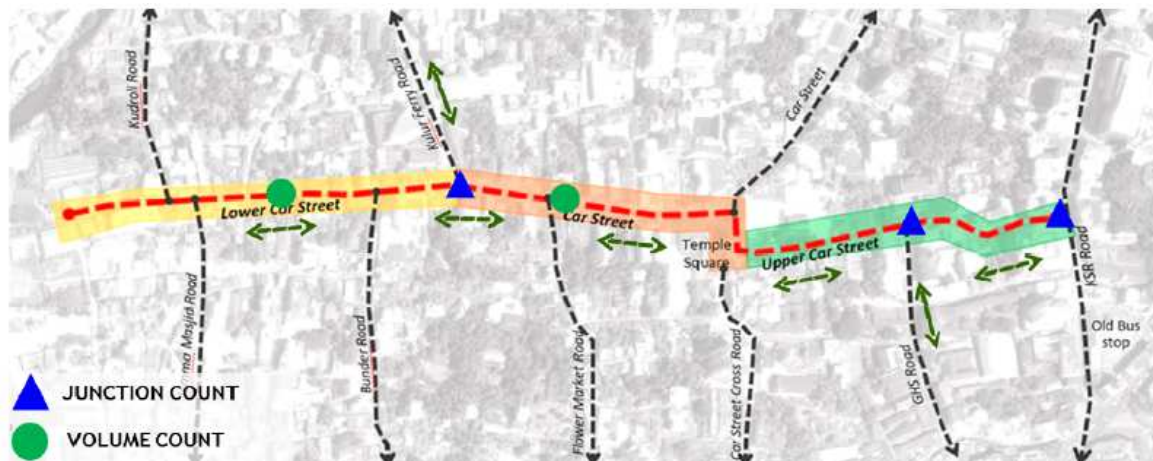


Source - MSCL

6.3 Modal Split

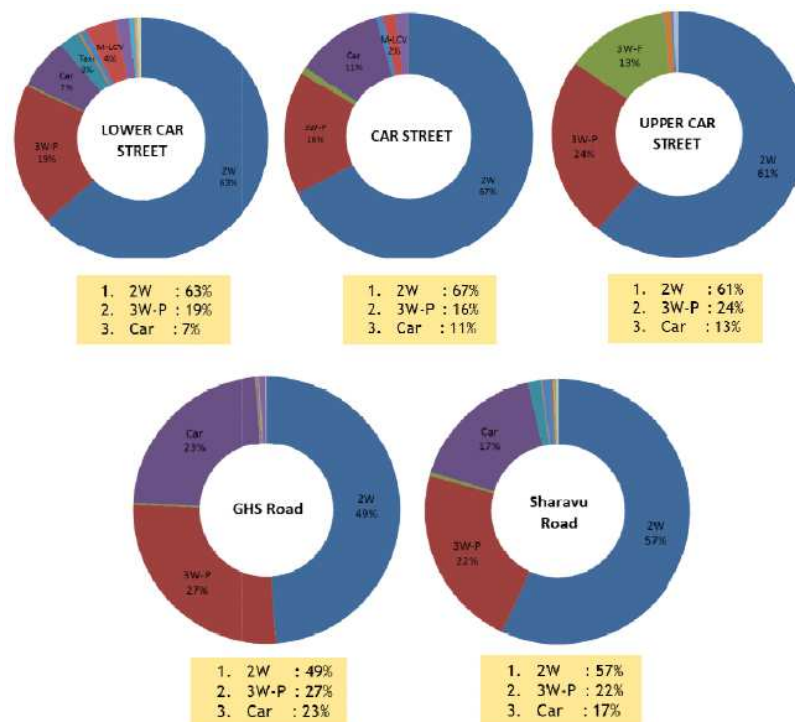
A modal split (also called mode-share) is the percentage of travellers using a particular type of transportation or number of trips using said type. In other words, modal split involves separating the trips from each origin to destination zone into distinct travel modes (e.g., walking, bicycle, driving, train, bus). The number of people using two wheelers as their preferred mode of transportation is much higher as compared to any other modes combined. This may be primarily due to the flexibility and untimely arrival of buses at a particular location.

Figure 48 - Locations for traffic count to determine modal split



Source - MSCL

Figure 49 - Modal Splits along Carstreet



Source - MSCL

7 STAKEHOLDER ANALYSIS

As with any other urban level projects, Car Street also has several stakeholders. These stakeholders may be categorized as owners and users, based on either property held or the type of property usage. List of stakeholder types are given in the following table:

Table 4 -Stakeholders- Owners

SL.No	Stakeholders - OWNERS
1	Shop Owners
2	Jewellers Associations
3	Auto Rickshaw Driver's associations
4	School owners - Government Girls College
5	College owners - Government First Grade College Mangalore Car Street
6	College owners
7	Temple trustees – All temples along Car Street
8	Tile factory owner – Sujirkar's Tile Factory

Source - MSCL

Table 5 - Stakeholders - Users

SL.No	Stakeholders - USERS
1	Students
2	Working class: shop owners, workers in the shops, teachers / professors and factory workers
3	Residents
4	Hawkers
5	Visitors / Tourists

Source -MSCL

8 DESIGN PROPOSAL

8.1 Design Vision

The vision of development is to revitalize and redevelop the Car Street into a street with heritage value, which will be cherished by the community. The objective is to redevelop the proposed stretch of road with infrastructure development for vehicular and pedestrian movement, underground utility services and add aesthetic elements to enrich the heritage value.

8.2 Design Strategies

For the redevelopment of Car Street, the following strategies can be adopted:

- **Creating a Destination:** Car street has high levels of commercial activity is observed along the Street. The main strategy in designing this street is creating it a destination worth visiting and not just a through-way.
- **Universal Accessibility:** This Street experiences high levels of pedestrian and vehicular footfall and needs to be designed for all modes of transport equally. Pedestrian safety and accessibility to all becomes one of the key elements of design.
- **Introducing Historic Streetscape Character:** Improvements to include elements such as special paving, street furniture and design guidelines for the heritage buildings. Public safety to be well designed and sign boards to be placed such that it adds a sense of purpose and activity while reducing the visual clutter.
- **Integration of Pedestrian and Vehicular Movement:** Pedestrian and vehicular movement to be integrated as a part of the design proposal.

There is a need of formation of a Heritage Management Committee within the MCC to scrutinize all the development happening around the heritage precinct.

8.3 Design Proposal - Concept

It is proposed to ADD a minor heritage characteristics to the street scape of Temple Square, Car Street and certain approach roads through the use of traditional styled street lighting, furniture and select design interventions.

This will be done above the road, pavement and infrastructure developed by MSCL as a separate project.

The proposed street heritage development is for a series of roads with a “town square” in the middle which extends from East to West, starting from K. S. Rao Road

in the east through Sharavu Temple Road, Krishna Math Road, Temple Square and ending at Car Street (upper and lower portions) in the west.

Each of these streets has different physical and traditional characteristics. They are also of different available spaces, road widths, neighborhood buildings, land uses and urban facility needs. For example, the Temple Square section has the main Venkataramana Temple and is a “town square” with adjoining streets. All others are streets having varying widths and characteristics. Due to this, the design requirements of different areas of the development vary from one another.

Considering this as an urban design parameter, it is proposed to divide the length of the road for development into six sections. **Each section will be designed separately, but using a common set of design elements and templates.** This will enable us to treat each section differently while using the same general heritage character and design language.

It is proposed to provide traditional /vernacular styled street lighting, street furniture, paving, handrails and walls in these sections thereby affecting a traditional character to the public components of the street, while not affecting the privately held buildings and spaces.

The sections (marked as Sector 1-5 in the drawings) are as below:

- 1. Sharavu Temple Road:** Extending from K. S. Rao Road upto junction of Hotel Vimallesh
- 2. Krishna Math Road:** From Vimallesh Hotel junction to Temple Square
- 3. Temple Square:** With Krishna Math road on the South East corner and the Car Street (upper) on the North West corner.
- 4. Upper Car Street 1:** From Gokarna Math to Flower Market point.
- 5. Upper car Street 2:** From Flower market point to Kuloor Ferry Road Junction

The basis of design based on the location along the stretch of Car Street. Urban design features suitable for the stretch forms the part of the design.

Sector 1 - Sharavu Temple Road

SECTOR - 1

K S RAO ROAD TO HOTEL VIMALESH

P-4 BL-J ARCODE

SP-1 DATA WINDOW OFFICE

CANARA APARTMENT COMMERCIAL COMPLEX

P-6

P-4 KRISHNA PRASAD

1

1

MISCHIEF MALL

HOUSE VENU KRIPA

HOUSE HARI KRIPA

SP-1

SWAMY KRIPA

POPULAR Building

Commercial Building

0m 20m

SECTOR - 1
K S RAO ROAD TO HOTEL VIMALESH

Hotel Vimalesh International

Ganesh Store

KATTE

SP-1

DRAIN

SRI MAHA LAXMI GANAPATHI MANDIRA

HOUSE SP-2

IDEAL TOWERS

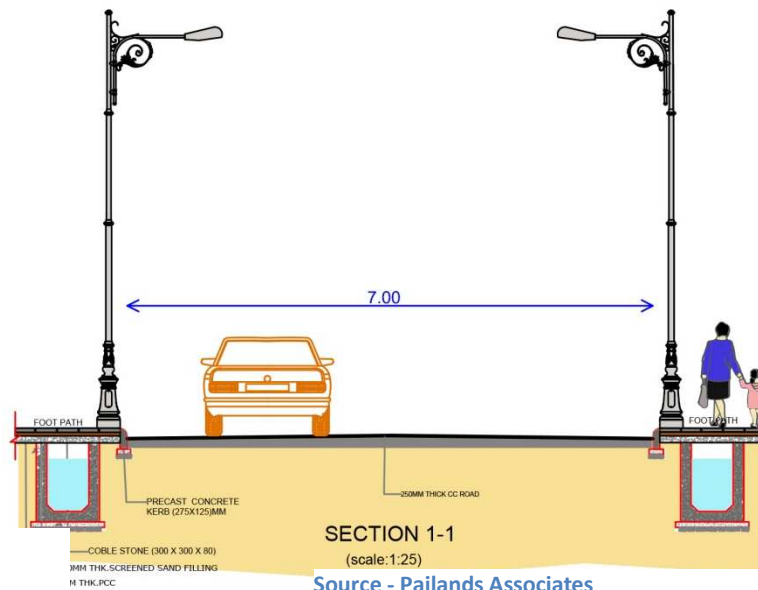
P-4

Foot Path

SP-1

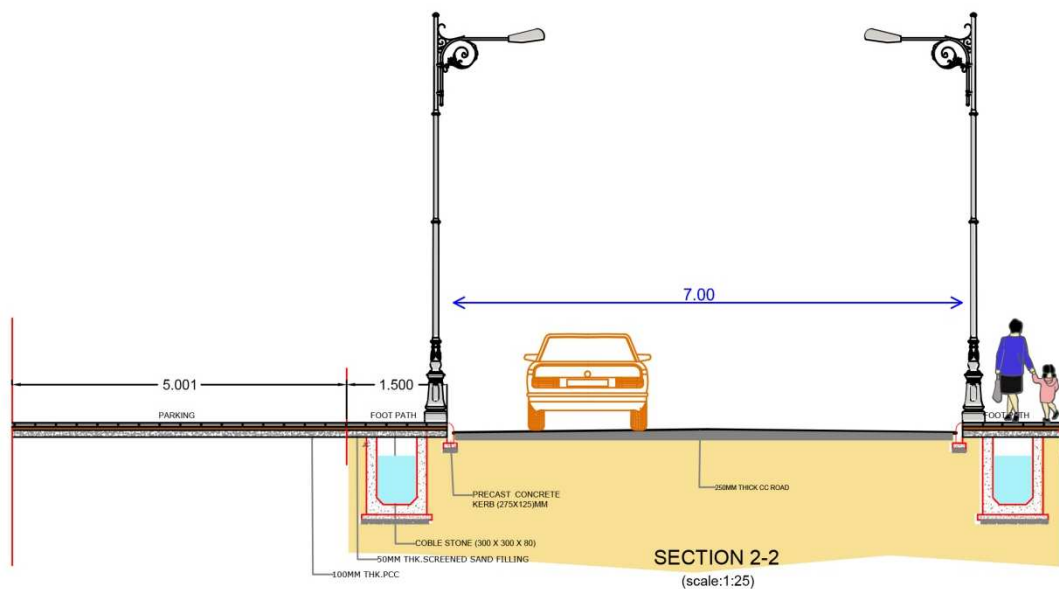
Page 36

Figure 52 - Section 1-1



Source - Pailands Associates

Figure 53 - Section 2-2



Source -Pailands Associates

Design Components of Layout Plan

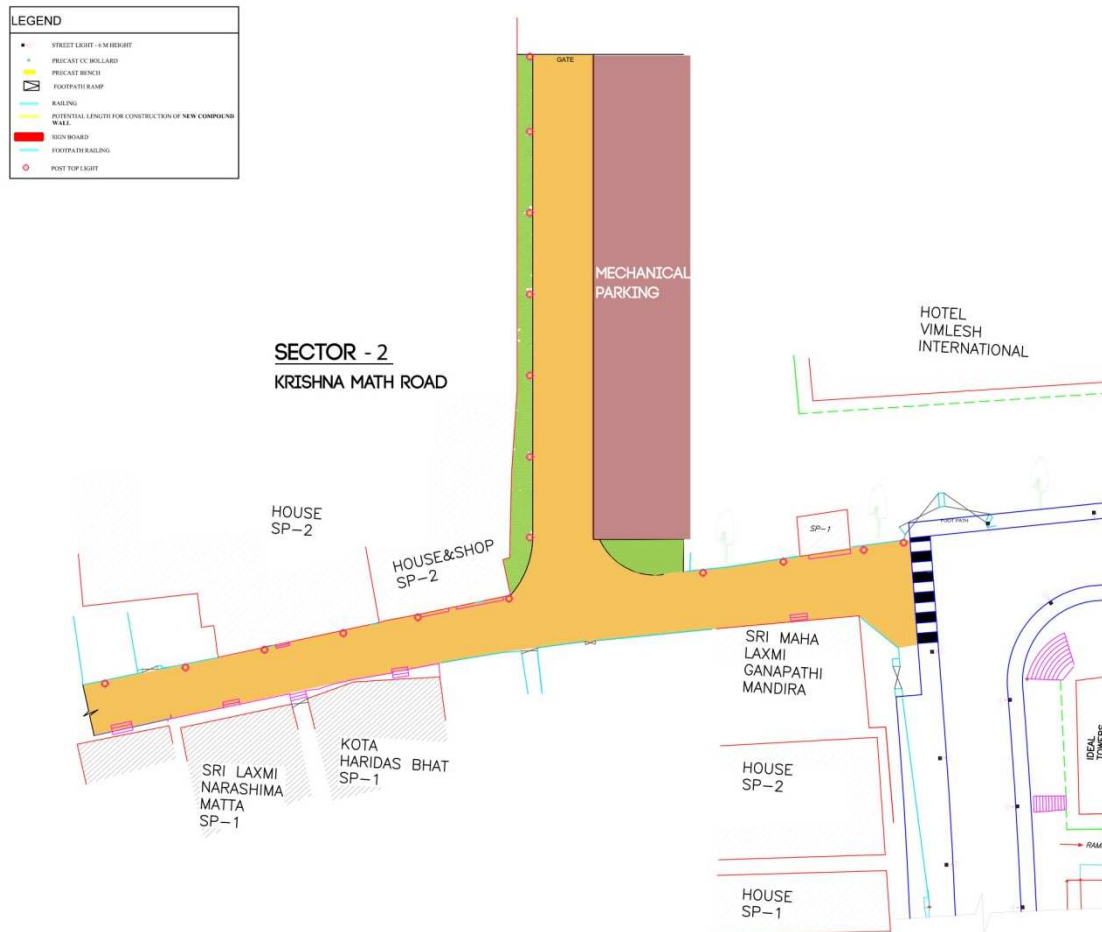
- 1 Streetlight
- 2 Benches
- 3 Railing/ Bollard
- 4 Street signboards

This road, due to its narrow width, presently supports a one-way traffic flow. A similar traffic flow is maintained in the proposed design. The carriageway width has been maintained at 6.25- 6.5 meters with pedestrian walkways of 1.95 meters

approximately designed on both sides of the carriageway. The road will be a cement concrete one and interlock footpath with provision for streetlights and street furniture will be given at a height of 20 cm from Road finish level.

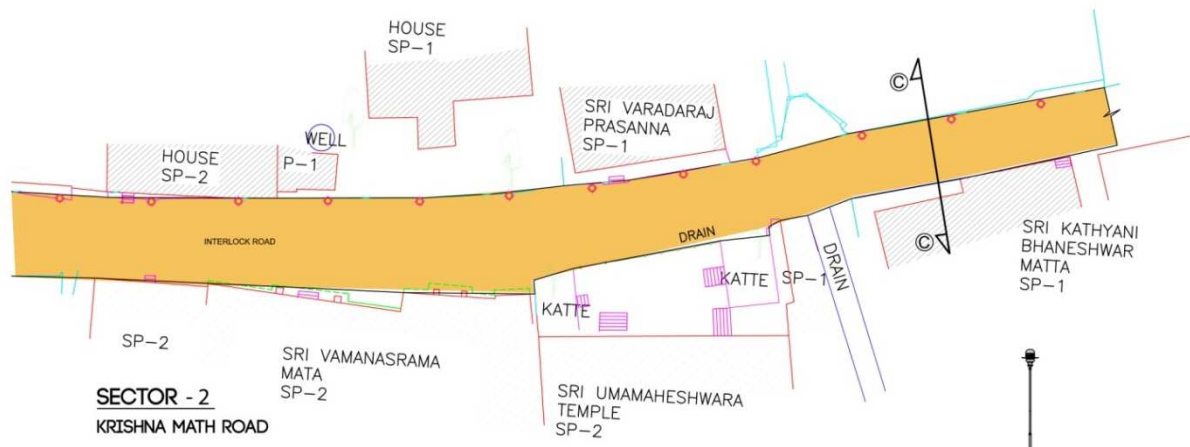
Sector 2 - Krishna Math Road

Figure 54- Plan - Sector 2 -A



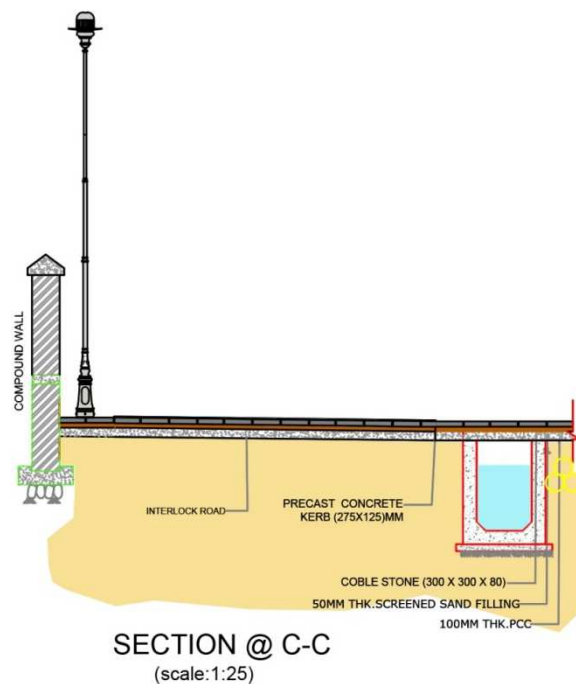
Source - Pailands Associates

Figure 55 - Plan - Sector 2-B



Source - Pailands Associates

Figure 56 - Section C C



Source - Pailands Associates

Design Components of Layout Plan

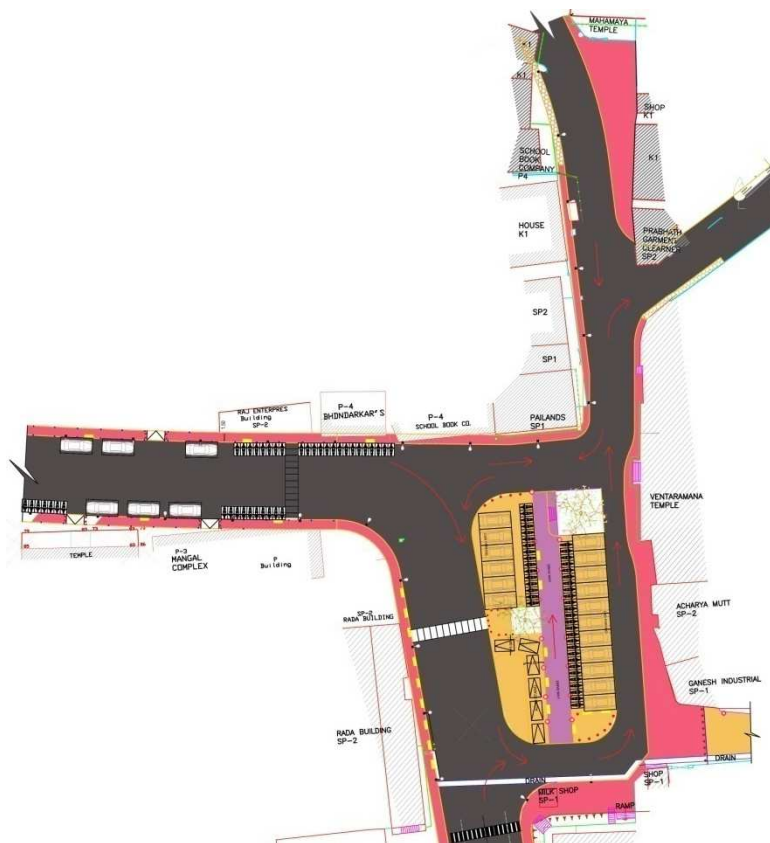
- 1 Interlock Road
- 2 Streetlight
- 3 Compound wall works
- 4 Street signboards

This road, due to its narrow width, presently supports a one-way traffic flow. A similar traffic flow is maintained in the proposed design. The carriageway width has been

maintained at 3.5 meters with pedestrian walkways of minimum 1.5 meters designed on both sides of the carriageway. The road will be an interlock road .

Sector 3 - Temple Square

Figure 57 - Plan - Sector 3



Source - Pailands Associates

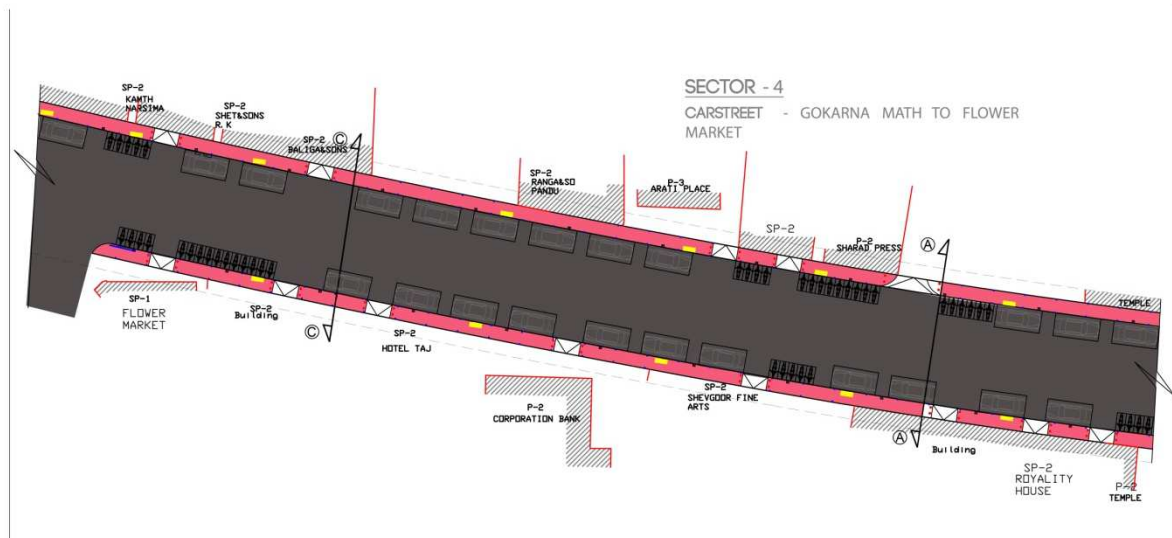
Design Components of Layout Plan

- 1 Interlock Road
- 2 Streetlight and High Mast
- 3 Benches
- 4 Bollards/railings
- 5 Compound wall finishing
- 6 Street signboards
- 7 Shade roof installing

This sector has the major plaza with parking facilities and heritage elements installed. The plaza will be made of interlock pavers.

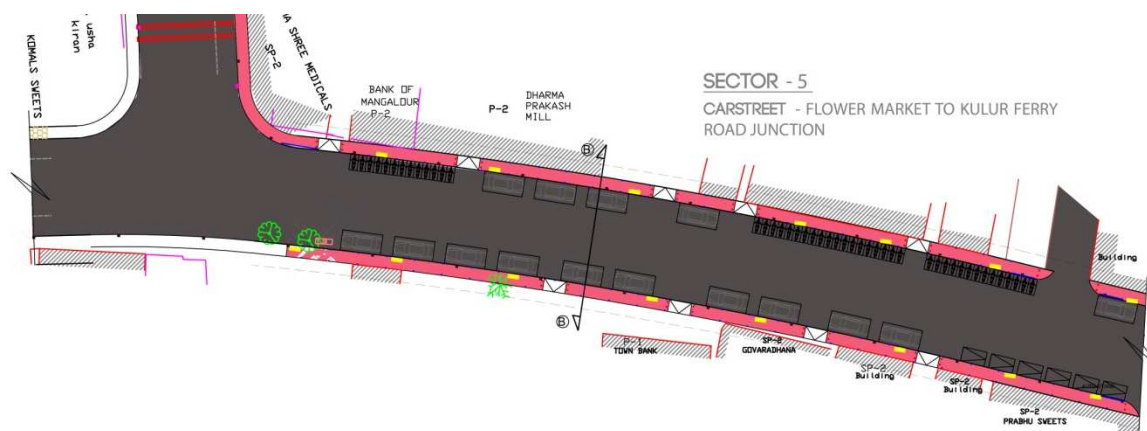
Sector 4, 5 - Carstreet

Figure 58 - Sector 4- Plan



Source - Pailands Associates

Figure 59- Sector 5- Plan



Source -Pailands Associates

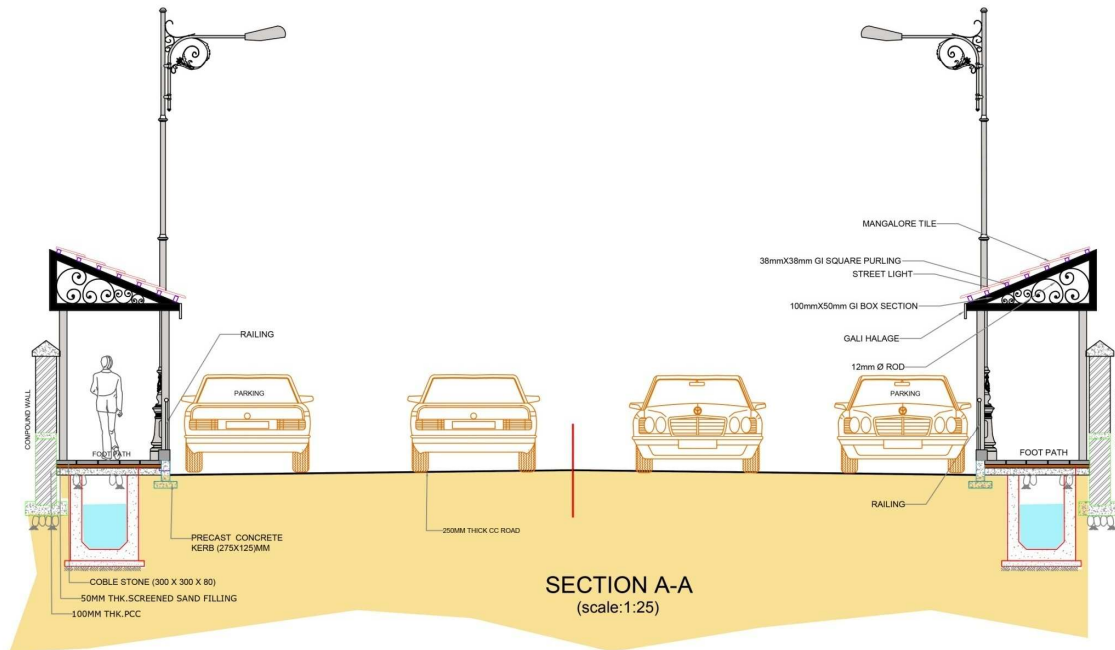
Design Components of Layout Plan

- 1 Streetlight and High Mast
- 2 Benches
- 3 Bollards/railings
- 4 Compound wall finishing
- 5 Street signboards
- 6 Shade roof installing

The 12 M wide road will allow 2.5 m width for 180 degree car parking on both sides and two 3.5 m wide lanes will cater for the vehicular movement. Shaded roof all

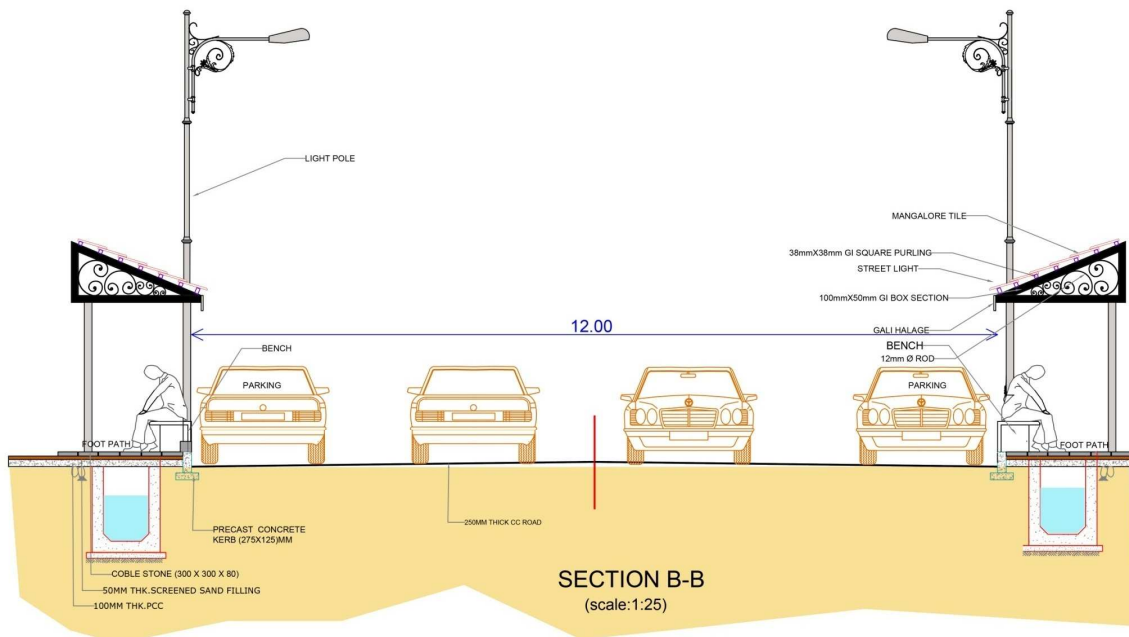
along the long topped with Mangalore Tiles will add the heritage character to the street. Street furniture and laterite cladded wall will complement for the aesthetics.

Figure 60- Section A-A



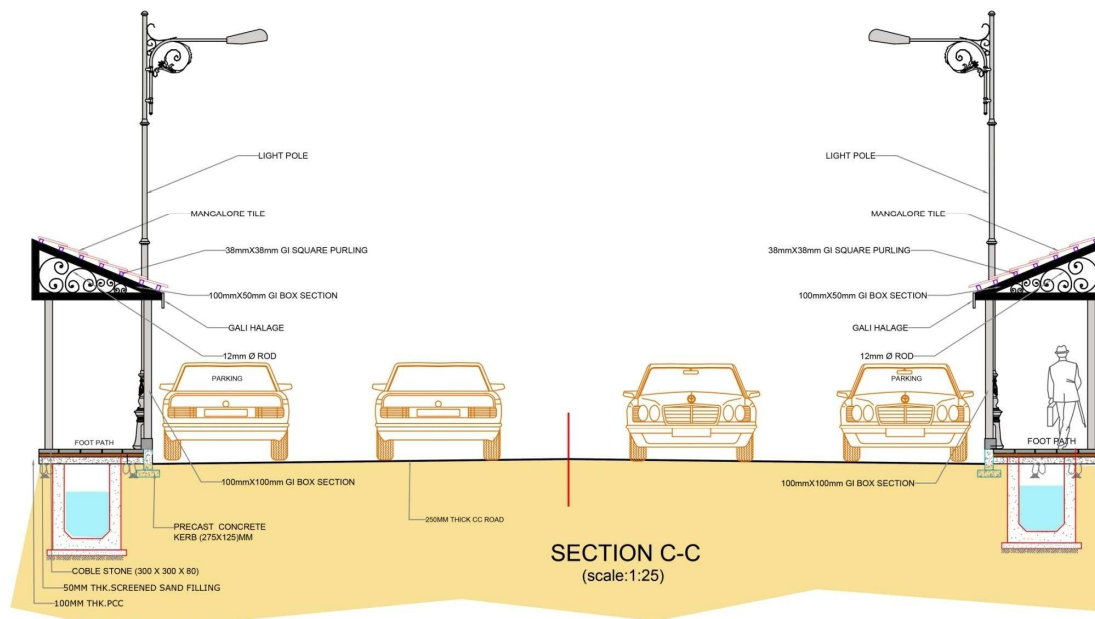
Source - Pailands Associates

Figure 61- Section B-B



Source - Pailands Associates

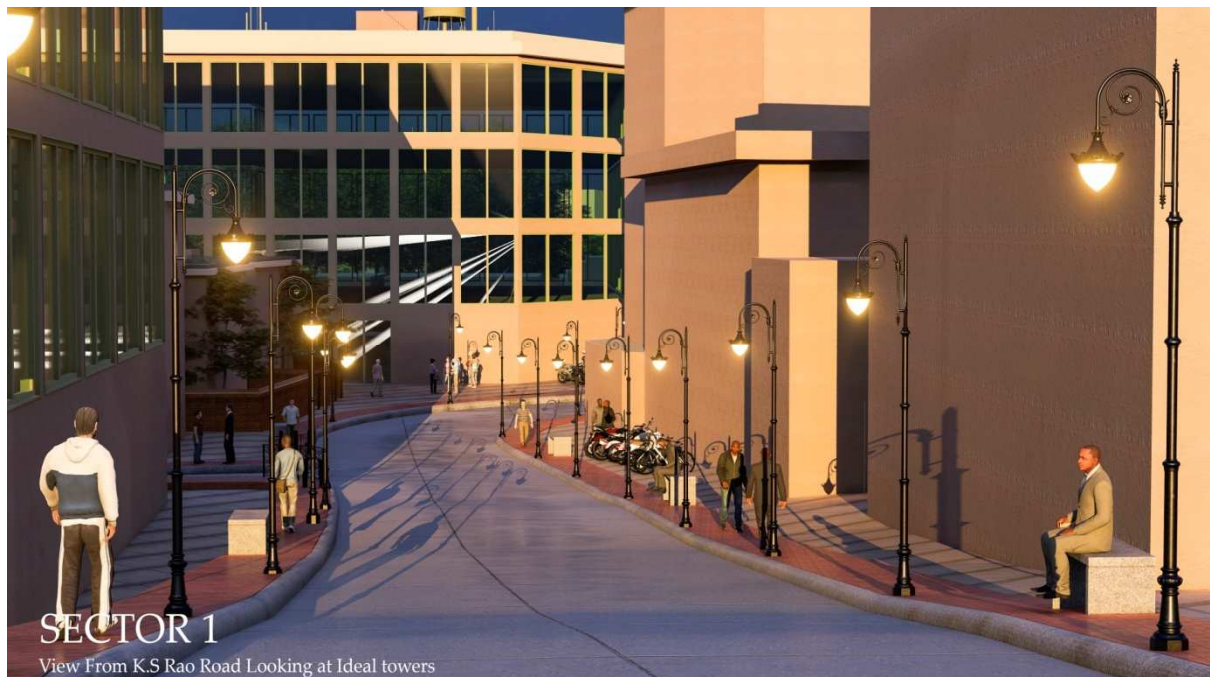
Figure 62 - Section C-C



Source - Pailands Associates

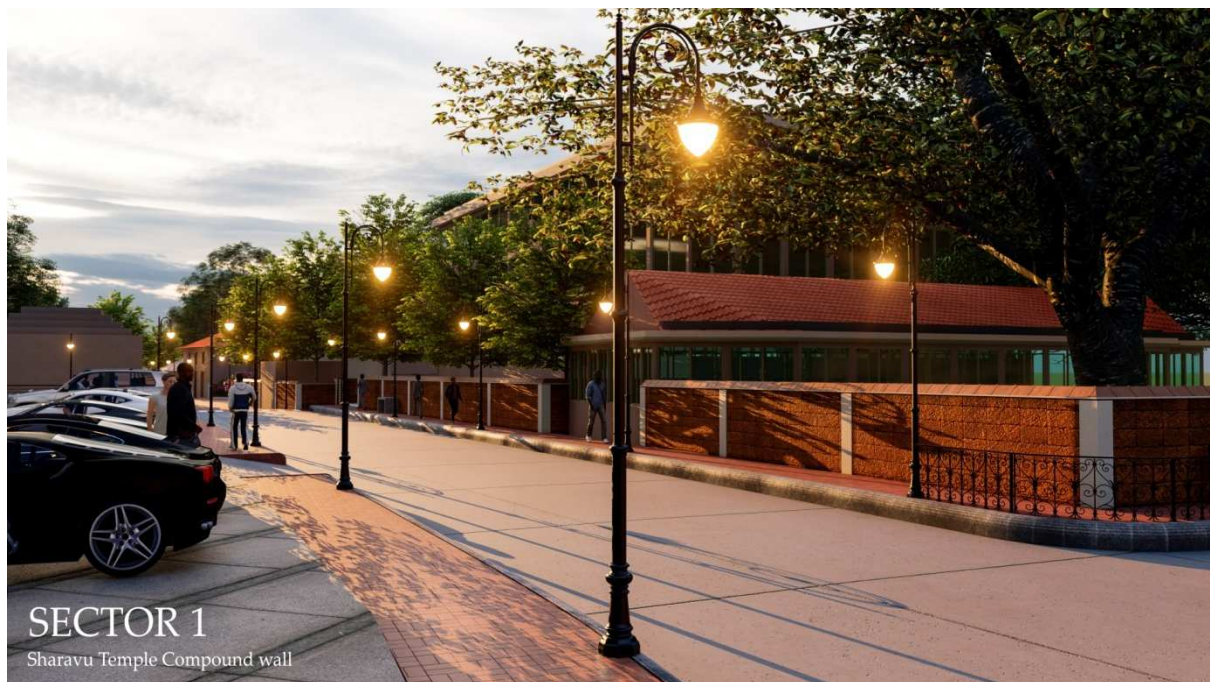
8.5 Aesthetic Features

Figure 63 - View from K S Rao road



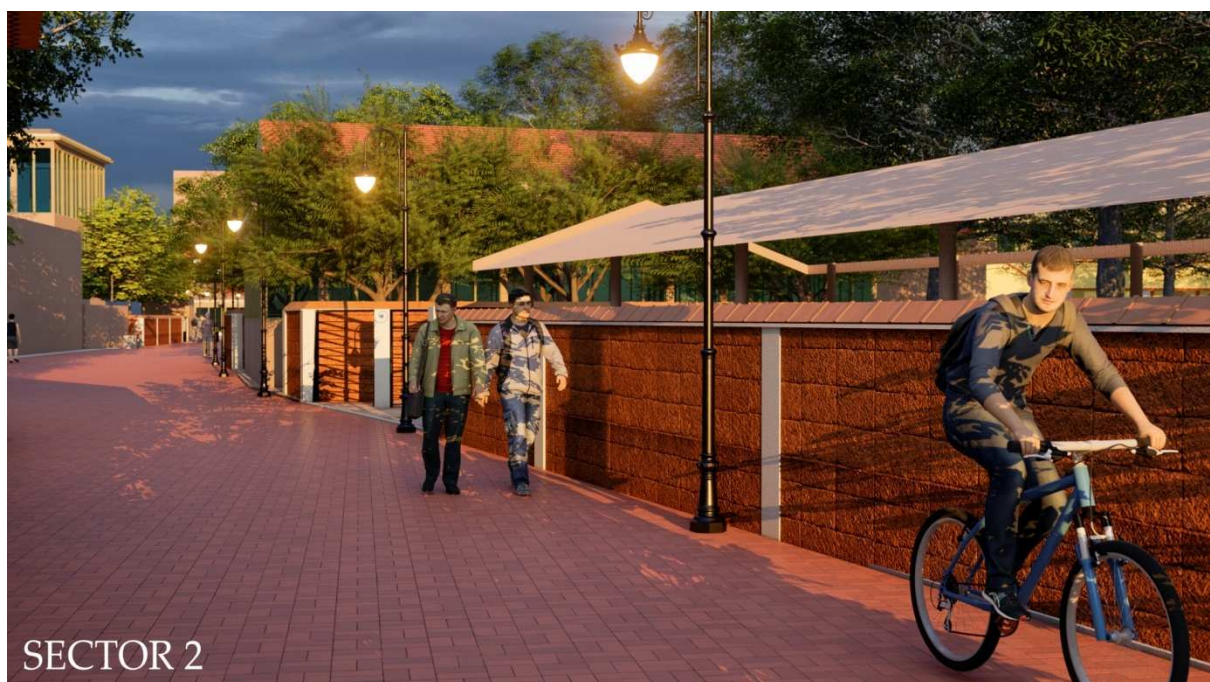
Source - Pailands Associates

Figure 64 - View from Ideal Towers



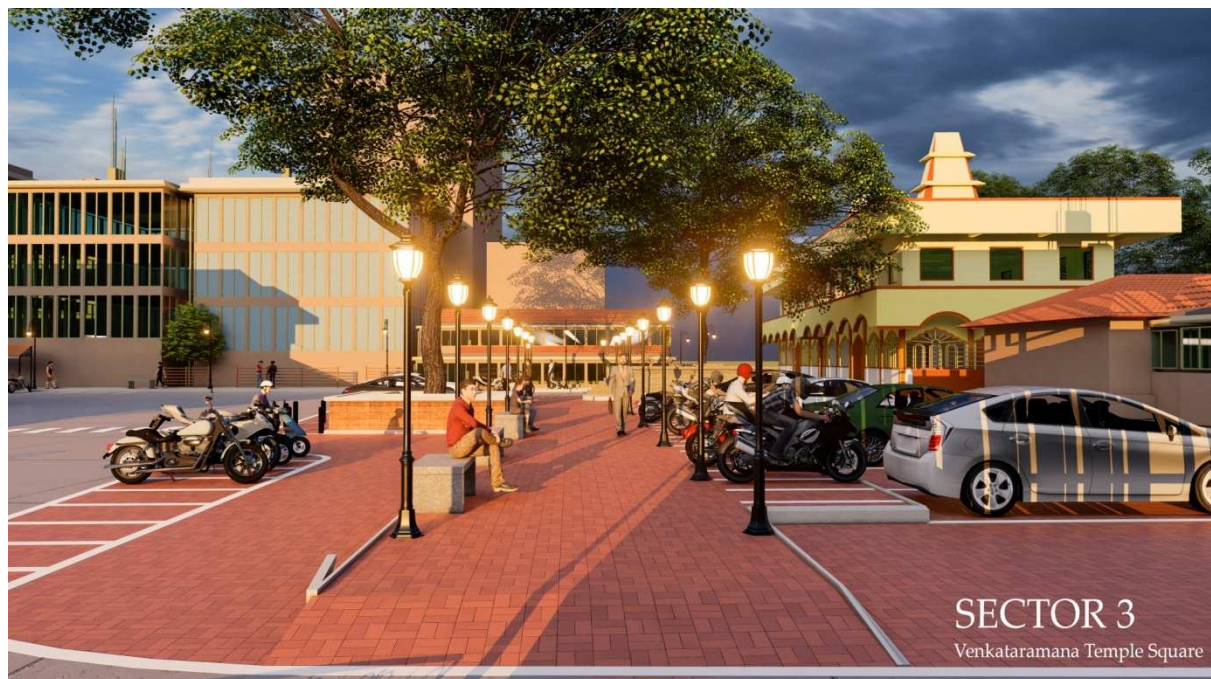
Source - Pailands Associates

Figure 65 - View from Kathyayani Math



Source - Pailands Associates

Figure 66 - View of parking area in Temple Square



Source - Pailands Associates

Figure 67 - Bird's Eye View of the Parking area in Temple Square



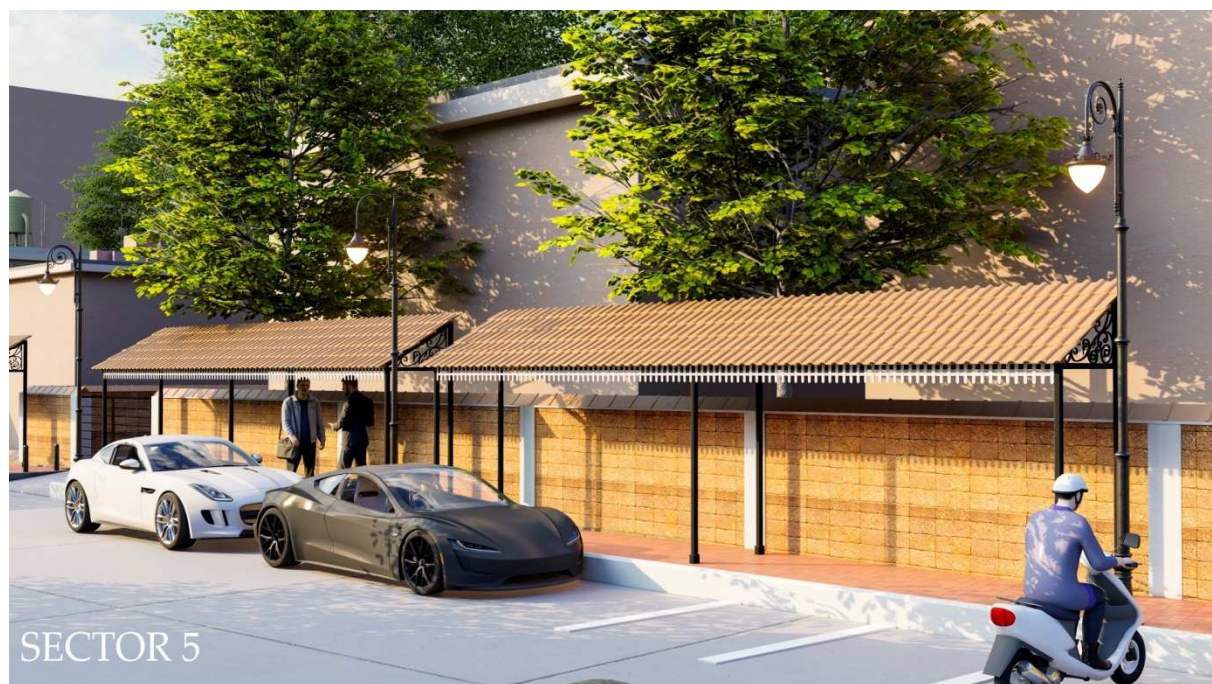
Source - Pailands Associates

Figure 68 - View of Carstreet



Source - Pailands Associates

Figure 69 - View of Roofing and Laterite Cladded wall



Source - Pailands Associates

ESTIMATE AND DRAWINGS

Name of work: PROPOSED "RETROFITTING/REDEVELOPMENT OF CAR STREET AND AREAS OF SRI VENKATRAMANA TEMPLE AS RELIGIOUS ZONE"		
GENERAL ABSTRACT		
Sl.No	Item of Work	Amount
A. CIVIL -SoR Items		
1	Fabrication and erection of roof over pavement	65,20,861.00
2	Providing Highmast Lighting poles ,Lighting Luminaires and Cabling	24,94,992.00
3	Providing RCC foundation and erection of Electrical poles	32,27,993.00
4	Decorative Finishing of select Compound walls	25,66,206.00
5	Providing and fixing of Sign boards for Heritage Character only(Non- Road side)	90,750.00
6	Beautification of Temple Tree Katte	99,284.00
7	RCC foundation for Cast Iron Railings and MS Bollards	1,37,285.00
8	Removal and reconstruction of façade treatment as required in the road widening	7,35,483.00
9	Providing Interlocking for Temple Square	11,37,271.00
	Total	170,10,125.00
B. Non SoR Items		
1	Providing Precast CC Items	11,88,000.00
2	Supplying of Cast Iron Decorative Streetlight Poles	150,45,250.00
3	Providing granite carving for Katte finishing	8,58,037.00
4	Supplying of Mangalore Roof tiles	8,95,540.00
5	Supplying of MS Bollards	2,08,200.00
6	Providing Cast Iron + SS railings	43,70,875.00
7	Supplying of Eaves Board	4,92,500.00
	Total	230,58,402.00
TOTAL (A+B)		400,68,527.00
Contingencies @ 3 %		12,02,056.00
Price Escalation Charges and Tender Premium @ 5 %		20,03,427.00
GST @ 12 % (CIVIL-SoR Items)		20,41,215.00
GST @ 18% (Non SoR Items)		41,50,513.00
MISCELLANEOUS AND ROUNDING OFF		34,262.00
GRAND TOTAL		495,00,000.00

Assistant Engineer
MSCL Mangaluru

Assistant Executive Engineer
MSCL Mangaluru

Executive Engineer
MSCL Mangaluru

General Manager Technical
MSCL Mangaluru

Name of the Work : Fabrication and erection of roof over pavement

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
1	KSRRB M200-12.3. Dismantling of existing structure like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. i) Lime/Cement concrete I. By manual means. C. Prestressed/Reinforced cement concrete grade M-20 above. MORTH Specification No. 202							
	S.R Item No 18.19 Page 139							
	For RCC structure							
	Sector 5	1	8			8.00	1747.90	13,983.20
						Cum		
	Basic rate	1589.00						
	Add 10% for Malnad area works	158.90						
	Total	1747.90	/Cum					
2	KSRRB M200-12.1. Dismantling of existing structure like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications.							
	S.R Item No 18.17 Page 139							
	For masonry							
	Sector 5	1	7			8.00		
					Say	8.00	499.40	3,995.20
	Basic rate	454.00				Cum		
	Add 10% for Malnad area works	45.40						
	Total	499.40	/Cum					
3	KSRRB M200-32. Removal of Telephone/ Electric poles including excavation and dismantling of foundation concrete and lines under the supervision of concerned department, disposal with all lifts and stacking the serviceable and unserviceable material separately complete as per specifications.							
	S.R Item No 18.57 Page 141							
	Electrical poles	20				20.00		
	Telephone	10				10.00		
					say	30.00	238.70	7,161.00
	Basic rate	217.00				Nos.		
	Add 10% for Malnad area works	21.70						
	Total	238.70	/nos					
4	KSRRB M200-29. Dismantling old barbed wire fencing / wire mesh fencing including posts, foundation concrete, back filling of pit by manual means including disposal of dismantled material with all lifts and stacking serviceable ,material and unserviceable material separately complete as per specifications. MORTH Specification No. 22							
	SR Item No 18.54, Page No 141							
	Existing fence	1	20.00			20.00		
					Say	20.00	72.60	1,452.00
						m		
	Basic rate	66.00						
	Add 10% for Malnad area works	6.60						
	Total	72.60	/m					
5	Dismantling Mangalore tiles roof and stacking the material within a radius of 50 metres including cost of materials, labour, HOM complete as per specifications - with reepers							
	SR Item No 37.42.1, Page No 269							
		1	50.00		Say	50.00	81.40	4,070.00
						Sqm		
	Basic rate	74.00						
	Add 10% for Malnad area works	7.40						
	Total	81.40	/Sqm					
6	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.							
	CPWD Delhi SR 2018 , Vol. 2 , SR Item no. 15.25, Page no. 260							
		1	120.00			120.00	190.30	22,836.00
						Sqm		
7	Dismantling roofing including ridges, hips, valleys and gutters etc., and stacking the material within 50 metres lead of: GS Sheet							
	CPWD Delhi SR 2018 , Vol. 2 , SR Item no. 15.28.1, Page no. 260							
		1	100.00			100.00	121.90	12190.00
						Sqm		

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
8	Dismantling roofing including ridges, hips, valleys and gutters etc., and stacking the material within 50 metres lead of: Asbestos Cement Sheet							
	CPWD Delhi SR 2018 , Vol. 2 , SR Item no. 15.28.2, Page no. 260							
		1	75.00			75.00	56.90	4267.50
						Sqm		
9	Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in: Channels, angles, tees and flats							
	CPWD Delhi SR 2018 , Vol. 2 , SR Item no. 15.17.2, Page no. 259							
		1	1000.00			1000.00	1.70	1700.00
						kg		
10	KSRRB M200-6.2 Cutting of trees girth from 600mm to 900mm including cutting of trunks, branches and removal of stumps, roots stacking of serviceable materials with all lifts and upto a lead of 1000m and earth filling in the depressions/pit, complete as per specifications. MORTH Specification No.201							
	S.R Item No 18.7 Page 138							
		2				2.00		
					Say	2.00	1134.10	2,268.20
						Each		
	Basic rate	1031.00						
	Add 10% for Malnad area works	103.10						
	Total	1134.10	/Each					
11	KSRRB 2-2 : Earthwork excavation by Manual means for foundation of buildings, water supply and sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. including breaking of clods complete as per specifications. specification. No. KBS 2.1(a) / 2.3.5							
	For vertical box section							
	Sector 3							
	At road side	27	0.45	0.45	0.5	2.73		
	At compound wall side	27	0.45	0.45	0.5	2.73		
	Sector 4							
	At road side	55	0.45	0.45	0.5	5.57		
	At compound wall side	55	0.45	0.45	0.5	5.57		
	Sector 5							
	At road side	51	0.45	0.45	0.5	5.16		
	At compound wall side	51	0.45	0.45	0.5	5.16		
						26.93		
					Say	28.00	Cum	
	In Ordinary Soil 100%							
	S.R. Item No. 2.3 Page 6		28.00	X		1	28.00	328.90
							Cum	9,209.20
	Basic rate	299.00						
	Add 10% for Malnad area works	29.90						
	Total	328.90	/Cum					
12	KSRRB 4-1.2 : Providing and laying in position plain cement concrete of mix 1:3:6 with OPC @ 220 kgs, with 40mm and down size graded granite metal course aggregates @ 0.892 cum and fine aggregates @ 0.465 cum machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2							
	S.R. Item No. 4.2 Page 13							
	For vertical box section							
	Sector 3							
	At road side	27	0.45	0.45	0.1	0.55		
	At compound wall side	27	0.45	0.45	0.1	0.55		
	Sector 4							
	At road side	55	0.45	0.45	0.1	1.11		
	At compound wall side	55	0.45	0.45	0.1	1.11		
	Sector 5							
	At road side	51	0.45	0.45	0.1	1.03		
	At compound wall side	51	0.45	0.45	0.1	1.03		
						5.39		
					Say	6.00	6175.40	37,052.00
						Cum		
	Basic rate	5614.00						
	Add 10% for Malnad area works	561.40						
	Total	6175.40	/Cum					

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
13	KSRB 4-1.2 : Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 320 kgs, with 20mm and down size graded granite metal course aggregates @ 0.69 cum and fine aggregates @ 0.46 cum with super plasticiser @ 3 Ltrs confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms. thick, vibrated for beams, columns of all sizes in foundation, plinth and superstructure ground floor level for roof slabs, staircase, lintels, columns including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.6							
	S.R. Item No. 4.11 Page 14							
A	FOR FOOTINGS							
	For vertical box section							
	Sector 3							
	At road side							
	For Pedestals	27	0.30	0.30	0.50	1.22		
	At compound wall side	27	0.30	0.30	0.50	1.22		
	Sector 4							
	At road side							
	For Pedestals	55	0.30	0.30	0.50	2.48		
	At compound wall side	55	0.30	0.30	0.50	2.48		
	Sector 5							
	At road side							
	For Pedestals	51	0.30	0.30	0.50	2.30		
	At compound wall side	51	0.30	0.30	0.50	2.30		
						11.97		
					Say	14.00	6642.90	93,001.00
						Cum		
	Basic rate	6039.00						
	Add 10% for Malnad area works	603.90						
	Total	6642.90	/Cum					
14	KSRB 4.9.2 : Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3							
	TMT Bars Fe 500							
	S.R. Item No. 4.46.2 Page 18							
	Footings							
	Sector 3		2.43	X	80.00	194.40		
	Sector 4		4.95	X	80.00	396.00		
	Sector 5		4.59	X	80.00	367.20		
						957.60		
					Say	1000.00	Kgs	
					Or	1.00	77860.20	77,860.00
						Tonne		
	Basic rate	70782.00						
	Add 10% for Malnad area works	7078.20						
	Total	77860.20	/Tonne					
15	KSRB 4-6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2							
	S.R. Item No. 4.28 Page 16							
	For Foundations							
	Sector 3							
	At road side	27	1.2		0.5	16.20		
	At compound wall side	27	1.2		0.5	16.20		
	Sector 4							
	At road side	55	1.2		0.5	33.00		
	At compound wall side	55	1.2		0.5	33.00		
	Sector 5							
	At road side	51	1.2		0.5	30.60		
	At compound wall side	51	1.2		0.5	30.60		
						159.60		
					Say	165.00	289.30	47,734.50
						Sqm		
	Basic rate	263.00						
	Add 10% for Malnad area works	26.30						
	Total	289.30	/Sqm					

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
16	Fabrication supplying and erecting M.S tubular trusses of all spans as per approved drawing and design prefabricated steel applications using quality material are durable, reliable and corrosion and abrasion resistant. Welding shall conform to structural welding code. Quality shall be on various parameters like shape, size, design gauge and polish. The entire trusses is anchored in RCC column by using 4nos of MS anchor bolts at each support with 10mm thick base plate and shoe plate. The work includes cutting, straightening, placing in position of MS pipes and welding where ever necessary and applying one coat of red oxide primer coat to all the members including coat of all material, labour charges and hire charges of machineries for cutting, welding, grinding and erection equipments, with all lead and lift, transportation etc., complete as per the specification							
	S.R. Item No. 7.29, Page no. 43							
	Sector 3	2	28	2.00		112		
	Sector 4	2	80	2.00		320		
	Sector 5	1	15	2.00		30		
		1	30	2.00		60		
		1	100	2.00		200		
		1	75	2.00		150		
						872		
					30.00	26160	122.10	31,94,136.00
					Kg/Sqm	Kgs		
	Basic rate	111.00						
	Add 10% for Malnad area works	11.10						
	Total	122.10	/Kgs					
17	Providing and installing of approved make pre-painted Galvalume iron accessories, like, plain, ridges, plain gutter, plain flashing, corner trim, etc. The total coated thickness (TCT) of the sheet shall be 0.47 mm +/- 0.02 tolerance mm Zinc- Alu alloy coating AZ 150 gsm as per ASTM 1397/755-550 mpa steel grade, 5-7 microns using self drilling/self tapping screws of 25 mm length (width upto 500-600 mm only), to be fixed over the existing purlins, rafters, channels and trusses.							
	SR. Item no 38.31, Page no. 301							
	Sector 3	2	28	1.2		67.2		
	Sector 4	2	80	1.2		192		
	Sector 5	1	15	1.2		18		
		1	30	1.2		36		
		1	100	1.2		120		
		1	75	1.2		90		
						523.2		
					Say	525	726	3,81,150.00
	Basic rate	660				Sqm		
	Add 10% for Malnad area works	66.00						
	Total	726.00	/Sqm					
18	KSRB 8.6 : Providing and fixing on wall surface 4.0 kg/ sq.cm H.D.P.E. rain down pipes of approved make and brand with necessary specials like shoes, bends and offsets fixed with iron clamps, wall plugs, screws, including cost of materials, labour, curing complete as per specifications.							
	KSRB 8.6-5- 4.0 Kg/ sq.cm H.D.P.E. rain down water pipes 110 mm outer dia							
	SR Item no. 8.19, Page no 49							
	Sector 3	54	4.15			224.1		
	Sector 4	110	4.15			456.5		
	Sector 5	102	4.15			423.3		
						1103.9		
					Say	1110	564.30	6,26,373.00
	Basic rate	513				m		
	Add 10% for Malnad area works	51.30						
	Total	564.30	/m					
19	Structural Steel Coatings Cleaning the existing steel surface by mechanical means such as sand blasting so as to remove all the existing loose rust etc. Using cotton waste swab apply rust converting, steel passivating, flash rust preventing sulphate and chloride free, non-alkaline, inorganic single component, rust converter and nano fill forming surface passivator. After 24 Hours remove the free/loose rust particles by simple dusting with brush. Providing and applying one coat of Two component, anticorrosive, solvent free, substituted long chain nylon reticulant based epoxy coating/primer. This should be followed by two coats of protective two component, APR based, UV resistant anticorrosive coating. Apply the coats by brush or spray at 4-6 hours interval between each coat.							
	S.R Item No 38.73 Page 321							
	for Roof							
	Sector 3	2	28	2.00		112.00		
	Sector 4	2	80	2.00		320.00		
	Sector 5	1	15	2.00		30.00		
		1	30	2.00		60.00		
		1	100	2.00		200.00		
		1	75	2.00		150.00		
						872.00		
					say	880	363	3,19,440.00
	Basic rate	330.00				sqm		
	Add 10% for Malnad area works	33.00						
	Total	363.00	/Sqm					

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
20	KSRB 15-18.2: Providing and applying enamel metal paint two coats (excluding priming coat) over new steel or other metal surface brushing to give an even shade after cleaning oil, grease, dirt and other foreign matter, including cost of materials, labour, complete as per specifications.							
	SR Item no 15.74, Page No 123							
	Sector 3	2	28	2		112		
	Sector 4	2	80	2		320		
	Sector 5	1	15	2		30		
		1	30	2		60		
		1	100	2		200		
		1	75	2		150		
						872.00		
					Say	880.00	104.50	91,960.00
						Sqm		
	Basic rate	95.00						
	Add 10% for Malnad area works	9.50						
	Total	104.50	/Sqm					
21	Fixing charges for installation of CI Poles foundation bolts and base plate/ template on site as per the drawings and instructions of Architect of PMC and Incharge Executive Engineer, MSCL							
	Rate Analysis							
	Sector 3							
	At road side	27				27.00		
	At compound wall side	27				27.00		
	Sector 4							
	At road side	55				55.00		
	At compound wall side	55				55.00		
	Sector 5							
	At road side	51				51.00		
	At compound wall side	51				51.00		
						266.00	58.00	15,428.00
						Nos.		
22	Laying charges of Mangalore Single groove tile/ ceiling tile/ skylight tile over the existing roof truss including cost of labour as per specifications.							
	Rate analysis							
	Roof Tile area							
	Sector 3	2	28	2		112		
	Sector 4	2	80	2		320		
	Sector 5	1	15	2		30		
		1	30	2		60		
		1	100	2		200		
		1	75	2		150		
						872.00		
					Say	880.00	296.00	2,60,480.00
						Sqm		
23	Providing and finishing external walls in two coats over one coat of 100% acrylic silicon glazed primer with antifungal paint for top coat of approved brand and shade to give an even shade after thoroughly brooming the surface to remove all dirt and loose powdered material, free from mortar drops and other foreign matter cost of materials, labour, complete as per specifications.							
	SR Item No 15.104 Page No127							
	For Single groove tile and Skylight tile							
	Sector 3	4	28	2		224.00		
	Sector 4	4	80	2		640.00		
	Sector 5	2	15	2		60.00		
		2	30	2		120.00		
		2	100	2		400.00		
		2	75	2		300.00		
						1744.00	198.00	3,45,312.00
						Sqm		
	Basic rate	180.00						
	Add 10% for Malnad area works	18.00						
	Total	198.00	/Sqm					
24	Providing and finishing external walls in two coats over one coat of 100% acrylic silicon glazed primer with antifungal paint for top coat of approved brand and shade to give an even shade after thoroughly brooming the surface to remove all dirt and loose powdered material, free from mortar drops and other foreign matter cost of materials, labour, complete as per specifications.							
	SR Item No 15.104 Page No127							
	Ceiling Tile							
	Sector 3	4	28	2		224.00		
	Sector 4	4	80	2		640.00		
	Sector 5	2	15	2		60.00		
		2	30	2		120.00		

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
		2	100	2		400.00		
		2	75	2		300.00		
						1744.00		
	considered 25% of Total area					436		
					Say	450.00	198.00	89,100.00
						Sqm		
	Basic rate	180.00						
	Add 10% for Malnad area works	18.00						
	Total	198.00	/Sqm					
25	Applying red lead ready mix priming coat over new steel or other metal surface including preparing the surface after thoroughly cleaning oil, grease, dirt and other foreign matter, and scoured with wire brushes, fine steel wool, sand papers including cost of materials, labour, complete as per specifications.							
	SR Item No 15.73, Page No123							
	For CI Support Poles							
	Sector 3	54	1.57			84.78		
	Sector 4	110	1.57			172.70		
	Sector 5	102	1.57			160.14		
						417.62		
					Say	425.00	45.10	19,167.50
						Sqm		
	Basic rate	41.00						
	Add 10% for Malnad area works	4.10						
	Total	45.10	/Sqm					
26	KSRB 15-18.2: Providing and applying enamel metal paint two coats (excluding priming coat) over new steel or other metal surface brushing to give an even shade after cleaning oil, grease, dirt and other foreign matter, including cost of materials, labour, complete as per specifications.							
	SR Item no 15.74, Page No 123							
	Painting of CI Support Poles							
	Sector 3	54	1.57			84.78		
	Sector 4	110	1.57			172.70		
	Sector 5	102	1.57			160.14		
						417.62		
					Say	425.00	104.50	44,412.50
						Sqm		
	Basic rate	95.00						
	Add 10% for Malnad area works	9.50						
	Total	104.50	/Sqm					
27	Fixing old eve board with necessary screws and approved painting two coats. including cost of materials, labour, HOM complete as per specifications.							
	S.R Item No 37.14 Page 267							
	Eaves board							
	Sector 3	2	35			70.00		
		4	2			8.00		
	Sector 4	2	90			180.00		
		20	2			40.00		
	Sector 5	2	69			138.00		
		15	2			30.00		
						466		
						470	28.60	13,442.00
						m		
	Basic rate	26.00						
	Add 10% for Malnad area works	2.60						
	Total	28.60	/m					
28	Applying red lead ready mix priming coat over new steel or other metal surface including preparing the surface after thoroughly cleaning oil, grease, dirt and other foreign matter, and scoured with wire brushes, fine steel wool, sand papers including cost of materials, labour, complete as per specifications.							
	SR Item No 15.73, Page No123							
	Eaves board							
	Sector 3	2	35	0.2		14.00		
		4	2	0.2		1.60		
	Sector 4	2	90	0.2		36.00		
		20	2	0.2		8.00		
	Sector 5	2	69	0.2		27.60		
		15	2	0.2		6.00		
						93		
					Say	95.00	45.10	4,284.50
						Sqm		
	Basic rate	41.00						
	Add 10% for Malnad area works	4.10						
	Total	45.10	/Sqm					
29	KSRB 4-1.5 : Providing and laying in position plain cement concrete of Mix M20 with OPC@ 300kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregates @ 0.43cum, machine mixed, concrete laid in layers not exceeding 15 ems. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2							
	S.R. Item No. 4.5 Page 13							

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
	Over tiled roof							
	Sector 3	18	2	0.05	0.075	0.135		
	Sector 4	48	2	0.05	0.075	0.360		
	Sector 5	5	2	0.05	0.075	0.038		
		10	2	0.05	0.075	0.075		
		30	2	0.05	0.075	0.225		
		23	2	0.05	0.075	0.173		
						1.005		
					Say	1.00	6251.3	6251.3
	Basic rate	5683				Cum		
	Add 10% for Malnad area works	568.30						
	Total	6251.30	/Cum					
30	KSRB15-3.11 : Providing 20mm thick cement plaster in single coat with cement mortar 1:4, to stone masonry / concrete surface including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications.							
	S.R. Item No. 15.19 Page 116							
	for concrete band							
	Sector 3	18	2		0.20	7.20		
	Sector 4	48	2		0.20	19.20		
	Sector 5	5	2		0.20	2.00		
		10	2		0.20	4.00		
		30	2		0.20	12.00		
		23	2		0.20	9.20		
						53.60		
					Say	55.00	300.30	16,517.00
	Basic rate	273.00				Sqm		
	Add 10% for Malnad area works	27.30						
	Total	300.30	/Sqm					
31	KSRB4-4-6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, base of columns for mass concrete including cost of all materials, labour complete as per specifications.							
	Specification No. KBS 4.6.2							
	S.R Item No 4.28 Page No. 16							
	for Roof Band							
	Sector 3	36	2		0.08	5.40		
	Sector 4	96	2		0.08	14.40		
	Sector 5	10	2		0.08	1.50		
		20	2		0.08	3.00		
		60	2		0.08	9.00		
		46	2		0.08	6.90		
						40.20		
					Say	45	289.30	13,018.50
						Sqm		
	Basic rate	263.00						
	Add 10% for Malnad area works	26.30						
	Total	289.30	/Sqm					
32	Erection and testing of Cast Iron Pole - 2.7 m tall onto the Foundation as per specification and instructions of Architect of PMC/ Executive Engineer, MSCL							
	(Rate analysis)							
	Sector 3							
	At road side	27				27.00		
	At compound wall side	27				27.00		
	Sector 4							
	At road side	55				55.00		
	At compound wall side	55				55.00		
	Sector 5							
	At road side	51				51.00		
	At compound wall side	51				51.00		
						266.00	2788.00	7,41,608.00
						Nos.		
Sub Total								65,20,861.00
Non SoR Items - Approved Rate								
1	Supplying, Erection and testing of 2.7m (minimum)height decorative cast iron pole with CI embellishment duly welded. The bottom CI portion should have round mounting base of not more than 250mm dia. The top portion should not be less than 90mm dia. Foundation bolts and Templates included. The work shall be carried out as per the instructions of Architect of the PMC and incharge Executive Engineer of MSCL. (Approved Rate)							
	At road side	27				27.00		
	At compound wall side	27				27.00		
	Sector 4							
	At road side	55				55.00		
	At compound wall side	55				55.00		
	Sector 5							
	At road side	51				51.00		
	At compound wall side	51				51.00		

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
						266.00	29700.00	79,00,200.00
						Nos.		
2	Supplying of Mangalore tiles- Single groove - 16" x 9" size pointed with 1:4 cement mortar over the existing rafter including fixing charges curing complete per instructions of Architect of PMC and EE engineer in charge MSCL. (Approved Rate)							
	Footpath roofing							
	Sector 3	2	28	2		112		
	Sector 4	2	80	2		320		
	Sector 5	1	15	2		30		
		1	30	2		60		
		1	100	2		200		
		1	75	2		150		
						872		
	Considered 50% of Total area					436		
					Say	450	362.00	1,62,900.00
						Sqm		
	Rate per Sqm		362.00/Sqm					
3	Supplying of Mangalore tiles - Ceiling tiles of size 12.75" x 9.25" pointed with 1:4 cement mortar over the existing rafter including fixing charges curing complete as per instructions of Architect of PMC and EE engineer in charge MSCL (Approved Rate)							
	Footpath roofing							
	Sector 3	2	28	2		112		
	Sector 4	2	80	2		320		
	Sector 5	1	15	2		30		
		1	30	2		60		
		1	100	2		200		
		1	75	2		150		
						872		
	Considered 25% of Total area					218		
					Say	230	377.00	86,710.00
						Sqm		
	Rate per Sqm		377.00/Sqm					
4	Supplying of Mangalore tiles - Skylight tiles - 16" x 9" size pointed with 1:4 cement mortar over the existing rafter including fixing charges curing complete as per instructions of Architect of PMC and EE engineer in charge MSCL (Approved Rate)							
	Footpath roofing							
	Sector 3	2	28	2		112		
	Sector 4	2	80	2		320		
	Sector 5	1	15	2		30		
		1	30	2		60		
		1	100	2		200		
		1	75	2		150		
						872		
	Considered 50% of Total area					436		
					Say	460	1356.00	6,23,760.00
						Sqm		
	Rate per Sqm		1356.00/Sqm					
5	Supplying of Wood Polymer Composite Hybrid board of minimum density 650 kg/cum having 18mm thickness and 200 mm height as eaves board as per the approved design using CNC cutting machine. The scope of work shall include the supply of material, cutting the board in CNC machine , necessary labour, accessories complete as per the specification and requirements as per the instructions of the Architect of the PMC and incharge Executive Engineer of MSCL. (Approved Rate)							
	Sector 3	2	35	0.2		14.00		
		4	2	0.2		1.60		
	Sector 4	2	90	0.2		36.00		
		20	2	0.2		8.00		
	Sector 5	2	69	0.2		27.60		
		15	2	0.2		6.00		
						93		
						97	4925.00	4,77,725.00
						Sqm.		
Sub Total								92,51,295.00

Assistant Engineer
MSCL Mangaluru

Assistant Executive Engineer
MSCL Mangaluru

Executive Engineer
MSCL Mangaluru

General Manager Technical
MSCL Mangaluru

Name of the Work : Providing Highmast Lighting poles ,Lighting Luminaires and Cabling								
Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
HIGH MAST								
1	Fabrication, Supplying, Erection, Testing and Commissioning ofMtrs long polygon high mast with Single / Multiple telescopic sections having, (minimum overlap distance of 1.5 times of top section) thickness as per BSEN 10025 grade S 355 JO /ASTM A572-50 steel sheet plate for shaft suitable to withstand a wind velocity of 47 m/sec as per IS 875 part 3(as per GA Drawing).Base plate as per IS 2062/ASTM A572-50. The mast shall be Galvanized in single Hot-dip as per BSEN ISO 1461/ASTM A123 with an average 70 microns as per IS 2629, and welded as per BS 5135 Single L-Seam joint. The mast shall have 2way head frame with die cast LM-6 pulleys, stainless steel axle, Phosphorus Bronze bearing bush press-fitted with separate guides for 2 runs of 5mm dia, stainless steel wire rope of AISI 304grade 7/19-core, (Factor of Safety as per TR no-7). 2.5sqmm EPR insulated PCP sheathed trailing power cable housed inside the bottom shaft of mast with door having locking arrangement. The mast shall have manual / power tool (Suitable reversible geared motor operating on 230/ 415V, 50Hz, shall be provide above 15 Mtrs mast) The mast shall have lantern of 2 segments, suitable dia with max load carrying capacity as per IS 1239. The mast shall be erected on existing RCC footing. The mast shall be supplied with 3mm thick template, lightning arrester of 1.2m length galvanized pipe with top arrow fitted on top of the head frame cover and GLS type aviation twin lamps fitting with wiring complete. (excluding foundation) as per technical data. 16Mtrs - Top 150mm and bottom 410 mm dia							
	PWD Electrical SR Item No. 4.5.2 , page no. 15							
	Sector 3					1		
					Say	1	140800	140800
						Each		
2	Supply of LED floodlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate/clear glass material, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatible for pole mouting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/ IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture withW System Power consumption. LED Efficiency>130lm/w, nominal CRI >75. Luminaire manufacturer should have inhouse facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer. - LED Floodlight 240W							
	PWD Electrical SR Item No. 12.9.7, page no. 67							
	Sector 3	1				6		
					Say	6	18400	110400
						Each		
3	Fixing halogen/metal halide / SVL / IL / LED floodlight fitting over existing pole / wall ceiling including clamps, bolts, nuts and wiring using suitable capacity wires.							
	PWD Electrical SR - Item no. 14.5, Page no.79							
	Sector 3	1				6		
					Say	6	175	1050
						Each		
4	Supplying 100 amps rated 3phase with natural bus bar using required capacity electrolytic aluminium strips covered with heat shrinkable coloured PVC sleeve, mounted on phenolic / FRP/DMC insulator which are mounted on powder coated 40*6mm M>S flat frame work in existing panel board, the bus bar shall have suitable holes for termination of incoming and outgoing cables as per IS specification with necessary bolts, nuts and washers etc., complete.							
	PWD Electrical SR - Item no. 5.40.1 Page no.30							
						2.5	2050	5125
						m		
5	Supplying and fixing angle Iron frame work fabricated out of MS angle iron frame work and MS flat with bolts washers etc and painted with two coats of red oxide and then two coats of approved paint. 75*75*6mm							
	PWD Electrical SR - Item no. 5.41.3 Page no.30							
						10	460	4600
						m		
6	Supplying and fixing porcelain fuse channel with cut outs on existing wooden panel using bolt nut and washers -63A (EPWD SR 19-20 5.7.3)							
	PWD Electrical SR - Item no. 5.7.3 Page no.25							
						15	227	3405
						Each		

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
7	Supplying ,fixing, wiring earth electrode for grounding conduits I.C. cutouts and other equipments on the meter board using 40mm dia 2.90 thick G.I pipe 2.5 mtrs long buried in a pit. The pit should be filled. With equal proportion os salt and charcoal 150mm around the pipe to complete, depth the connection from the pipe to the conduits etc. Is to be established through GI wire of size as per ISI specification 733. Of IS 732using 12mm dia bolts, nuts, washers and checknuts etc. The pipe shall have 16 though holes of 122 mm dia.							
	PWD Electrical SR - Item no. 6.1 Page no.40							
						5	2999.7	14998.5
						Nos.		
8	Fabricating supplying and mounting MS box made out...SWG suitable for floor/ wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 2 coats of red oxide primer paint and finally finished with- 14SWG							
	PWD Electrical SR - Item no. 5.42.1 Page no.30							
						72000	0.4	28800
						Sqcm		
9	Supplying and fixing miniature circuit on existing M C B distribution board using necessary fixing materials and c type curve indicators on/off energy cross-3 with short circuit breaking capacity of 10k and complete wiring as required 5-32 amps TPN							
	PWD Electrical SR - Item no. 5.46.6 Page no.31							
						5	994	4970
						Each		
10	Supply and fixing of 4pole power contractor with NO/NC contacts on existing wood/ panel board using necessary bolts, nuts, washers and wiring etc.,complete with AC-3 Rating and as per IS-13947-60-70AMPS							
	PWD Electrical SR - Item no. 5.13.3 Page no.26							
						5	4200	21000
						Each		
11	Supplying and fixing microprocessor based electronic timer using necessary bolts, nuts, etc							
	PWD Electrical SR - Item no. 5.47 Page no.32							
					Say	5	1925	9625
						Each		
12	LT Single phase 5-30A, DLMS complaint static energy meter, class-1.0 Accuracy (MESCOM SR 18-19 I.No: 54.05, Page no. 16 , SoR Standard stock materials for 11 kV system)							
					Say	5	671	3355
						Nos.		
13	Anchor Bolts 750 mm SR , Item no. 287, Code no. 2018, Page XI							
		8				8	121.19	969.50
						Nos.		
	Basic rate	110.17						
	Add 10% for Malnad area works	11.02						
	Total	121.19	/Nos					
14	Fixing of base plates and anchor Bolts							
	Rate analysis							
		4				4	58.00	232.00
						Nos.		
FLOOD LIGHTS								
15	Supply of LED floodlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate/clear glass material, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatiblefor pole mouting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/ IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture withW System Power consumption. LED Efficiency>130lm/w, nominal CRI >75. Luminaire manufacturer should have inhouse facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer . -LED Floodlight 70W							
	LED Floodlight 70W							
	PWD Electrical SR Item no. 12.9.1 , Page no. 67							
	Sector 3	2				3		
					Say	6	6800	40800
						Each		
16	Fixing halogen/metal halide / SVL / IL / LED floodlight fitting over existing pole / wall ceiling including clamps, bolts, nuts and wiring using suitable capacity wires.							
	PWD Electrical SR Item No. 14.5 , page no. 79							

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
	Sector 3	2				3		
					Say	6	175	1050
						Each		
SHADED ROOF LIGHTS								
17	Supplying of recess mounting non integrated type LED down light W luminaire comprising of pressure diecast/ extruded aluminium housing, with spring loaded false ceiling clamps, LED of Power/COB with CCT 6500 degree K, CRI> 70%. efficacy >100 lumen per watt, 120degree beam spread, life> 25000 burning hours and Compliance to IS 10322/IEC 60598, LM 79 & LM 80. The lamp compartment is enclosed with anti glare opal diffuser which enhances the lighting level. LEDs are driven by HF electronic driver integrated in a separate control gear assembly., with PF > 0.95, power loss should < 5% of lamp wattage., short circuit & open circuit protection to be integrated in the circuit, THD less than 20%, Life as per LM 79. The operating input voltage should be between 130 to 275 volts. BIS Approved and Tested by NABL/CPRI accredited laboratory with 2 years Warranty against any manufacturing defect working under standard electrical condition. - 15-18 W							
	15-18 W							
	PWD Electrical SR Item No. 12.4.3 , page no. 65							
	Sector 3	2	16			32		
	Sector 4	2	46			92		
	Sector 5	2	35			70		
						194		
					Say	195	2000	390000
						Each		
18	Fixing all types and all capacities of fluorescent / false ceiling / spot light / CFL / LED fittings indoor on the wall / ceiling / rafters / girders using 23/0.0076" twin twisted PVC insulated wires, required Nos of round blocks and clamps. - On wall / ceiling / Rafter / Girders							
	On wall / ceiling / Rafter / Girders							
	PWD Electrical SR Item No. 14.7.1 , page no. 79							
	Sector 3	2	16			32		
	Sector 4	2	46			92		
	Sector 5	2	35			70		
						194		
					Say	195	110	21450
						Each		
ONE ARM STREET LIGHTS								
19	Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate material, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%. maximum light intensity should be between 60 degrees to 70 degrees. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture withW System Power consumption. LED Efficiency>130lm/w, nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer. - LED Streetlight 40watts							
	LED Streetlight 40watts							
	PWD Electrical SR - Item no. 12.8.2, Page no. 67							
	Sector 1	34				34		
	Sector 3	26				26		
	Sector 4	24				24		
	Sector 5	22				22		
					Say	106	3360	356160
						Nos.		
20	Fixing halogen/metal halide / SVL / IL / LED floodlight fitting over existing pole / wall ceiling including clamps, bolts, nuts and wiring using suitable capacity wires.							
	PWD Electrical SR - Item no.14.5 Page no. 79							
	Sector 1	34				34		
	Sector 3	26				26		
	Sector 4	24				24		
	Sector 5	22				22		
					Say	106	175	18550
						Each		

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
POST TOP LIGHTS								
21	Supply of LED pole mounting type post top lantern with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate/ clear glass material, delivering superior light output.Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/Overload, short circuit/ miss-wiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB . LED Efficiency>130lm/w, nominal CRI >75. Luminaire manufacturer should have inhouse facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer. - LED Post Top Lantern with 25 watts							
	LED Post Top Lantern with 25 watts							
	PWD Electrical SR - Item no. 12.7.1, Page no.66							
	Sector 2	29				29		
	Sector 3	24				24		
					Say	53	5600	296800
						Nos.		
22	Fixing charges of post top/ Gate/ Garden fitting /LED on the existing CI / GI or any other pipe using required size of reducer, wiring using suitable wires.							
	PWD Electrical SR - Item no. 14.6, Page no.79							
	Sector 2	29				29		
	Sector 3	24				24		
					Say	53	154	8162
						Each		
CABLING WORKS								
23	Supplying of 1.1 KV LT UG cable XLPE or Heat resistant PVC insulated, PVC extruded Inner sheath armoured UG LT cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness in average +5% and resistivity 14 Ohms/Kms (Max) as per IS-3975 - 3.5 core 25 sqmm							
	PWD Electrical SR - Item no. 6.4.5, Page no.40							
					Say	2100	180	378000
						m		
24	PVC Pipes as per IS-2509 - 40 mm Dia							
	PVC Pipe - 40 mm Dia							
	(MESCOM SR 18-19 I.No :46.04, Sl.no 367 , 778040, Page no. 14 , SoR Standard stock materials for 11 kV system)							
					Say	2100	46	96600
						m		
25	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required.- in existing trench/duct- 25 sqmm to 75 sqmm							
	PWD Electrical SR - Item no. 6.5.2, Page no.41							
					Say	2100	15.5	32550
						m		
26	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.(As per Civil SR KSRB I-2, P-7) - In soil (hard)							
	PWD Electrical SR - Item no. 6.6.2, Page no.41							
					Say	2100	102	214200
						m		
27	Providing and filling sand in excavated trench to cover already laid UG cable to a depth of 150mm all-round the cable.							
	PWD Electrical SR - Item no. 6.7, Page no.41							
					Say	2100	100	210000
28	Supplying heavy gauge PVC Conduit Pipediamm thick with suitable size bends, metal junction boxes adhesive paste etc., by groove cutting in the wall and fixing by bracing U or J hooks and cement plastering up to the wall surface and run with 18 SWG GI fish wire run throughout the conduit wherever necessary. 19/20mm dia 2mm thick							
	PWD Electrical SR Item no. 1.3.1 , Page no. 2							
					Say	980	51	49980
						m		
29	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:confirming to latest amendments. - 2.5 sqmm							
	PWD Electrical SR Item no. 2.3.3 , Page no. 6							
					Say	980	32	31360
						m		
Sub Total								24,94,992.00

Assistant Engineer
MSCL Mangaluru

Assistant Executive Engineer
MSCL Mangaluru

Executive Engineer
MSCL Mangaluru

General Manager Technical
MSCL Mangaluru

Name of the Work :Providing RCC foundation and erection of Electrical poles								
Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
HIGH MAST POLES								
1	KSRB 2-2 : Earthwork excavation by Manual means for foundation of buildings, water supply and sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. including breaking of clods complete as per specifications. Specification. No. KBS 2.1(a) / 2.3.5							
	For high mast							
	Sector 2	1	3.00	3.00	2.00	18.00		
	Sector 3	1	3.00	3.00	2.00	18.00		
					Say	36.00	Cum	
a)	In Ordinary Soil 90%							
	S.R. Item No. 2.3 Page 6		36.00	X	0.90	32.40	328.90	10,656.36
						Cum		
	Basic rate	299.00						
	Add 10% for Malnad area works	29.90						
	Total	328.90	/Cum					
b)	In Hard soil 10%							
	S.R. Item No. 2.4 Page 6		36.00	X	0.10	3.60	492.80	1,774.08
						Cum		
	Basic rate	448.00						
	Add 10% for Malnad area works	44.80						
	Total	492.80	/Cum					
2	KSRB 4-1.2 : Providing and laying in position plain cement concrete of mix 1:3:6 with OPC @ 220 kgs, with 40mm and down size graded granite metal course aggregates @ 0.892 cum and fine aggregates @ 0.465 cum machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2							
	S.R. Item No. 4.2 Page 13							
	Sector 2	1	2.80	2.80	0.10	0.78		
	Sector 3	1	2.80	2.80	0.10	0.78		
						1.56		
					Say	1.60	6175.40	9,880.64
						Cum		
	Basic rate	5614.00						
	Add 10% for Malnad area works	561.40						
	Total	6175.40	/Cum					
3	KSRB 2-3- Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. In depth, compacting each deposited layer by ramming after watering with lead upto 50m and lift upto 1.5 m including cost of all labour complete as per specifications. Specification no. KBS 2.9							
	S.R. Item No. 2.10 Page 7							
	Sector 2	1	3.00	3.00	2.00	18		
	less PCC	-1	0.78			-0.78		
	less RCC	-1	3.04			-3.04		
	Sector 3	1	3.00	3.00	2.00	18.00		
	less PCC	-1	0.78			-0.78		
	less RCC	-1	3.04			-3.04		
						28.36		
					Say	30.00	221.10	6,633.00
						Cum		
	Basic rate	201.00						
	Add 10% for Malnad area works	20.10						
	Total	221.10	/Cum					
RCC								
4	KSRB 4.2.7: Providing and laying in position reinforced cement concrete design mix M25 with OPC @340kgs, with 20mm and down size graded granite metal course aggregates @ 0.70Cum and fine aggregates @ 0.47Cum, with super plasticisers @ 3 lts confirming to IS9103- 1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15cms thick, vibrated for all works in ground floor level for roof slabs, staircase, lintels and beams, retaining walls, return walls, walls (any thickness) including attached pilasters, columns, lintels, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6							
	S.R Item No 4.12 Page No. 14							
	Sector 2							
	For foundation	1	2.6	2.6	0.3	2.03		
	Pedastal	1	0.75	0.75	1.8	1.01		
	Sector 3							
	For foundation	1	2.6	2.6	0.3	2.03		
	Pedastal	1	0.75	0.75	1.8	1.01		
						6.08		
					Say	6.10	7074.10	43,152.01

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
	Basic rate	6431.00				Cum		
	Add 10% for Malnad area works	643.10						
	Total	7074.10	/Cum					
	TMT							
5	KSRB 4.9.2 : Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3							
	TMT Bars Fe 500							
	S.R. Item No. 4.46.2 Page 18							
	Sector 2							
	Sector 3	1	6.10	X	80.00	488.00		
					Kg/Cum	488.00		
					Say	500.00	Kgs	
					Or	0.50	77860.20	38,930.10
					Tonne			
	Basic rate	70782.00						
	Add 10% for Malnad area works	7078.20						
	Total	77860.20	/Tonne					
	Shuttering							
6	KSRB4-4-6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, base of columns for mass concrete including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2							
	S.R Item No 4.28 Page No. 16							
	Footing							
	Sector 2							
	Footing F1	4	2.6		0.3	3.12		
	Pedastal	4	0.75		1.8	5.4		
	Sector 3							
	Footing F1	4	2.6		0.3	3.12		
	Pedastal	4	0.75		1.8	5.4		
						17.04		
					Say	17.1	289.30	4,947.03
					Sqm			
	Basic rate	263.00						
	Add 10% for Malnad area works	26.30						
	Total	289.30	/Sqm					
7	KSRB15-3.11 : Providing 20mm thick cement plaster in single coat with cement mortar 1:4, to stone masonry / concrete surface including rounding off corners wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications.							
	-do- cement mortar 1 : 4							
	S.R Item No 15.19 Page No. 116							
	Sector 2	1	3.00		0.75	2.25		
	Sector 3	1	3.00		0.75	2.25		
						4.50		
					Say	5.00	300.30	1,501.50
					Sqm			
	Basic rate	273.00						
	Add 10% for Malnad area works	27.30						
	Total	300.30	/Sqm					
8	KSRB 15-16.1 : Providing and finishing external walls in two coats with waterproof cement paint of approved brand and shade to give an even shade after thoroughly brooming the surface to remove all dirt and loose powdered material, free from mortar drops and other foreign matter cost of materials, labour, complete as per specifications. - with primer							
	Item no 15.53.2 ,Page no. 120							
	For pedestal							
	Sector 2	1	3.00		0.75	2.25		
	Sector 3	1	3.00		0.75	2.25		
						4.50		
					Say	5.00	112.20	561.00
					Sqm			
	Basic rate	102.00						
	Add 10% for Malnad area works	10.20						
	Total	112.20	/Sqm					
9	PVC Pipes as per IS-2509							
	PVC Pipe - 75 mm Dia							
	SI No 370 Item no 46.07 ,Material code :778075,Pg 14.(MESCOM SR ,Rates for standard stock of materials)							
	Sector 2	1	2.00			2.00		
	Sector 3	1	2.00			2.00		
						4.00	80.00	320.00
						m		
10	Dismantling, shifting and reinstallation of existing high mast pole as per the specification and instructions of Architect of the PMC/ Executive Engineer of MSCL							

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
	Rate Analysis	1				1.00	14884.00	14,884.00
						Nos.		
STREETLIGHT POLES								
11	KSRB 2-2 : Earthwork excavation by Manual means for foundation of buildings, water supply and sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. including breaking of clods complete as per specifications. specification. No. KBS 2.1(a) / 2.3.5							
	For light poles							
	Sector 1	34	1.00	1.00	1.70	57.80		
	Sector 3	26	1.00	1.00	1.70	44.20		
	Sector 4	24	1.00	1.00	1.70	40.80		
	Sector 5	22	1.00	1.00	1.70	37.40		
						180.20		
					Say	182.00	Cum	
a)	In Ordinary Soil 90%							
	S.R. Item No. 2.3 Page 6		182.00	X	0.90	163.80	328.90	53,873.82
						Cum		
	Basic rate	299.00						
	Add 10% for Malnad area works	29.90						
	Total	328.90	/Cum					
b)	In Hard soil 10%							
	S.R. Item No. 2.4 Page 6		182.00	X	0.10	18.20	492.80	8,968.96
						Cum		
	Basic rate	448.00						
	Add 10% for Malnad area works	44.80						
	Total	492.80	/Cum					
12	KSRB 4-1.2 : Providing and laying in position plain cement concrete of mix 1:3:6 with OPC @ 220 kgs, with 40mm and down size graded granite metal course aggregates @ 0.892 cum and fine aggregates @ 0.465 cum machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2							
	S.R. Item No. 4.2 Page 13							
	Sector 1	34	0.80	0.80	0.10	2.18		
	Sector 3	26	0.80	0.80	0.10	1.66		
	Sector 4	24	0.80	0.80	0.10	1.54		
	Sector 5	22	0.80	0.80	0.10	1.41		
						6.78		
					Say	7.00	6175.40	43,227.80
						Cum		
	Basic rate	5614.00						
	Add 10% for Malnad area works	561.40						
	Total	6175.40	/Cum					
13	KSRB 2-3- Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. In depth, compacting each deposited layer by ramming after watering with lead upto 50m and lift upto 1.5 m including cost of all labour complete as per specifications. Specification no. KBS 2.9							
	S.R. Item No. 2.10 Page 7							
	Sector 1	34	1.00	1.00	1.70	57.8		
	Less PCC	-1	2.18			-2.176		
	Less RCC	-1	26.66			-26.66		
	Sector 3	26	1.00	1.00	1.70	44.2		
	Less PCC	-1	1.66			-1.664		
	Less RCC	-1	20.38			-20.38		
	Sector 4	24	1.00	1.00	1.70	40.80		
	Less PCC	-1	1.54			-1.54		
	Less RCC	-1	18.82			-18.82		
	Sector 5	22	1.00	1.00	1.70	37.40		
	Less PCC	-1	1.41			-1.41		
	Less RCC	-1	17.25			-17.25		
						90.31		
					Say	92.00	221.10	20,341.20
						Cum		
	Basic rate	201.00						
	Add 10% for Malnad area works	20.10						
	Total	221.10	/Cum					
RCC								
14	KSRB 4.2.7: Providing and laying in position reinforced cement concrete design mix M25 with OPC @340kgs, with 20mm and down size graded granite metal course aggregates @ 0.70Cum and fine aggregates @ 0.47Cum, with super plasticisers @ 3 lts confirming to IS9103- 1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15cms thick, vibrated for all works in ground floor level for roof slabs, staircase, lintels and beams, retaining walls, return walls, walls (any thickness) including attached pilasters, columns, lintels, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6							
	S.R Item No 4.12 Page No. 14							
	For foundation							
	Sector 1	34	0.7	0.7	1.6	26.66		
	Sector 3	26	0.7	0.7	1.6	20.38		

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
	Sector 4	24	0.7	0.7	1.6	18.82		
	Sector 5	22	0.7	0.7	1.6	17.25		
						83.10		
					Say	85.00	7074.10	6,01,298.50
	Basic rate	6431.00				Cum		
	Add 10% for Malnad area works	643.10						
	Total	7074.10	/Cum					
	TMT							
15	KSRB 4.9.2 : Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3							
	TMT Bars Fe 500							
	S.R. Item No. 4.46.2 Page 18							
	Sector 1	1	26.66	X	80.00	2132.48		
	Sector 3	1	20.38	X	80.00	1630.72		
	Sector 4	1	18.82	X	80.00	1505.28		
	Sector 5	1	17.25	X	80.00	1379.84		
					Kg/Cum			
						6648.32	Kgs	
						6.65		
					Say	7.00	77860.20	5,45,021.40
						Tonne		
	Basic rate	70782.00						
	Add 10% for Malnad area works	7078.20						
	Total	77860.20	/Tonne					
	Shuttering							
16	KSRB4-4.6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, base of columns for mass concrete including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2							
	S.R. Item No 4.28 Page No. 16							
	Footing F1							
	Sector 1	34	2.8		1.6	152.32		
	Sector 3	26	2.8		1.6	116.48		
	Sector 4	24	2.8		1.6	107.52		
	Sector 5	22	2.8		1.6	98.56		
						474.88		
					Say	480	289.30	1,38,864.00
						Sqm		
	Basic rate	263.00						
	Add 10% for Malnad area works	26.30						
	Total	289.30	/Sqm					
17	KSRB15-3.11 : Providing 20mm thick cement plaster in single coat with cement mortar 1:4, to stone masonry / concrete surface including rounding off corners wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications.							
	S.R. Item No. 15.19 Page 116							
	Sector 1	34	2.80		0.70	66.64		
	Sector 3	26	2.80		0.70	50.96		
	Sector 4	24	2.80		0.70	47.04		
	Sector 5	22	2.80		0.70	43.12		
						207.76		
					Say	210.00	300.30	63,063.00
						Sqm		
	Basic rate	273.00						
	Add 10% for Malnad area works	27.30						
	Total	300.30	/Sqm					
18	KSRB 15-16.1 : Providing and finishing external walls in two coats with waterproof cement paint of approved brand and shade to give an even shade after thoroughly brooming the surface to remove all dirt and loose powdered material, free from mortar drops and other foreign matter cost of materials, labour, complete as per specifications. - with primer							
	Item no 15.53.2 ,Page no. 120							
	For pedestal							
	Sector 1	34	2.80		0.70	66.64		
	Sector 3	26	2.80		0.70	50.96		
	Sector 4	24	2.80		0.70	47.04		
	Sector 5	22	2.80		0.70	43.12		
						207.76		
					Say	210.00	112.20	23,562.00
						Sqm		
	Basic rate	102.00						
	Add 10% for Malnad area works	10.20						
	Total	112.20	/Sqm					
19	PVC Pipes as per IS-2509							
	PVC Pipe - 32 mm Dia							
	SI No 366 Item no 46.03 ,Material code :778032,Pg 14.(MESCOM SR ,Rates for standard stock of materials)							
	Sector 1	34	2.00			68.00		

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
	Sector 3	26	2.00			52.00		
	Sector 4	24	2.00			48.00		
	Sector 5	22	2.00			44.00		
						212.00		
					Say	215.00	41.00	8,815.00
						m		
20	Erection and testing of Cast Iron Pole - 6 m tall onto the Foundation as per specification and instructions of Architect of PMC/ Executive Engineer, MSCI							
	Rate Analysis							
	Sector 1	34				34		
	Sector 3	26				26		
	Sector 4	24				24		
	Sector 5	22				22		
						106	4,720.00	5,00,320.00
						Nos.		
POST TOP LIGHT POLES								
21	KSRB 2-2 : Earthwork excavation by Manual means for foundation of buildings, water supply and sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. including breaking of clods complete as per specifications. specification. No. KBS 2.1(a) / 2.3.5							
	For light poles							
	Sector 2	29	1.00	1.00	1.70	49.30		
	Sector 3	24	1.00	1.00	1.70	40.80		
						90.10		
					Say	92.00	Cum	
a)	In Ordinary Soil 90%							
	S.R. Item No. 2.3 Page 6		92.00	X	0.90	82.80	328.90	27,232.92
						Cum		
	Basic rate	299.00						
	Add 10% for Malnad area works	29.90						
	Total	328.90	/Cum					
b)	In Hard soil 10%							
	S.R. Item No. 2.4 Page 6		92.00	X	0.10	9.20	492.80	4,533.76
						Cum		
	Basic rate	448.00						
	Add 10% for Malnad area works	44.80						
	Total	492.80	/Cum					
22	KSRB 4-1.2 : Providing and laying in position plain cement concrete of mix 1:3:6 with OPC @ 220 kgs, with 40mm and down size graded granite metal course aggregates @ 0.892 cum and fine aggregates @ 0.465 cum machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2							
	S.R. Item No. 4.2 Page 13							
	Sector 2	29	0.80	0.80	0.10	1.86		
	Sector 3	24	0.80	0.80	0.10	1.54		
						3.39		
					Say	3.50	6175.40	21,613.90
						Cum		
	Basic rate	5614.00						
	Add 10% for Malnad area works	561.40						
	Total	6175.40	/Cum					
23	KSRB 4.2.7: Providing and laying in position reinforced cement concrete design mix M25 with OPC @340kgs, with 20mm and down size graded granite metal course aggregates @ 0.70Cum and fine aggregates @ 0.47Cum, with super plasticisers @ 3 lts confirming to IS9103- 1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15cms thick, vibrated for all works in ground floor level for roof slabs, staircase, lintels and beams, retaining walls, return walls, walls (any thickness) including attached pilasters, columns, lintels, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6							
	S.R Item No 4.12 Page No. 14							
	For foundation							
	Sector 2	29	0.7	0.7	1.6	22.74		
	Sector 3	24	0.7	0.7	1.6	18.82		
						41.55		
					Say	43.00	7074.10	3,04,186.30
						Cum		
	Basic rate	6431.00						
	Add 10% for Malnad area works	643.10						
	Total	7074.10	/Cum					
24	KSRB4-4-6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, base of columns for mass concrete including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2							
	S.R Item No 4.28 Page No. 16							
	Footing F1							

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
	Sector 2	29	2.8		1.6	129.92		
	Sector 3	24	2.8		1.6	107.52		
						237.44		
					Say	240	289.30	69,432.00
						Sqm		
	Basic rate	263.00						
	Add 10% for Malnad area works	<u>26.30</u>						
	Total	<u>289.30</u>	/Sqm					
25	KSRB15-3.11 : Providing 20mm thick cement plaster in single coat with cement mortar 1:4, to stone masonry / concrete surface including rounding off corners wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications.							
	S.R. Item No. 15.19 Page 116							
	Sector 2	29	2.80		1.60	129.92		
	Sector 3	24	2.80		1.60	107.52		
						237.44		
					Say	240.00	300.30	72,072.00
						Sqm		
	Basic rate	273.00						
	Add 10% for Malnad area works	<u>27.30</u>						
	Total	<u>300.30</u>	/Sqm					
26	KSRB 4.9.2 : Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3							
	TMT Bars Fe 500							
	S.R. Item No. 4.46.2 Page 18							
	Sector 2	1	22.74	X	80.00	1818.88		
	Sector 3	1	18.82	X	80.00	1505.28		
			Cum			3324.16		
					Kg/cum			
					Say	3550.00	Kgs	
					Or	3.50	77860.20	2,72,510.70
						Tonne		
	Basic rate	70782.00						
	Add 10% for Malnad area works	<u>7078.20</u>						
	Total	<u>77860.20</u>	/Tonne					
27	KSRB 2.3- Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. In depth, compacting each deposited layer by ramming after watering with lead upto 50m and lift upto 1.5 m including cost of all labour complete as per specifications. Specification no. KBS 2.9							
	S.R. Item No. 2.10 Page 7							
	Sector 2	29	1.00	1.00	1.70	49.3		
	Less PCC	-1	1.86			-1.856		
	Less RCC	-1	22.74			-22.74		
	Sector 3	24	1.00	1.00	1.70	40.80		
	Less PCC	-1	1.54			-1.54		
	Less RCC	-1	18.82			-18.82		
						45.16		
					Say	48.00	221.10	10,612.80
						Cum		
	Basic rate	201.00						
	Add 10% for Malnad area works	<u>20.10</u>						
	Total	<u>221.10</u>	/Cum					
28	KSRB 15-16.1 : Providing and finishing external walls in two coats with waterproof cement paint of approved brand and shade to give an even shade after thoroughly brooming the surface to remove all dirt and loose powdered material, free from mortar drops and other foreign matter cost of materials, labour, complete as per specifications. with primer							
	Item no 15.53.2 ,Page no. 120							
	For pedestal							
	Sector 2	29	2.80		0.70	56.84		
	Sector 3	24	2.80		0.70	47.04		
						103.88		
					Say	105.00	112.20	11,781.00
						Sqm		
	Basic rate	102.00						
	Add 10% for Malnad area works	<u>10.20</u>						
	Total	<u>112.20</u>	/Sqm					
29	PVC Pipes as per IS-2509							
	PVC Pipe - 32 mm Dia							
	SI No 366 Item no 46.03 ,Material code :778032,Pg 14.(MESCOM SR ,Rates for standard stock of materials)							
	Sector 2	29	2.00			58.00		
	Sector 3	24	2.00			48.00		
						106.00		
					Say	110.00	41.00	4,510.00
						m		

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
30	Applying red lead ready mix priming coat over new steel or other metal surface including preparing the surface after thoroughly cleaning oil, grease, dirt and other foreign matter, and scoured with wire brushes, fine steel wool, sand papers including cost of materials, labour, complete as per specifications.							
	SR Item No 15.73, Page No123							
	Sector 1							
	6 m pole	34		4.71		160.14		
	Sector 2							
	4 m pole	29		3.14		91.06		
	Sector 3							
	6 m pole	26		4.71		122.46		
	4 m pole	24		3.14		75.36		
	Sector 4							
	6 m pole	24		4.71		113.04		
	Sector 5							
	6 m pole	22		4.71		103.62		
						665.68		
						670.00	45.10	30,217.00
						Sqm		
	Basic rate	41.00						
	Add 10% for Malnad area works	4.10						
	Total	45.10/Sqm						
31	KSRB 15-18.2: Providing and applying enamel metal paint two coats (excluding priming coat) over new steel or other metal surface brushing to give an even shade after cleaning oil, grease, dirt and other foreign matter, including cost of materials, labour, complete as per specifications.							
	SR Item no 15.74, Page No 123							
	Painting of Poles							
	Sector 1							
	6 m pole	34	4.71			160.14		
	Sector 2							
	4 m pole	29	3.14			91.06		
	Sector 3							
	6 m pole	26	4.71			122.46		
	4 m pole	24	3.14			75.36		
	Sector 4							
	6 m pole	24	4.71			113.04		
	Sector 5							
	6 m pole	22	4.71			103.62		
						665.68		
					Say	670.00	104.50	70,015.00
						Sqm		
	Basic rate	95.00						
	Add 10% for Malnad area works	9.50						
	Total	104.50/Sqm						
32	Fixing charges for installation of CI Poles Foundation bolts/Anchorbolts and template/Base plate on site as per the drawings and instructions of Architect of PMC and Incharge Executive Engineer, MSCL							
	Rate Analysis							
	Sector 1							
	6 m pole	34				34.00		
	Sector 2							
	4 m pole	29				29.00		
	Sector 3							
	6 m pole	26				26.00		
	4 m pole	24				24.00		
	Sector 4							
	6 m pole	24				24.00		
	Sector 5							
	6 m pole	22				22.00		
						159.00	58.00	9,222.00
33	Erection and testing of Cast Iron Pole - 4 m tall onto the Foundation as per specification and instructions of Architect of PMC/ Executive Engineer, MSCL							
	Rate analysis							
	Sector 2	29				29.00		
	Sector 3	24				24.00		
						53.00	3386.00	1,79,458.00
						Nos.		
Sub Total								32,27,993.00
Non SoR Items - Approved Rate								
1	Supplying, Erection and testing of 6.0mtr height decorative cast iron pole with CI embellishments welded. The bottom CI portion should have round mounting base of not more than 450mm dia and must be provided with service window comprising of 4way, 25Amp connector terminal and a MCB. The top portion should not be less than 90mm dia. Foundation bolts and Templates included. The work shall be carried out as per the instructions of Architect of the PMC and incharge Executive Engineer of MSCL. Supplying of following size single ornamental Cast Iron bracket & fixing on the existing pole for mounting LED street light fitting including necessary accessories etc. as required - 1 m in length . The work shall be carried out as per the instructions of Architect of the PMC and incharge Executive Engineer of MSCL. (Approved Rate)							

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
	Sector 1	34				34		
	Sector 3	26				26		
	Sector 4	24				24		
	Sector 5	22				22		
						106	44840	47,53,040.00
						Nos.		
2	Supplying, Erection and testing of 4.0mtr. height decorative cast iron pole for post top light with CI embellishments welded. The bottom CI portion should have round mounting base of not more than 400mm dia and must be provided with service window comprising of 4way, 25Amp connector terminal and a MCB. The top portion should not be less than 90mm dia. Foundation bolts and Templates included. The work shall be carried out as per the instructions of Architect of the PMC and incharge Executive Engineer of MSCL. (Approved Rate)							
	Sector 2	29				29		
	Sector 3	24				24		
						53	41770	22,13,810.00
						Nos.		
Sub Total								69,66,850.00

Assistant Engineer
MSCL Mangaluru

Assistant Executive Engineer
MSCL Mangaluru

Executive Engineer
MSCL Mangaluru

General Manager Technical
MSCL Mangaluru

Name of the Work : Decorative Finishing of select Compound walls								
Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
1	KSRB 2-2 : Earthwork excavation by Manual means for foundation of buildings, water supply and sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. including breaking of clods complete as per specifications. specification. No. KBS 2.1(a) / 2.3.5							
	For Compound wall							
		1	50.00	0.60	1.00	30.00		
					Say	30.00	Cum	
a)	In Ordinary Soil 100%							
	S.R. Item No. 2.3 Page 6		30	X	1	30.00	328.9	9,867.00
						Cum		
	Basic rate	299.00						
	Add 10% for Malnad area works	29.90						
	Total	328.90	/Cum					
2	KSRB 4-1.2 : Providing and laying in position plain cement concrete of mix 1:4:8 with OPC @ 220 kgs, with 40mm and down size graded granite metal course aggregates @ 0.892 cum and fine aggregates @ 0.465 cum machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2							
	S.R. Item No. 4.3 Page 13							
	For vertical box section							
		1	50.00	0.50	0.10	2.50		
					Say	3.00	6063.20	18,190.00
	Basic rate	5512.00				Cum		
	Add 10% for Malnad area works	551.20						
	Total	6063.20	/Cum					
3	KSRB 5.2-3 : Providing and constructing granite / trap / basalt size stone masonry in foundation cement mortar 1:6, stone hammerd dressed in courses not less than 20 cms high, bond stones at 2m. apart in each course including cost of materials, labour, curing complete as per specifications.							
	KBS 5.1.13							
	S.R. Item No. 5.3 Page 25							
	Compound wall							
	Sector 5	1	50.00	0.60	0.45	13.50		
					Say	14.00	4471.50	62,601.00
	Basic rate	4065.00				Cum		
	Add 10% for Malnad area works	406.50						
	Total	4471.50	/Cum					
4	Providing and constructing laterite size stone masonry including cost and conveyance of materials curing etc complete as per specification FOR SUPER STRUCTURE in C M 1:6							
	S.R. Item No. 42.5.3, Page no 384							
	Sector 2							
	Main wall	1	50.00	0.23	1.80	20.70		
	Pillars	17	0.45	0.45	1.80	6.20		
						26.90		
					Say	27.00	5992.80	1,61,806.00
	Basic rate	5448.00				Cum		
	Add 10% for Malnad area works	544.80						
	Total	5992.80	/Cum					
5	KSRB15-3.11 : Providing 20mm thick cement plaster in single coat with cement mortar 1:4, to stone masonry / concrete surface including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications.							
	S.R. Item No. 15.19 Page 116							
	Compound wall							
	Sector 2	1	26	2.50		65.00		
	columns	18	0.3	2.50		13.50		
	Sector 3	1	20	1.80		36.00		
	columns	14	0.3	1.80		7.56		
		1	20	1.80		36.00		
	columns	14	0.3	1.80		7.56		
		1	21	1.80		37.80		
	columns	14	0.3	1.80		7.56		
	Sector 4	1	26.5	1.80		47.70		
	columns	16	0.3	1.80		8.64		
	Sector 5	1	17	1.80		30.60		
	columns	12	0.3	1.80		6.48		
		1	46	1.80		82.80		
	columns	32	0.3	1.80		17.28		
	New wall	1	50	1.80		90.00		
	columns	17	0.3	1.80		9.18		
						503.66		
					Say	505.00	300.30	1,51,652.00

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
	Basic rate	273.00				Sqm		
	Add 10% for Malnad area works	27.30						
	Total	300.30	/Sqm					
6	KSRB 4-1.2 : Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 320 kgs, with 20mm and down size graded granite metal course aggregates @ 0.69 cum and fine aggregates @ 0.46 cum with superplasticiser @ 3 Ltrs confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms. thick, vibrated for beams, columns of all sizes in foundation, plinth and superstructure ground floor level for roof slabs, staircase, lintels, columns including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.6							
	S.R. Item No. 4.11 Page 14							
	For Coping							
	Sector 2	1	26	0.23	0.25	1.50		
	Sector 3	1	20	0.23	0.25	1.15		
		1	20	0.23	0.25	1.15		
		1	21	0.23	0.25	1.21		
	Sector 4	1	26.5	0.23	0.25	1.52		
	Sector 5	1	17	0.23	0.25	0.98		
		1	46	0.23	0.25	2.65		
	New wall	1	50	0.23	0.25	2.88		
						13.02		
					Say	14	6642.90	93,001.00
						Cum		
	Basic rate	6039.00						
	Add 10% for Malnad area works	603.90						
	Total	6642.90	/Cum					
7	KSRB4-4-6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, base of columns for mass concrete including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2							
	S.R. Item No 4.28 Page No. 16							
	For Coping							
	Sector 2	2	26		0.25	13.00		
	Sector 3	2	20		0.25	10.00		
		2	20		0.25	10.00		
		2	21		0.25	10.50		
	Sector 4	2	26.5		0.25	13.25		
	Sector 5	2	17		0.25	8.50		
		2	46		0.25	23.00		
	New wall	2	50		0.25	25.00		
						113.25		
					Say	115	289.30	33269.5
						Sqm		
	Basic rate	263.00						
	Add 10% for Malnad area works	26.30						
	Total	289.30	/Sqm					
8	Providing and fixing 20mm thick gang saw cut Lacquered granite for cladding in CM 1:4 propotion with a coat of rough plastering using CM1:4 cut to required shape, pattern with paper joints,finished with cement mortar using white cement and color pigments to match the color of slab making through jointing with sealant,grooves in joints including cost of curing etd.complete including cost and conveyance of all materials,mortar,labor for all items of work, HOM etc.,complete as per specification.							
	S.R. Item No. 14.60 Page 111							
	For compound wall clading							
	Sector 2	1	26	2.5		65		
	columns	18	0.3	2.5		13.5		
	Sector 3	1	20	1.8		36		
	columns	14	0.3	1.8		7.56		
		1	20	1.8		36		
	columns	14	0.3	1.8		7.56		
		1	21	1.8		37.8		
	columns	14	0.3	1.8		7.56		
	Sector 4	1	26.5	1.8		47.7		
	columns	16	0.3	1.8		8.64		
	Sector 5	1	17	1.8		30.6		
	columns	12	0.3	1.8		6.48		
		1	46	1.8		82.8		
	columns	32	0.3	1.8		17.28		
	New wall	1	50	1.80		90.00		
	columns	17	0.3	1.80		9.18		
						503.66		
					say	505	3820.30	19,29,251.50
						Sqm		
	Basic rate	3473.00						
	Add 10% for Malnad area works	347.30						

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
	Total	3820.30	Sqm					
9	Providing Mangalore Ridge tiles set in CM 1:2 and pointed with CM 1:2 including cost of materials,labour,HOM complete as per specifications. S R item NO.37.7, Page no. 266 For Compound wall							
	Sector 2	1	26			26		
	Sector 3	1	20			20		
		1	20			20		
		1	21			21		
	Sector 4	1	26.5			26.5		
	Sector 5	1	17			17		
		1	46			46		
	New wall	1	50			50		
						226.50		
					say	230.00	226.60	52,118.00
						Rmt		
	Basic rate	206.00						
	Add 10% for Malnad area works	20.60						
	Total	226.60	Rmt					
10	Providing and finishing external walls in two coats over one coat of 100% acrylic silicon glazed primer with antifungal paint for top coat of approved brand and shade to give an even shade after thoroughly brooming the surface to remove all dirt and loose powdered material, free from mortar drops and other foreign matter cost of materials, labour, complete as per specifications. SR Item No 15.104 Page No127 For Mangalore Ridge tiles							
	Sector 2	2	26	0.6		31.20		
	Sector 3	2	20	0.6		24.00		
		2	20	0.6		24.00		
		2	21	0.6		25.20		
	Sector 4	2	26.5	0.6		31.80		
	Sector 5	2	17	0.6		20.40		
		2	46	0.6		55.20		
	New wall	2	50	0.6		60.00		
						271.80		
					Say	275.00	198.00	54,450.00
						Sqm		
	Basic rate	180.00						
	Add 10% for Malnad area works	18.00						
	Total	198.00	/Sqm					
Sub Total								25,66,206.00

Assistant Engineer
MSCL Mangaluru

Assistant Executive Engineer
MSCL Mangaluru

Executive Engineer
MSCL Mangaluru

General Manager Technical
MSCL Mangaluru

Name of the Work : Providing and fixing of Sign boards for Heritage Character only(Non- Road side)

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
1	Providing and fixing RCC name board of size 1.35 x 0.6 x 0.04 mtrs fixed in reinforced cement concrete poles of size 0.1 x 0.1 x 2.6 mtrs in cement concrete M 20 proportion using 20 mm and down size graded metal machine mixed with 10 mm dia main steel bars and 8 mm dia stirrups. The board shall be provided with 12 mm thick cement plaster in cement mortar 1:3 on both the sides. The poles shall be embedded in the ground for a depth of 0.5 m with cement concrete M 10 proportion. The board shall be fixed as per the drawing and at the place indicated by the engineer in charge of the work. The cost includes excavation, bare cost of all materials, cost of steel, centering, transporation charges, fixing charges, labour, HOM etc., The work shall be carried out as per the detailed specifications , drawings and directions of the engineer of the work.							
	S R item NO.37.60, Page no. 271	15				15	6050.00	90,750.00
						Each		
	Basic rate	5500.00						
	Add 10% for Malnad area works	550.00						
	Total	6050.00	/Each					
Sub Total								90,750.00

Assistant Engineer
MSCL Mangaluru

Assistant Executive Engineer
MSCL Mangaluru

Executive Engineer
MSCL Mangaluru

General Manager Technical
MSCL Mangaluru

Name of the Work : Beautification of Temple Tree Katte								
Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
1	KSRB 24-36: Removing the tiles in patches in area exceeding 10 tiles and not exceeding 5 sqm including removing old tiles preparing surfaces and laying or setting new or old tiles complete including cost of materials (excluding cost of tiles) labour, complete as per specifications. Specification no. KBS 24 - glazed tiles							
	S.R. Item No. 16.31 Page 133							
		2	4.5		1.2	10.8		
		2	4.8		1.2	11.52		
	Steps	3	1.05	0.2		0.63		
		2	4	3		24		
		3	1.05	0.3		0.95		
						47.90		
					Say	50	884.40	44,220.00
						Sqm		
	Basic rate	804.00						
	Add 10% for Malnad area works	80.40						
	Total	884.40	/Sqm					
2	KSRRB M200-12.1. Dismantling of existing structure like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P ans scaffolding wherever necessary, sorting the dismantled material, disposal of unservicable material and stacking the servicable material with all lifts complete as per specifications.							
	S.R Item No 18.17 Page 139							
	For masonry							
		4	4.5	0.35	1.20	7.56		
		1	1.2	0.9	0.30	0.32		
		1	1.2	0.6	0.30	0.22		
		1	1.2	0.3	0.30	0.11		
						8.21		
					Say	9.00	499.40	4,494.60
	Basic rate	454.00				Cum		
	Add 10% for Malnad area works	45.40						
	Total	499.40	/Cum					
3	Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in : Channels, angles, tees and flats							
	CPWD Delhi SR 2018 , Vol. 2 , SR Item no. 15.17.2, Page no. 259							
		1	200.00			200.00	1.7	340.00
						kg		
4	KSRB 2-2 : Earthwork excavation by Manual means for foundation of buildings, water supply and sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. including breaking of clods complete as per specifications. specification. No. KBS 2.1(a) / 2.3.5							
	In Ordinary Soil 100%							
	S.R. Item No. 2.3 Page 6	2	4.252	0.4	0.6	2.04		
		2	3.228	0.4	0.6	1.55		
		1	2.35	0.3	0.35	0.25		
		2	0.595	0.3	0.35	0.12		
						3.96		
					Say	4.00	328.90	1,315.60
						Cum		
	Basic rate	299.00						
	Add 10% for Malnad area works	29.90						
	Total	328.90	/Cum					
5	KSRB 4-1.2 : Providing and laying in position plain cement concrete of mix 1:4:8 with OPC @ 220 kgs, with 40mm and down size graded granite metal course aggregates @ 0.892 cum and fine aggregates @ 0.465 cum machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2							
	S.R. Item No. 4.3 Page 13							
		2	4.252	0.4	0.1	0.34		
		2	3.228	0.4	0.1	0.26		
		1	2.35	0.3	0.1	0.07		
		2	0.595	0.3	0.1	0.04		
		1	2.35	0.825	0.1	0.19		
						0.90		
					Say	1.00	6063.20	6,063.20
						Cum		
	Basic rate	5512.00						
	Add 10% for Malnad area works	551.20						
	Total	6063.20	/Cum					
6	Providing and constructing laterite size stone masonry including cost and conveyance of materials curing etc complete as per specification FOR basement in C M 1:6							
	S.R. Item No. 42.5.1, Page no 384							
		2	4.252	0.35	0.863	2.57		
		2	3.228	0.35	0.863	1.95		
		2	4.252	0.23	0.4	0.78		
		2	3.228	0.23	0.4	0.59		
		1	2.35	0.23	0.463	0.25		
		2	0.595	0.23	0.463	0.13		

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Name of the Work : RCC foundation for Cast Iron Railings and MS Bollards

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
RAILINGS								
1	KSRB 2-2 : Earthwork excavation by Manual means for foundation of buildings, water supply and sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. including breaking of clods complete as per specifications. specification. No. KBS 2.1(a) / 2.3.5							
	In Ordinary Soil 90%							
	S.R. Item No. 2.3 Page 6							
	Sector 1	85	0.3	0.3	0.5	3.825		
	Sector 3	30	0.3	0.3	0.5	1.35		
	Sector 4	82	0.3	0.3	0.5	3.69		
	Sector 5	82	0.3	0.3	0.5	3.69		
						12.56		
					Say	13.00	328.90	4,276.00
	Basic rate	299.00				Cum		
	Add 10% for Malnad area works	29.90						
	Total	328.90	/Cum					
2	KSRB 4.2.8: Providing and laying in position reinforced cement concrete design mix M20 with OPC @320kgs, with 20mm and down size graded granite metal course aggregates @ 0.69Cum and fine aggregates @ 0.46Cum, with super plasticisers @ 3 lts confirming to IS9103- 1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15cms thick, vibrated for all works in ground floor level for roof slabs, staircase, lintels and beams, retaining walls, return walls, walls (any thickness) including attached pilasters, columns, lintels, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6							
	S.R Item No 4.13 Page No. 14							
	Sector 1	85	0.3	0.3	0.5	3.825		
	Sector 3	30	0.3	0.3	0.5	1.35		
	Sector 4	82	0.3	0.3	0.5	3.69		
	Sector 5	82	0.3	0.3	0.5	3.69		
						12.56		
					Say	13.00	6899.20	89,689.60
	Basic rate	6272.00				Cum		
	Add 10% for Malnad area works	627.20						
	Total	6899.20	/Cum					
MS BOLLARDS								
3	KSRB 2-2 : Earthwork excavation by Manual means for foundation of buildings, water supply and sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. including breaking of clods complete as per specifications. specification. No. KBS 2.1(a) / 2.3.5							
	Sector 3							
	Fixed MS Bollard	20	0.45	0.45	0.4	1.62		
	Removable MS Bollard	16	0.45	0.45	0.4	1.30		
						2.92		
a)	In Ordinary Soil 90%				Say	3.20		
	S.R. Item No. 2.3 Page 6		3.20	X	1	3.20	328.9	1,052.48
						Cum		
	Basic rate	299.00						
	Add 10% for Malnad area works	29.90						
	Total	328.90	/Cum					
4	KSRB 4-1.2 : Providing and laying in position plain cement concrete of mix 1:3:6 with OPC @ 220 kgs, with 40mm and down size graded granite metal course aggregates @ 0.892 cum and fine aggregates @ 0.465 cum machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2							
	S.R. Item No. 4.2 Page 13							
	For vertical box section - Sector 3							
	Fixed MS Bollard	20	0.45	0.45	0.1	0.41		
	Removable MS Bollard	16	0.45	0.45	0.1	0.32		
						0.73		
					Say	1.00	6175.40	6,175.00
	Basic rate	5614.00				Cum		
	Add 10% for Malnad area works	561.40						
	Total	6175.40	/Cum					
5	KSRB 4-1.2 : Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 320 kgs, with 20mm and down size graded granite metal course aggregates @ 0.69 cum and fine aggregates @ 0.46 cum with superplasticiser @ 3 Ltrs confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms. thick, vibrated for beams, columns of all sizes in foundation, plinth and superstructure ground floor level for roof slabs, staircase, lintels, columns including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.6							

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
	S.R. Item No. 4.11 Page 14							
A	FOR FOOTINGS							
	For Pedestals- Sector 3							
	Fixed MS Bollard	20	0.3	0.3	0.45	0.81		
	Removable MS Bollard	16	0.3	0.3	0.45	0.65		
						1.46		
					Say	2	6642.90	13,286.00
						Cum		
	Basic rate	6039.00						
	Add 10% for Malnad area works	603.90						
	Total	6642.90	/Cum					
6	KSRB 4.9.2 : Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3							
	TMT Bars Fe 500							
	S.R. Item No. 4.46.2 Page17							
	Footings							
	Fixed and Removable MS Bollard		2.00	X	80.00	160.00		
						160.00	Kgs	
					Say	200.00	Kgs	
					Or	0.20	77860.20	15,572.00
						Tonne		
	Basic rate	70782.00						
	Add 10% for Malnad area works	7078.20						
	Total	77860.20	/Tonne					
7	KSRB 4-6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2							
	S.R. Item No. 4.28 Page 16							
	For Foundations							
	Fixed MS Bollard	20	1.2		0.5	12.00		
	Removable MS Bollard	16	1.2		0.5	9.60		
						21.60		
					Say	25	289.30	7,233.00
						Sqm		
	Basic rate	263.00						
	Add 10% for Malnad area works	26.30						
	Total	289.30	/Sqm					
	Sub Total							
	1,37,285.00							
Non SoR Items - Approved Rates								
1	Fabricating and providing M.S.Circular Bollards of 750 mm height above ground and 200mm dia, 10 Gauge with steel pedestal & steel cap as per designs given by the Architect including cutting, welding, riveting, polishing. The foundation shall be with base plate of 275x275x6mm thk and embedding pipe in foundation of 1:2:4 concrete as shown in drawing . The assembly shall be treated with Rusticised solution of approved company & applied with two coats of epoxy painting over one coat of epoxy primer to resist rusting of material (the treatment shall be given as per Manufacture's specifications and certificate to that effect shall be submitted along with Guarantee Certificate). The work shall be carried out as per the instructions of Architect of the PMC and Executive Engineer, MSCL. (Approved Rate)							
	Fixed Bollards							
		20.00				20	4350	87,000.00
						Nos.		
2	Fabricating and providing M.S.Circular Bollards of 750 mm height above ground and 200mm dia, 10 Gauge with steel pedestal , 275x275x6mm thk base plate(provision for fixing bolts to foundation base plate) & steel cap as per designs given by the Architect including cutting, welding, riveting, polishing. The foundation shall with base plate of 275x275x6mm thk with 20mm Diax6 nos holdfasts embedded in 1:2:4 concrete as shown in drawing , and provided with 4 Nos. 16 mm dia J Bolts for fixing bollards .The assembly shall be treated with Rusticised solution of approved company & applied with two coats of epoxy painting over one coat of epoxy primer (the treatment shall be given as per Manufacture's specifications and certificate to that effect shall be submitted along with Guarantee Certificate). The work shall be carried out as per the instructions of Architect of the PMC and Executive Engineer, MSCL. (Approved Rate)							
		16.00				16.00	7575	1,21,200.00
						Nos.		
3	Fabricating and providing of Cast Iron grills with Stainless steel pipes of specified size (matt finish/brushed steel finish)frame as per design. The ornamental grills made of Cast Iron of weight upto 45kg/sqm shall be framed by Stainless steel frame of 0.025 m diameter and 0.0127 m diameter circular sections as per design. The vertical and horizontal frame supports should be made up of Stainless steel pipe sections for height 0.95 m above ground of 304 grade and have brushed steel finish. The horizontal member of 50 mm dia 16 guage hollow pipe shall be welded to vertical hollow pipe of 50 mm dia 16 guage at intervals as marked in the drawing. The work includes providing two coats of enamel painting of approved colour over one coat of primer to the Cast Iron elements and shall include cost of all materials, fabrication, labour, painting, transportation , accessories charges as per specification and drawings given . The work shall be carried out as per the instructions of Architect of the PMC and Executive Engineer, MSCL. (Approved Rate)							
						365.00	11975.00	43,70,875.00
						Rmt		

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
4	Providing and Fixing Precast bollard - 0.75 m high and 0.2 m dia .cast using M-30 Grade Concrete with OPC with reinforcement as detailed in this specification and with acrylic painting finish, Including transportation , loading unloading and fixing at site as per instructions by Architect of PMC and EE engineer in charge MSCL. (Approved Rate)							
						<u>145.00</u>	2700.00	3,91,500.00
						Nos.		
5	Providing Precast Concrete bench - 1.50 m x 0.50 m x 0.45 m- without backrest and without armrest using M-30 Grade Concrete with OPC and with reinforcement as in detailed specification. Acrylic based paint is used for finishing top surface. Including transportation , loading unloading and fixing at site as per instructions by Architect of PMC and EE engineer in charge MSCL. (Approved Rate)							
						<u>75.00</u>	10620.00	7,96,500.00
						Nos.		
	Sub Total							57,67,075.00

Assistant Engineer
MSCL Mangaluru

Assistant Executive Engineer
MSCL Mangaluru

Executive Engineer
MSCL Mangaluru

General Manager Technical
MSCL Mangaluru

Name of work: Removal and reconstruction of façade treatment as required in the road widening

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
1	KSRRB M200-12.1. Dismantling of existing structure like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications.							
	S.R Item No 18.17 Page 139							
	For masonry	1	25			25.00		
					Say	<u>25.00</u>	499.40	12,485.00
	Basic rate	454.00				Cum		
	Add 10% for Malnad area works	<u>45.40</u>						
	Total	<u>499.40</u>	/Cum					
2	Dismantling tiled roofing with battens, boarding etc. complete including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.							
	CPWD SR Item no. 15.31 , Page no. 260							
		1	50.00		Say	<u>50.00</u>	150.00	7,500.00
						Sqm		
3	Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in : Channels, angles, tees and flats							
	CPWD Delhi SR 2018 , Vol. 2 , SR Item no. 15.17.2, Page no. 259							
		1	200.00			<u>200.00</u>	1.7	340
						kg		
4	Providing and fixing 20mm thick gang saw cut Lacquered granite for cladding in CM 1:4 proportion with a coat of rough plastering using CM1:4 cut to required shape, pattern with paper joints, finished with cement mortar using white cement and color pigments to match the color of slab making through jointing with sealant, grooves in joints including cost of curing etc. complete including cost and conveyance of all materials, mortar, labor for all items of work, HOM etc., complete as per specification.							
	S.R. Item No. 14.60 Page 111							
	for compound wall	1	10		2	20		
	for steps	1	5		1.2	6		
		1	5		0.6	3		
	floor	1	20		1	20		
	floor	1	20		0.6	12		
						61		
					Say	<u>65</u>	3820.30	2,48,319.50
	Basic rate	3473.00				Sqm		
	Add 10% for Malnad area works	<u>347.30</u>						
	Total	<u>3820.30</u>	Sqm					
5	KSRB15-3.11 : Providing 20mm thick cement plaster in single coat with cement mortar 1:4, to stone masonry / concrete surface including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications.							
	S.R. Item No. 15.19 Page 116							
	for main wall	1	20.00		1.00	20.00		
	steps	1	5.00		1.00	5.00		
		1	5.00		1.20	6.00		
						31.00		
					Say	<u>35.00</u>	300.30	10,511.00
	Basic rate	273.00				Sqm		
	Add 10% for Malnad area works	<u>27.30</u>						
	Total	<u>300.30</u>	/Sqm					
6	Providing and constructing laterite size stone masonry including cost and conveyance of materials curing etc complete as per specification FOR SUPER STRUCTURE in C M 1:6							
	S.R. Item No. 42.5.3, Page no 384							
	Sector 2							
	Main wall	1	20.00	0.23	1.00	4.60		
	steps	1	5.00	1.20	0.30	1.80		
		1	5.00	0.90	0.30	1.35		
		1	5.00	0.60	0.30	0.90		
		1	5.00	0.30	0.30	0.45		
	masonry pillars	4	0.35	0.35	1.50	0.74		
						9.84		
					Say	<u>12.00</u>	5992.80	71,914.00
	Basic rate	5448.00				Cum		
	Add 10% for Malnad area works	<u>544.80</u>						
	Total	<u>5992.80</u>	/Cum					

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
7	KSRB 4-1.2 : Providing and laying in position plain cement concrete of mix 1:4:8 with OPC @ 220 kgs, with 40mm and down size graded granite metal course aggregates @ 0.892 cum and fine aggregates @ 0.465 cum machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2							
	S.R. Item No. 4.3 Page 13							
	for main wall	1	20	0.6	0.1	1.2		
	for steps	1	5	1.2	0.1	0.6		
	for Floor	1	20	0.6	0.1	1.2		
						3		
					Say	4.00	6063.20	24,253.00
	Basic rate	5512.00				Cum		
	Add 10% for Malnad area works	<u>551.20</u>						
	Total	<u>6063.20</u>	/Cum					
8	KSRB 5.2-3 : Providing and constructing granite / trap / basalt size stone masonry in foundation cement mortar 1:6, stone hammerd dressed in courses not less than 20 cms high, bond stones at 2m. apart in each course including cost of materials, labour, curing complete as per specifications.							
	KBS 5.1.13							
	S.R. Item No. 5.3 Page 25							
	for main wall	1	20.00	0.60	0.60	7.20		
	for steps	1	5.00	1.20	0.30	1.80		
						9.00		
					Say	10.00	4471.50	44,715.00
	Basic rate	4065.00				Cum		
	Add 10% for Malnad area works	<u>406.50</u>						
	Total	<u>4471.50</u>	/Cum					
9	KSRB 2.3- Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. In depth, compacting each deposited layer by ramming after watering with lead upto 50m and lift upto 1.5 m including cost of all labour complete as per specifications. Specification no. KBS 2.9							
	S.R. Item No. 2.10 Page 7							
	for Plinth	1.00	20	0.6	1.00	12.00		
					Say	15.00	221.10	3,316.50
						Cum		
	Basic rate	201.00						
	Add 10% for Malnad area works	<u>20.10</u>						
	Total	<u>221.10</u>	/Cum					
10	Fabrication supplying and erecting M.S tubular trusses of all spans as per approved drawing and design prefabricated steel applications using quality material are durable, reliable and corrosion and abrasion resistant. Welding shall conform to structural welding code. Quality shall be on various parameters like shape, size, design gauge and polish. The entire trusses is anchored in RCC column by using 4nos of MS anchor bolts at each support with 10mm thick base plate and shoe plate. The work includes cutting, straightening, placing in position of MS pipes and welding where ever necessary and applying one coat of red oxide primer coat to all the members including coat of all material, labour charges and hire charges of machineries for cutting, welding, grinding and erection equipments, with all lead and lift, transportation etc., complete as per the specification							
	S.R. Item No. 7.29, Page no. 43							
		1	15	2.50		37.5		
					30.00	1125	122.10	1,37,362.50
					Kg/Sqm	Kgs		
	Basic rate	111.00						
	Add 10% for Malnad area works	<u>11.10</u>						
	Total	<u>122.10</u>	/Kgs					
11	Providing and installing of approved make pre-painted Galvalume iron accessories, like, plain, ridges, plain gutter, plain flashing, corner trim, etc. The total coated thickness (TCT) of the sheet shall be 0.47 mm +/- 0.02 tolerance mm Zinc- Alu alloy coating AZ 150 gsm as per ASTM 1397/755-550 mpa steel grade, 5-7 microns using self drilling/self taping screws of 25 mm length (width upto 500-600 mm only), to be fixed over the existing purlins, rafters, channels and trusses.							
	SR. Item no 38.31, Page no. 301							
		1	15	1.2		18		
					say	20	726	14,520.00
	Basic rate	660				Sqm		
	Add 10% for Malnad area works	<u>66.00</u>						
	Total	<u>726.00</u>	/Sqm					
12	KSRB 8.6 : Providing and fixing on wall surface 4.0 kg/ sq.cm H.D.P.E. rain down pipes of approved make and brand with necessary specials like shoes, bends and offsets fixed with iron clamps, wall plugs, screws, including cost of materials, labour, curing complete as per specifications.							
	KSRB 8.6-5- 4.0 Kg/ sq.cm H.D.P.E. rain down water pipes 110 mm outer dia							

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
	SR Item no. 8.19, Page no 49							
		6	5			30		
					Say	30	564.30	16,929.00
	Basic rate	513				m		
	Add 10% for Malnad area works	<u>51.30</u>						
	Total	<u>564.30</u>	/m					
13	Structural Steel Coatings Cleaning the existing steel surface by mechanical means such as sand blasting so as to remove all the existing loose rust etc. Using cotton waste swab apply rust converting, steel passivating, flash rust preventing sulphate and chloride free, non-alkaline, inorganic single component, rust converter and nano fill forming surface passivator. After 24 Hours remove the free/loose rust particles by simple dusting with brush. Providing and applying one coat of Two component, anticorrosive, solvent free, substituted long chain nylon reticulant based epoxy coating/primer. This should be followed by two coats of protective two component, APR based, UV resistant anticorrosive coating. Apply the coats by brush or spray at 4-6 hours interval between each coat.							
	S.R Item No 38.73 Page 321 for Roof							
		1	15	2.50		37.50		
	for gutter	1	15	1.20		18.00		
						55.50		
					say	60	363	21,780.00
	Basic rate	330.00				sqm		
	Add 10% for Malnad area works	<u>33.00</u>						
	Total	<u>363.00</u>	/Sqm					
14	KSRB 15-18.2: Providing and applying enamel metal paint two coats (excluding priming coat) over new steel or other metal surface brushing to give an even shade after cleaning oil, grease, dirt and other foreign matter, including cost of materials, labour, complete as per specifications.							
	SR Item no 15.74, Page No 123							
	for Roof	1	15	2		30		
	for gutter	1	15	1.2		18		
						48.00		
					Say	50.00	104.50	5,225.00
						Sqm		
	Basic rate	95.00						
	Add 10% for Malnad area works	<u>9.50</u>						
	Total	<u>104.50</u>	/Sqm					
15	Laying charges of Mangalore Single groove tile/ ceiling tile/ skylight tile over the existing roof truss including cost of labour as per specifications.							
	Rate analysis							
	Roof Tile area							
	Mangalore tile	1	15	2		30		
	Ceiling tile	1	15.00	2		30		
						60		
					Say	62.00	296.00	18,352.00
						Sqm		
16	Providing and finishing external walls in two coats over one coat of 100% acrylic silicon glazed primer with antifungal paint for top coat of approved brand and shade to give an even shade after thoroughly brooming the surface to remove all dirt and loose powdered material, free from mortar drops and other foreign matter cost of materials, labour, complete as per specifications.							
	SR Item No 15.104 Page No127							
	For Single groove tile							
		2	15	2		60.00		
						60.00	198.00	11,880.00
						Sqm		
	Basic rate	180.00						
	Add 10% for Malnad area works	<u>18.00</u>						
	Total	<u>198.00</u>	/Sqm					
17	Providing and finishing external walls in two coats over one coat of 100% acrylic silicon glazed primer with antifungal paint for top coat of approved brand and shade to give an even shade after thoroughly brooming the surface to remove all dirt and loose powdered material, free from mortar drops and other foreign matter cost of materials, labour, complete as per specifications.							
	SR Item No 15.104 Page No127							
	Ceiling Tile							
		2	15	2		60.00		
					Say	60.00	198.00	11,880.00
						Sqm		
	Basic rate	180.00						
	Add 10% for Malnad area works	<u>18.00</u>						
	Total	<u>198.00</u>	/Sqm					

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
18	Applying red lead ready mix priming coat over new steel or other metal surface including preparing the surface after thoroughly cleaning oil, grease, dirt and other foreign matter, and scoured with wire brushes, fine steel wool, sand papers including cost of materials, labour, complete as per specifications.							
	SR Item No 15.73, Page No123							
	For CI Support Poles							
		6	1.57			9.42		
					Say	10.00	45.10	451.00
						Sqm		
	Basic rate	41.00						
	Add 10% for Malnad area works	4.10						
	Total	45.10	/Sqm					
19	KSRB 15-18.2: Providing and applying enamel metal paint two coats (excluding priming coat) over new steel or other metal surface brushing to give an even shade after cleaning oil, grease, dirt and other foreign matter, including cost of materials, labour, complete as per specifications.							
	SR Item no 15.74, Page No 123							
	Painting of CI Support Poles							
		6	1.57			9.42		
					Say	10.00	104.50	1,045.00
						Sqm		
	Basic rate	95.00						
	Add 10% for Malnad area works	9.50						
	Total	104.50	/Sqm					
20	Fixing old /new eve board with necessary screws and approved painting two coats. including cost of materials, labour, HOM complete as per specifications.							
	S.R Item No 37.14 Page 267							
	Eaves board							
		1	15			15.00		
						15	28.60	429.00
						m		
	Basic rate	26.00						
	Add 10% for Malnad area works	2.60						
	Total	28.60	/m					
21	Applying red lead ready mix priming coat over new steel or other metal surface including preparing the surface after thoroughly cleaning oil, grease, dirt and other foreign matter, and scoured with wire brushes, fine steel wool, sand papers including cost of materials, labour, complete as per specifications.							
	SR Item No 15.73, Page No123							
	Eave board							
		2	15	0.2		6.00		
					Say	8.00	45.10	360.80
						Sqm		
	Basic rate	41.00						
	Add 10% for Malnad area works	4.10						
	Total	45.10	/Sqm					
22	Fixing charges for installation of CI Poles foundation bolts abd base plate/ template on site as per the drawings and instructions of Architect of PMC and Incharge Executive Engineer, MSCL							
	Rate Analysis							
	At road side	6				6.00		
						6.00	58.00	348.00
						Nos.		
23	KSRB 4-1.2 : Providing and laying in position plain cement concrete of mix 1:3:6 with OPC @ 220 kgs, with 40mm and down size graded granite metal course aggregates @ 0.892 cum and fine aggregates @ 0.465 cum machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2							
	S.R. Item No. 4.2 Page 13							
	for CI poles	6	0.45	0.45	0.1	0.12		
					Say	0.20	6175.40	1,235.00
						Cum		
	Basic rate	5614.00						
	Add 10% for Malnad area works	561.40						
	Total	6175.40	/Cum					
24	KSRB 4-1.2 : Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 320 kgs, with 20mm and down size graded granite metal course aggregates @ 0.69 cum and fine aggregates @ 0.46 cum with super plasticiser @ 3 Ltrs confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms. thick, vibrated for beams, columns of all sizes in foundation, plinth and superstructure ground floor level for roof slabs, staircase, lintels, columns including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.6							
	S.R. Item No. 4.11 Page 14							

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
	for CI poles	6	0.30	0.30	1.50	0.81		
					Say	1.00	6642.90	6,643.00
						Cum		
	Basic rate	6039.00						
	Add 10% for Malnad area works	603.90						
	Total	6642.90	/Cum					
25	KSRB 4.9.2 : Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3							
	TMT Bars Fe 500							
	S.R. Item No. 4.46.2 Page 18							
			1.00	X	80.00	80.00		
					Say	100.00	Kgs	
					Or	0.10	77860.20	7,786.00
						Tonne		
	Basic rate	70782.00						
	Add 10% for Malnad area works	7078.20						
	Total	77860.20	/Tonne					
26	KSRB 4-6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2							
	S.R. Item No. 4.28 Page 16							
	For Foundations							
		6	1.2		1.5	10.80		
					Say	12.00	289.30	3,471.60
						Sqm		
	Basic rate	263.00						
	Add 10% for Malnad area works	26.30						
	Total	289.30	/Sqm					
27	KSRB 2-2 : Earthwork excavation by Manual means for foundation of buildings, water supply and sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. including breaking of clods complete as per specifications. specification. No. KBS 2.1(a) / 2.3.5							
	For Compound wall							
	for Main wall	1	20.00	0.60	0.60	7.20		
	for steps	1	5.00	1.20	0.30	1.80		
	for CI poles	6	0.45	0.45	0.50	0.61		
						9.61		
					Say	10.00		
a)	In Ordinary Soil 100%							
	S.R. Item No. 2.3 Page 6		10.00	X	1	10.00	328.9	3,289.00
						Cum		
	Basic rate	299.00						
	Add 10% for Malnad area works	29.90						
	Total	328.90	/Cum					
28	Providing and finishing external wall in two coats over one coat of 100% acrylic silicon glazed primer with antifungal paint for top coat of approved brand and shade to give an even shade after thoroughly brooming the surface to remove all the dirt and loose powered material, free from mortar drops and other foreign matter cost of material, labour, complete as per specification.							
	S.R. Item No. 15.104 Page 127							
	External wall :front	1	15.00		7.00	105.00		
					Say	110.00	198.00	21,780.00
						Sqm		
	Basic rate	180.00						
	Add 10% for Malnad area works	18.00						
	Total	198.00	/Sqm					
29	KSRB 15-18.2: Providing and applying enamel metal paint two coats (excluding priming coat) over new steel or other metal surface brushing to give an even shade after cleaning oil, grease, dirt and other foreign matter, including cost of materials, labour, complete as per specifications.							
	SR Item no 15.74, Page No 123							
	window	2.00	0.90		1.50	2.70		
	collapsible gate	1.75	2		2.15	7.53		
						10.23		
					Say	11.00	104.50	1,149.50
						Sqm		
	Basic rate		95.00					

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
	Add 10% for Malnad area works		9.50					
	Total		104.50	/Sqm				
30	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead. CPWD Delhi SR 2018 , Vol. 2 , SR Item no. 15.25, Page no. 260 Demolition / Removing of Granite slabs							
		1	5	2		10	190.3	1903
						sqm		
31	KSRB 4-1.5 : Providing and laying in position plain cement concrete of Mix M20 with OPC@ 300kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregates @ 0.43cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2 S.R. Item No. 4.5 Page 13 concrete band over Roof tile		5	2	0.05	0.075	0.0375	
					say	1	6251.30	6251.3
						cum		
	Basic rate	5683						
	Add 10% for Malnad area works	568.30						
	Total	6251.30	/Sqm					
32	KSRB15-3.11 : Providing 20mm thick cement plaster in single coat with cement mortar 1:4, to stone masonry / concrete surface including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. S.R. Item No. 15.19 Page 116 for concrete band		5	2.00		0.20	2.00	
					Say	2.50	300.30	751.00
	Basic rate	273.00				Sqm		
	Add 10% for Malnad area works	27.30						
	Total	300.30	/Sqm					
33	KSRB4-4.6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, base of columns for mass concrete including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 S.R Item No 4.28 Page No. 16 for Roof Band		10.00	2	0.075	1.5		
					Say	2	289.30	578.60
						Sqm		
	Basic rate	263.00						
	Add 10% for Malnad area works	26.30						
	Total	289.30	/Sqm					
34	Erection and testing of Cast Iron Pole - 2.7 m tall onto the Foundation as per specification and instructions of Architect of PMC/ Executive Engineer, MSCL for CI poles		6			6	2788.00	16,728.00
						Nos.		
Sub Total								7,35,483.00
Non SoR Items - Approved Rates								
1	Supplying, Erection and testing of 2.7m (minimum)height decorative cast iron pole with CI embellishment duly welded. The bottom CI portion should have round mounting base of not more than 250mm dia. The top portion should not be less than 90mm dia. Foundation bolts and Templates included. The work shall be carried out as per the instructions of Architect of the PMC and incharge Executive Engineer of MSCL. (Approved Rate)							
	Building frontage	6				6.00		
						6.00	29700.00	1,78,200.00
						Nos.		
2	Supplying of Mangalore tiles- Single groove - 16" x 9" size pointed with 1:4 cement mortar over the existing rafter including fixing charges curing complete per instructions of Architect of PMC and EE engineer in charge MSCL. (Approved Rate)							
	Building Frontage	1	15	2		30		
					Say	30	362.00	10,860.00
						Sqm		
	Rate per Sqm	362.00	/Sqm					
3	Supplying of Mangalore tiles - Ceiling tiles of size 12.75" x 9.25 " pointed with 1:4 cement mortar over the existing rafter including fixing charges curing complete as per instructions of Architect of PMC and EE engineer in charge MSCL (Approved Rate)							
	Building Frontage	1	15	2		30		

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
					Say	30	377.00	11,310.00
						Sqm		
	Rate per Sqm	377.00	/Sqm					
4	Supplying of Wood Polymer Composite Hybrid board of minimum density 650 kg/cum having 18mm thickness and 200 mm height as eaves board as per the approved design using CNC cutting machine. The scope of work shall include the supply of material, cutting the board in CNC machine , necessary labour, accessories complete as per the specification and requirements as per the instructions of the Architect of the PMC and incharge Executive Engineer of MSCL. (Approved Rate)							
	Building Frontage	1	15	0.2		3.00		
						3	4925.00	14,775.00
						Sqm.		
Sub Total								2,15,145.00

Assistant Engineer
MSCL Mangaluru

Assistant Executive Engineer
MSCL Mangaluru

Executive Engineer
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General Manager Technical
MSCL Mangaluru

Name of the Work : Providing Interlocking for Temple Square								
Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
1	KSRRB M300-14: Excavation for road work in all types of soil by mechanical means including cutting and loading to tipper, trimming bottom and side slopes in accordance with requirements of lines, grades and cross section and transportation with a lead of 1.00KM and complete as per specifications. Morth Specification No.301							
	S.R. Item No. 19.14 Page 143							
	Temple side	1	59.00	3.00	0.30	53.1		
	nandini mlk prlr	1	18.00	5.10	0.30	27.5		
	For Kerb stone	1	110.00	0.40	0.30	13.2		
						93.84		
					Say	98.00	45.10	4,420.00
	Basic rate	41.00				Cum		
	Add 10% for Malnad area works	4.10						
	Total	45.10	/Cum					
2	KSRB 2.3 : Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. in depth, compacting each deposited layer by ramming after watering with lead upto 50 m. and lift upto 1.5 m. including cost of all labour complete as per specifications.							
	SR Item no. 2.10 , Page no. 7							
	Temple side	1	59.00	3.00	0.20	35.40		
	nandini mlk prlr	1	18.00	5.10	0.20	18.36		
	For Kerb stone	1	110.00	0.30	0.30	9.90		
						63.66		
						66.00	221.10	14,592.60
						cum		
	Basic rate	201.00						
	Add 10% for Malnad area works	20.10						
	Total	221.10	/Cum					
3	KSRB 14.6-2 : Providing and laying heavy duty cobble stones 75mm thick interlock pavers, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications.							
	Specification No.KBS							
	S.R. Item No. 14.7 Page 103							
	Temple side	1	59.00	3.00		177.00		
	nandini mlk parlour	1	18.00	5.10		91.80		
						268.80		
					Say	270.00	1225.40	3,30,858.00
	Basic rate	1114.00				Sqm		
	Add 10% for Malnad area works	111.40						
	Total	1225.40	/Sqm					
4	KSRRB M300-49:Scarifying bituminous course 50mm to 75mm thick along with premix carpet/surface dressing by manual means without disturbing the base and stacking of the debris materials including cost of all labour charges as per specifications.MORTH/Chapter 3							
	S.R Item No 19.55 Page 146							
	Temple side	1	59.00	3.00		177.00		
	nandini mp	1	18.00	5.10		91.80		
						268.80		
					Say	270.00	99.00	26,730.00
	Basic rate	90.00				Sqm		
	Add 10% for Malnad area works	9.00						
	Total	99.00	/Sqm					
5	KSRB 4-1.2 : Providing and laying in position plain cement concrete of mix M10 with OPC cement @ 220 kgs, with 40mm and down size graded granite metal course aggregates @ 0.892 cum and fine aggregates @ 0.465 cum machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2							
	S.R. Item No. 4.2 Page 13							
	For kerb stone -temple side	1	75.00	0.40	0.10	3.00		
	For Kerb stone -Nandini Mlk prlr and road	1	35.00	0.40	0.10	1.40		
						4.40		
					Say	4.50	6175.40	27,789.00
	Basic rate	5614.00				Cum		
	Add 10% for Malnad area works	561.40						
	Total	6175.40	/Cum					
6	Providing and fixing Pre cast solid cement concrete kerb stones made out of C.C. 1:2:4 with top and bottom width 114 and 165 mm respectively, 400 mm high and 450 mm in length finished with CM 1:3, plastering and finishing cutting, including formwork, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc., complete.							
	S.R. Item No. 5.30. Page 27							
	kerb stone -temple wall side	175				175		

Sl.No.	Description of work	No	L	B	D	Quantity	Rate	Amount
	Kerb stone -Nandini Milk prlr	80				80		
						255.00		
					Say	260.00	463.10	1,20,406.00
	Basic rate	421.00				/Nos		
	Add 10% for Malnad area works	42.10						
	Total	463.10	/Nos					
7	KSRRB M800-6,Painting two coats on new concrete surface:Painting two coats after filling the surface with synthetic enamel paint and all shades on new plastered concrete surfaces complete as per specification: MORTH specification No.803							
	S.R. Item No.24.7. Page 181							
	Kerb wall	1	260.00	0.45		117		
					Say	120.00	90.20	10,824.00
	Basic rate	82.00				/Sqm		
	Add 10% for Malnad area works	8.20						
	Total	90.20	/Sqm					
8	Construction of Granular sub base grading -V as sub base and drainage layer by providing coarse graded crushed stone aggregates of granite/trap/basalt material, mixing in a mechanical mix plant at OMC,carriage of mixed material to work site,spreading in uniform layers with mortar grader or prepared surface and compacting with vibratory power roller to achieve the 98% proctor density, complete as per the specification clause 401 of MORTH V Revision.							
	S.R. Item no. 20.4, Page no. 153							
	Temple side	1	59.00	3.00	0.25	44.25		
	nandini mp	1	18.00	5.10	0.25	22.95		
						67.20		
					Say	70	2382.60	1,66,782.00
						Cum		
	Basic rate	2166.00						
	Add 10% for Malnad area works	216.60						
	Total	2382.60	/Cum					
9	Providing and laying/fixing cement base, precast , pre polished cement concrete designer tiles 25 mm thick for flooring conforming to IS 1237 heavy duty tiles for flooring, treads of steps and landing, laid on a bed of 12 mm thick cement mortar 1:3 mis finished with flush pointing using white cement, including cost of materials, mortar, including cutting, gridding the edge to half/full round wherever required, labour, curing complete as per specification.							
	SR Item no. 14.62, Page no. 112							
	For Driveway	1.00	40	4		160	1356.30	2,17,008.00
						Sqm		
	Basic rate	1233.00						
	Add 10% for Malnad area works	123.30						
	Total	1356.30	/Sqm					
10	KSRRB 4-1.5 : Providing and laying in position plain cement concrete of Mix M20 with OPC@ 300kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregates @ 0.43cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2							
	S.R. Item No. 4.5 Page 13							
	For Driveway	1.00	40	4	0.15	24		
					Say	25	6251.30	1,56,282.50
						cum		
	Basic rate	5683.00						
	Add 10% for Malnad area works	568.30						
	Total	6251.30	/Sqm					
11	Providing and laying cement concrete using 20 mm and down size granite coarse aggregates and fine aggregates of ready mixed concrete for RCC works laid in 15 cms thick layers and well compacted including vibrating , curing etc., for all super structure works with all lead and lift etc., complete (exclusive of cost of steel and fabrication charges) - Ready mixed cement concrete M-30							
	S.R. Item No. 4.49.3 Page 19							
	FOR Beams	3.00	52	0.2	0.3	9.36		
					Say	10	6157.80	61,578.00
						Cum		
	Basic rate	5598.00						
	Add 10% for Malnad area works	559.80						
	Total	6157.80	/Cum					
	Sub Total							
								11,37,271.00

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					Per Foundation		
Rate Analysis for Fixing of Base Plate and Anchor Bolts							
Sl.no	Ref. to	Description	Units	Quantity	Rate RS	Cost Rs	Remarks
1		Details for Cost of anchor bolts and base plate Materials: Bolts 0.7m x4nos x 3.85kg/mt =10.78 kg Baseplate 0.26m x0.26mx 6mm @47kg/sqm=3.17kg					ELC SR
		Labour					
2	107	Black smith- 2 class	Day	0.05	421.20		PWD SR
		Add 10% for Malnad Area works			42.12		
		Total			463.32		
3	9999.0	Carriage and labor for Fixing	LS	4.55	1.00	4.55	Delhi Sr2017
					Total	27.72	
4		Sundries	LS			20.00	
		Sub total			Total	47.72	
5		Add Contractors profit @10% of				4.77	
6		Add Overhead charges @ 10%				4.77	
					Total	57.26	
		Total cost Per 1no of Foundation=58/-				58.00	

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					Per 10 SQM			
Rate Analysis for Mangalore Tile Fixing								
Sl.no	Ref. to	Description	Units	Quantity	Rate RS	Cost Rs	Remarks	
1	SL NO15	Tile layer or Carpenter class 1 (with tools)	day	2.00	421.20		PWD SR	
		Add 10 % for Malnad area works			42.12			
		Total			463.32			926.64
2	SL NO5	Mazdoor Heavy	Day	2.00	411.20		PWD SR	
		Add 10 % for Malnad area works			41.12			
		Total			452.32			904.64
3	SLNO12	Mason class 1(with tools)	Day	1.00	436.20		PWD SR	
		Add 10 % for Malnad area works			43.62			
		Total			479.82			479.82
4		Sundries	L.S			150.00		
					Total	2,461.10		
5		Add Contractors profit @10% of a.				246.11		
		Add overhead charges @ 10%				246.11		
					Total	2,953.32		
						295.33		
		Total Cost =Rs 296per sqm				296.00		

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					Per Pole		
Rate Analysis for Shifting of Existing High Mast pole							
Sl.no	Ref. to	Description	Units	Quantity	Rate RS	Cost Rs	Remarks
1	SR Item no. 4.2.7	Fabricating, supplying and erection of ...Mtrs long hot dip Galvanized Octagonal pole with BSEN 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangements, including suitable boards, Bakelite sheet and MCBs as per IS specifications suitable to withstand the wind speed of 47 m/sec forMtrs pole in single section and single joint welded as per IS 9595/IS 10178AWS having dimensions bottommm, top.....mm with 3mm thick, suitable base plate and 4Nos of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65micron as per ASTM-A123 and 153 etc., (excluding foundation) as per drawing appended. 9 meters - Top 70mm and bottom 155mm dia	Each	1.00	15,064.00	15,064.00	ELC SR
2	Item no. 165	Galvanised Octagonal Pole - 9 meters - Top 70mm and bottom 155mm dia	Each	1.00	6,025.60	6,025.60	ELC SR
		Deduct 10% of overhead charges				602.56	
		Deduct 10% of contractors profit				602.56	
3		Erection of ...Mtrs long hot dip Galvanized Octagonal pole with BSEN 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangements, including suitable boards, Bakelite sheet and MCBs as per IS specifications suitable to withstand the wind speed of 47 m/sec forMtrs pole in single section and single joint welded as per IS 9595/IS 10178AWS having dimensions bottommm, top.....mm with 3mm thick, suitable base plate and 4Nos of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65micron as per ASTM-A123 and 153 etc., (excluding foundation) as per drawing appended. 9 meters - Top 70mm and bottom 155mm dia				7,833.28	Erection charges only
4		Dismantling and reinstallation charges	Each	0.90	7,833.28	7,049.95	
					Total	14,883.23	
					Say	14,884.00	
		Total cost Per 1no of High mast pole = Rs. 14884 /-					

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Per Pole							
Rate Analysis for Erection and Testing of Cast Iron Poles							
6 m tall Cast Iron Pole							
Sl.no	Ref. to	Description	Units	Quantity	Rate RS	Cost Rs	Remarks
1	SR Item no. 4.2.4	Fabricating, supplying and erection of ...Mtrs long hot dip Galvanized Octagonal pole with BSEN 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangements, including suitable boards, Bakelite sheet and MCBs as per IS specifications suitable to withstand the wind speed of 47 m/sec forMtrs pole in single section and single joint welded as per IS 9595/IS 10178AWS having dimensions bottommm, top....mm with 3mm thick, suitable base plate and 4Nos of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65micron as per ASTM-A123 and 153 etc., (excluding foundation) as per drawing appended. 6meters - Top 70mm and bottom 130mm dia	Each	1.00	9,076.00	9,076.00	ELC SR
2	Item no. 162	Galvanised Octagonal Pole - 6meters - Top 70mm and bottom 130mm dia	Each	1.00	3,630.40	3,630.40	ELC SR
		Deduct 10% of overhead charges				363.04	
		Deduct 10% of contractors profit				363.04	
3		Erection of ...Mtrs long hot dip Galvanized Octagonal pole with BSEN 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangements, including suitable boards, Bakelite sheet and MCBs as per IS specifications suitable to withstand the wind speed of 47 m/sec forMtrs pole in single section and single joint welded as per IS 9595/IS 10178AWS having dimensions bottommm, top....mm with 3mm thick, suitable base plate and 4Nos of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65micron as per ASTM-A123 and 153 etc., (excluding foundation) as per drawing appended. 9 meters - Top 70mm and bottom 155mm dia				4,719.52	Erection charges only
					Total	4,719.52	
					Say	4,720.00	
Total cost Per 1no of 6 m pole = Rs. 4720/-							

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					Per Pole		
Rate Analysis for Erection and Testing of Cast Iron Poles							
4 m tall Cast Iron Pole							
Sl.no	Ref. to	Description	Units	Quantity	Rate RS	Cost Rs	Remarks
1	SR Item no. 4.2.2	Fabricating, supplying and erection of ...Mtrs long hot dip Galvanized Octagonal pole with BSEN 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangements, including suitable boards, Bakelite sheet and MCBs as per IS specifications suitable to withstand the wind speed of 47 m/sec forMtrs pole in single section and single joint welded as per IS 9595/IS 10178AWS having dimensions bottommm, top.....mm with 3mm thick, suitable base plate and 4Nos of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65micron as per ASTM-A123 and 153 etc., (excluding foundation) as per drawing appended. 4 meters - Top 70mm and bottom 130mm dia	Each	1.00	6,510.00	6,510.00	ELC SR
2	Item no. 160	Galvanised Octagonal Pole - 4 meters - Top 70mm and bottom 130mm dia	Each	1.00	2,604.00	2,604.00	ELC SR
		Deduct 10% of overhead charges				260.40	
		Deduct 10% of contractors profit				260.40	
3		Erection of ...Mtrs long hot dip Galvanized Octagonal pole with BSEN 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangements, including suitable boards, Bakelite sheet and MCBs as per IS specifications suitable to withstand the wind speed of 47 m/sec forMtrs pole in single section and single joint welded as per IS 9595/IS 10178AWS having dimensions bottommm, top.....mm with 3mm thick, suitable base plate and 4Nos of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65micron as per ASTM-A123 and 153 etc., (excluding foundation) as per drawing appended. 4 meters - Top 70mm and bottom 130mm dia				3,385.20	Erection charges only
					Total	3,385.20	
					Say	3,386.00	
Total cost Per 1no of 4 m tall pole = Rs. 3386/-							

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					Per Pole		
Rate Analysis for Erection and Testing of Cast Iron Poles							
2.7 m tall Cast Iron Pole							
Sl.no	Ref. to	Description	Units	Quantity	Rate RS	Cost Rs	Remarks
1	SR Item no. 4.2.1	Fabricating, supplying and erection of ...Mtrs long hot dip Galvanized Octagonal pole with BSEN 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangements, including suitable boards, Bakelite sheet and MCBs as per IS specifications suitable to withstand the wind speed of 47 m/sec forMtrs pole in single section and single joint welded as per IS 9595/IS 10178AWS having dimensions bottommm, top.....mm with 3mm thick, suitable base plate and 4Nos of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65micron as per ASTM-A123 and 153 etc., (excluding foundation) as per drawing appended. 3 meters - Top 70mm and bottom 130mm dia	Each	1.00	5,360.00	5,360.00	ELC SR
2	Item no. 159	Galvanised Octagonal Pole - 3 meters - Top 70mm and bottom 130mm dia	Each	1.00	2,144.00	2,144.00	ELC SR
		Deduct 10% of overhead charges				214.40	
		Deduct 10% of contractors profit				214.40	
		Erection of ...Mtrs long hot dip Galvanized Octagonal pole with BSEN 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangements, including suitable boards, Bakelite sheet and MCBs as per IS specifications suitable to withstand the wind speed of 47 m/sec forMtrs pole in single section and single joint welded as per IS 9595/IS 10178AWS having dimensions bottommm, top.....mm with 3mm thick, suitable base plate and 4Nos of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65micron as per ASTM-A123 and 153 etc., (excluding foundation) as per drawing appended. 3 meters - Top 70mm and bottom 130mm dia				2,787.20	Erection charges only
					Total	2,787.20	
					Say	2,788.00	
		Total cost Per 1no of 2.7 m tall pole = Rs.2788 /-					

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**PROPOSED “RETROFITTING/REDEVELOPMENT OF
CAR STREET AND AREAS OF
SRI VENKATRAMANA TEMPLE AS RELIGIOUS ZONE”**

**COMPREHENSIVE LIST OF SPECIFICATIONS
OF NON SoR ITEMS**

AEC -PAILANDS ASSOCIATES



LIST OF NON SoR ITEMS

- PROVISION FOR PRECAST CC ITEMS
 1. SPECIFICATION OF PRECAST C.C. BOLLARDS
 2. SPECIFICATION OF PRECAST C.C. BENCHES - WITHOUT ARMREST AND WITHOUT BACKREST

- PROVISION FOR SUPPLY OF CAST IRON DECORATIVE POLES
 1. SPECIFICATION OF CAST IRON STREETLIGHT POLES WITH ONE ARM BRACKET - 6 m
 2. SPECIFICATION OF CAST IRON BRACKETS FOR DECORATIVE STREET LIGHT POLES
 3. SPECIFICATION FOR CAST IRON DECORATIVE POST TOP LIGHT POLES - 4 m
 4. SPECIFICATION FOR CAST IRON DECORATIVE PILLARS FOR ROOF STRUCTURE

- PROVISION FOR GRANITE CLADDING FOR KATTE FINISH

- PROVISION FOR SUPPLY OF MANGALORE ROOF TILES
 1. MANGALORE SINGLE GROOVE ROOFING TILE - 16" X 9"
 2. CLAY CEILING TILES - 12.75" X 9.25 "
 3. MANGALORE TILE WITH GLASS - SKYLIGHT TILES - 16" X 9"

- PROVISION FOR SUPPLY OF MS BOLLARDS
 1. SPECIFICATION FOR M.S. BOLLARDS - FIXED BOLLARDS
 2. SPECIFICATION FOR M.S. BOLLARDS - REMOVABLE BOLLARDS

- PROVISION FOR SUPPLY OF CAST IRON + STAINLESS STEEL RAILING
SPECIFICATIONS FOR CAST IRON ORNAMENTAL GRILL WITH STAINLESS STEEL FRAME
RAILING

- PROVISION FOR SUPPLY OF EAVES BOARD

PROVISION FOR PRECAST CC ITEMS

1. SPECIFICATION OF PRECAST C.C. BOLLARDS -

Nos.

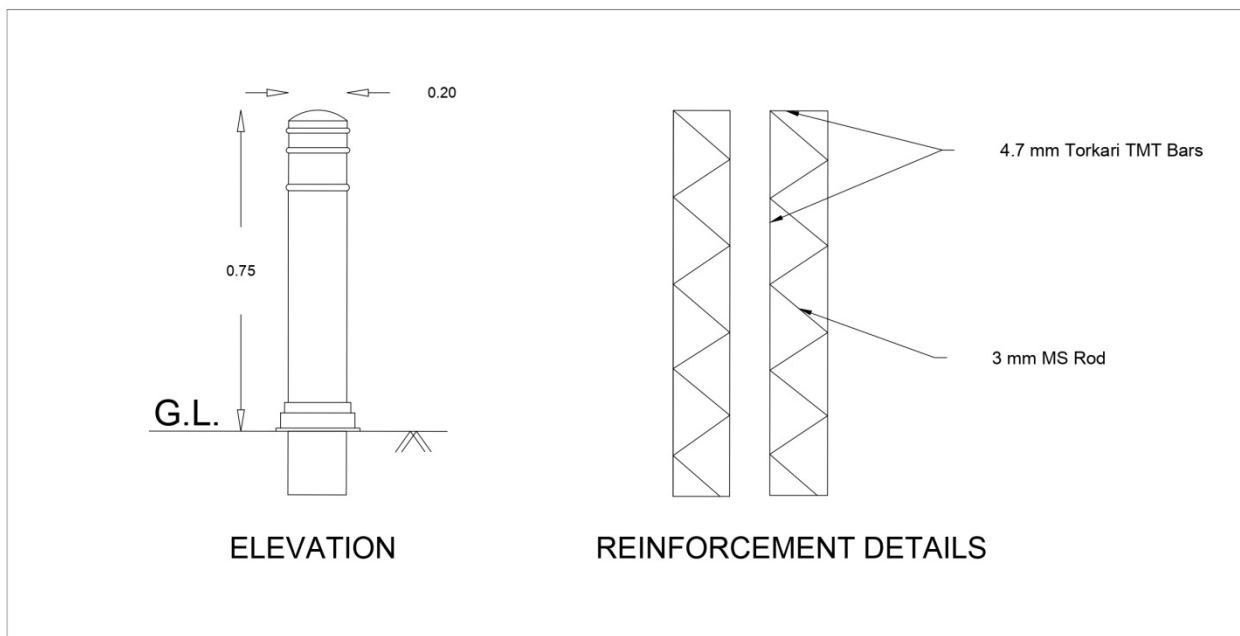
Providing and fixing Precast Bollard of 750mm height and 200 mm dia cast in M-30 Grade Concrete with Ordinary Portland Cement using vibro-compaction technique for a compressive strength of concrete for 30MPa at 28 days. Reinforcements include fabrication of micro trusses using 4.7 mm Torkari TMT Bars and 3 mm MS Rods and they are welded to achieve the required shape.

The half portions of Bollards to be manufactured separately using M-30 grade concrete and reinforced with fabricated micro trusses and then joined together using high performance mortar and surface finished with cement grout which makes uniformly smooth textured surface without any bug holes and smooth mold seams.

Paint finish: Putty finish with acrylic paint as per directions.

The bollards shall be installed in an excavated pit of size 0.3 m x 0.3 m x 0.3m in the ground and bottom 0.3 m of the bollard is fixed inside the ground level and remaining gap to be filled with PCC of 1:2:4 at the locations and levels as per the drawing indicated .

The cost shall include excavation, bare cost of all materials, cost of reinforcements, transportation charges, fixing charges, labour, HOM etc., The work shall be carried out as per the detailed specifications , drawings and directions of the Architect of the PMC and incharge Executive Engineer of MSCL.

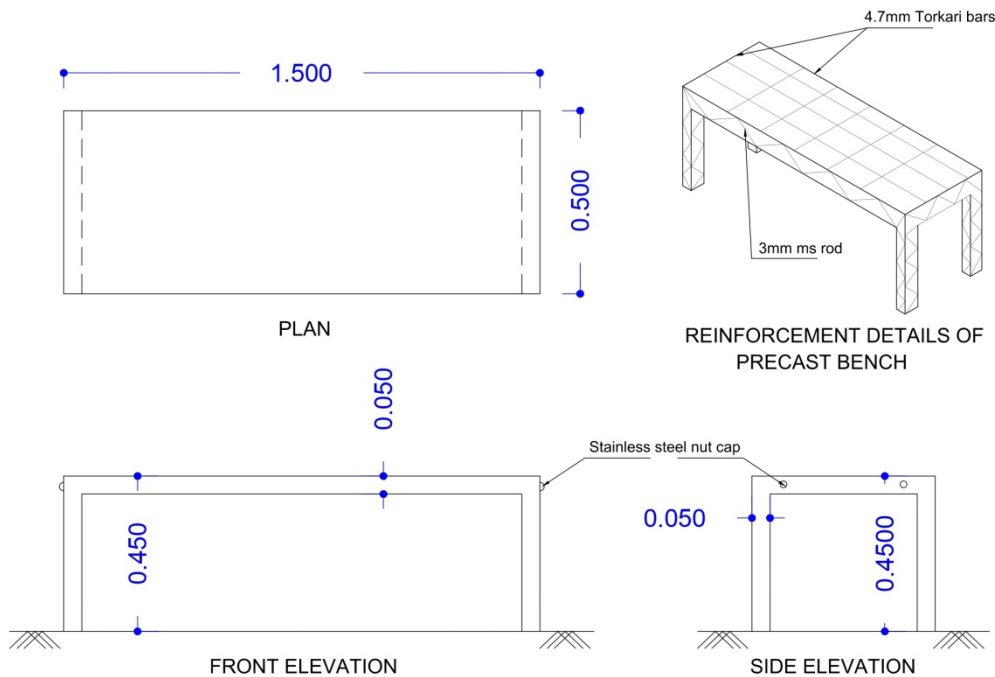


2. SPECIFICATION OF PRECAST C.C. BENCHES - WITHOUT ARMREST AND WITHOUT BACKREST-Nos.

Providing and fixing of Precast Benches of size **1500 mm x 500 mm x 450 mm** which is cast using M-30 grade concrete with Ordinary Portland Cement by using vibro-compaction technique for a compressive strength of concrete for 30MPa at 28 days. Reinforcements include fabrication of micro trusses using 4.7 mm Torkari TMT Bars and 3 mm MS Rods and they are welded to achieve the required shape. Wire mesh should be provided a seating planks to improve the strength. 12 mm dia x 130 mm long galvanised countersunk bolts with stainless steel nut cap shall be used to connect the seating plank with leg of the bench.

Two number of legs using M-30 grade concrete of height 450mm with 50mm thickness. Each leg is reinforced with fabricated micro truss. Each leg consists of two holes at appropriate location to connect seating planks with leg. Seating plank of size 1400mm x430mm shall be cast using M-30 grade concrete. Each concrete plank is reinforced with fabricated micro truss and wire mesh. Each plank will have 4 no. of 12 mm dia 130mm length galvanized countersunk bolts to fix with leg.

The bench shall be finished with cement grout of uniformly smooth texture without any bug holes and smooth mold seams. It shall be painted using Acrylic based paint as per the instructions. The seating planks shall be bolted with leg with help of 12 mm dia x 130 mm length galvanised steel countersunk bolts and stainless steel nut cap and placed at the location and level per the drawing indicated. The cost shall include bare cost of all materials, cost of reinforcements, transportation charges, fixing charges, labour, HOM etc., The work shall be carried out as per the detailed specifications, drawings and directions of the Architect of the PMC and incharge Executive Engineer of MSCL.



PROVISION FOR SUPPLY OF CAST IRON DECORATIVE POLES

1.SPECIFICATION OF CAST IRON STREETLIGHT POLES WITH ONE ARM BRACKET - 6 m

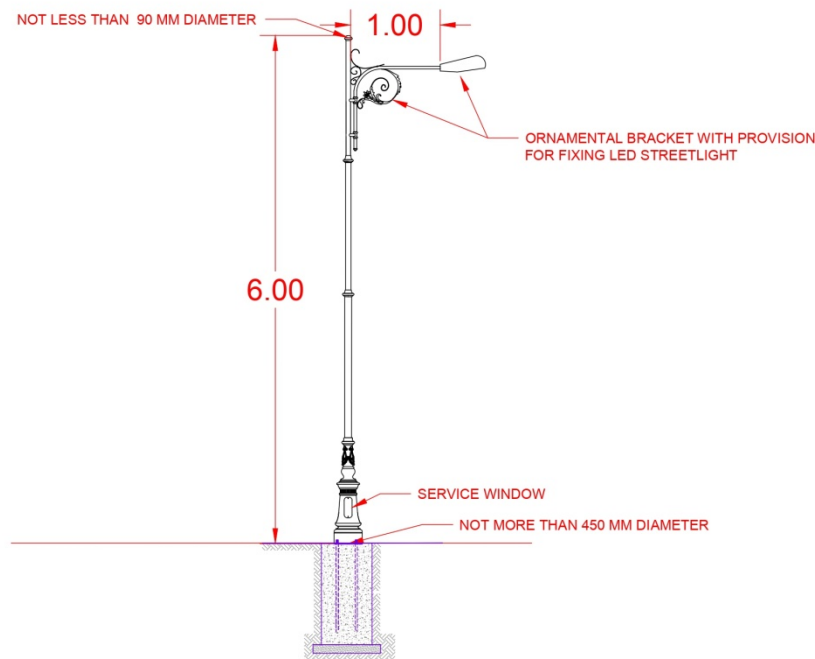
Nos.

Supplying, Erection and testing of 6.0mtr height decorative cast iron pole with CI embellishments welded. The bottom CI portion should have round mounting base of not more than 450mm dia and must be provided with service window comprising of 4way, 25Amp connector terminal and a MCB. The top portion should not be less than 90mm dia. Foundation bolts and Templates included. The work shall be carried out as per the instructions of Architect of the PMC and incharge Executive Engineer of MSCL.

2.SPECIFICATION OF CAST IRON BRACKETS FOR DECORATIVE STREET LIGHT POLES

Nos.

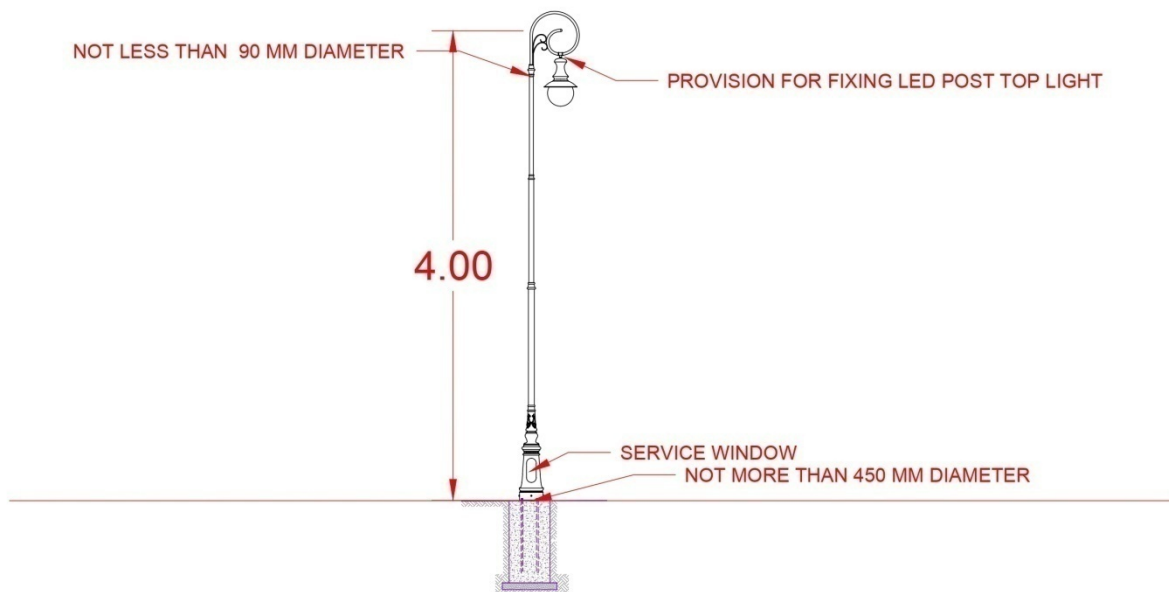
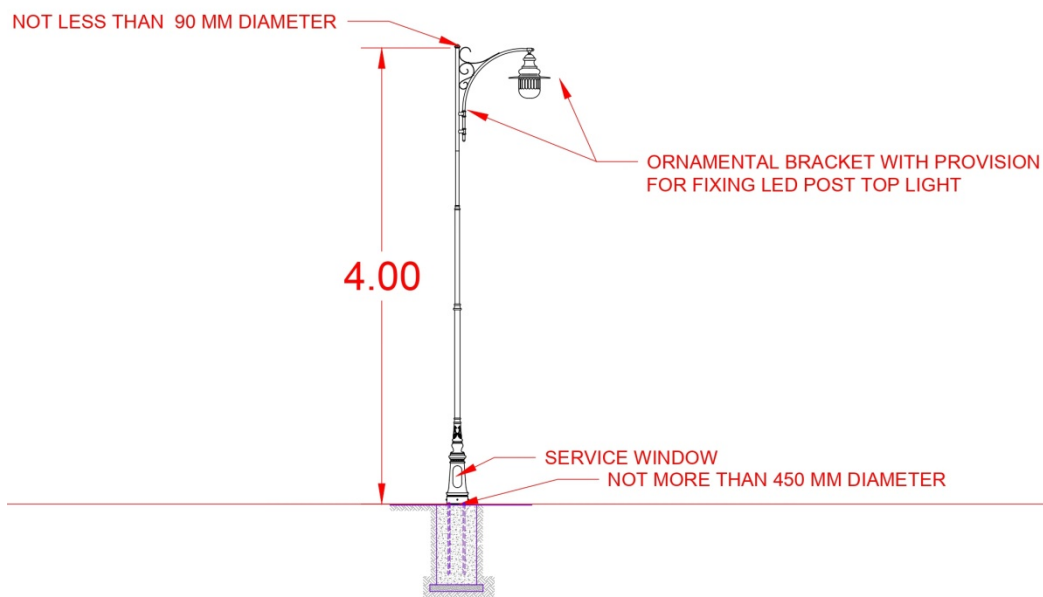
Supplying of following size single ornamental Cast Iron bracket & fixing on the existing pole for mounting LED street light fitting including necessary accessories etc. as required - 1 m in length . The work shall be carried out as per the instructions of Architect of the PMC and incharge Executive Engineer of MSCL.

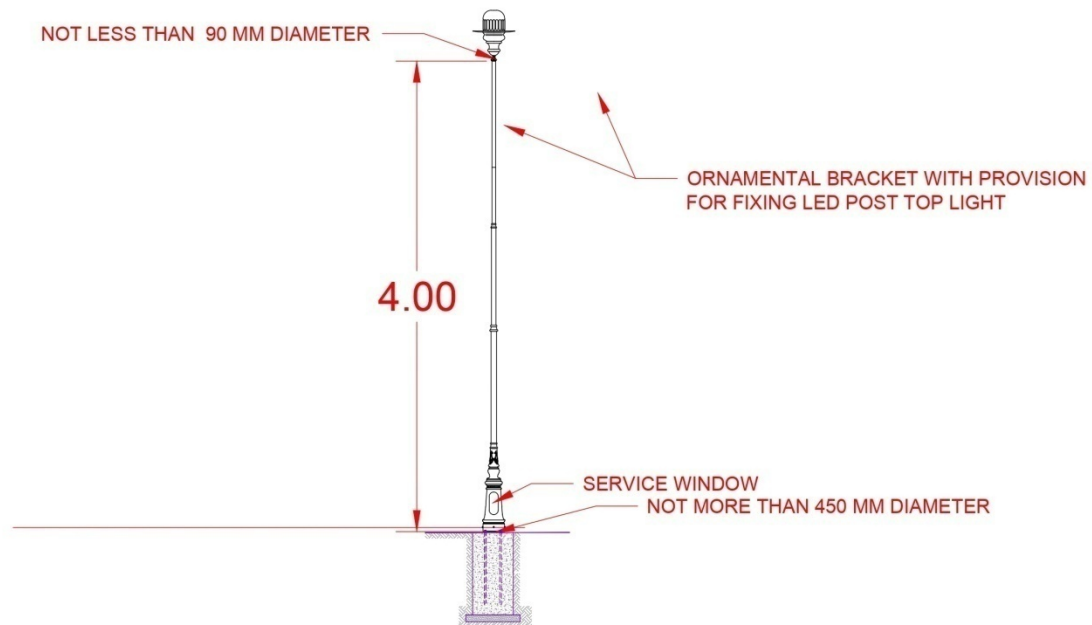


3.SPECIFICATION FOR CAST IRON DECORATIVE POST TOP LIGHT POLES - 4 m

Nos.

Supplying, Erection and testing of 4.0mtr. height decorative cast iron pole for post top light with CI embellishments welded. The bottom CI portion should have round mounting base of not more than 400mm dia and must be provided with service window comprising of 4way, 25Amp connector terminal and a MCB. The top portion should not be less than 90mm dia. Foundation bolts and Templates included. The work shall be carried out as per the instructions of Architect of the PMC and incharge Executive Engineer of MSCL.



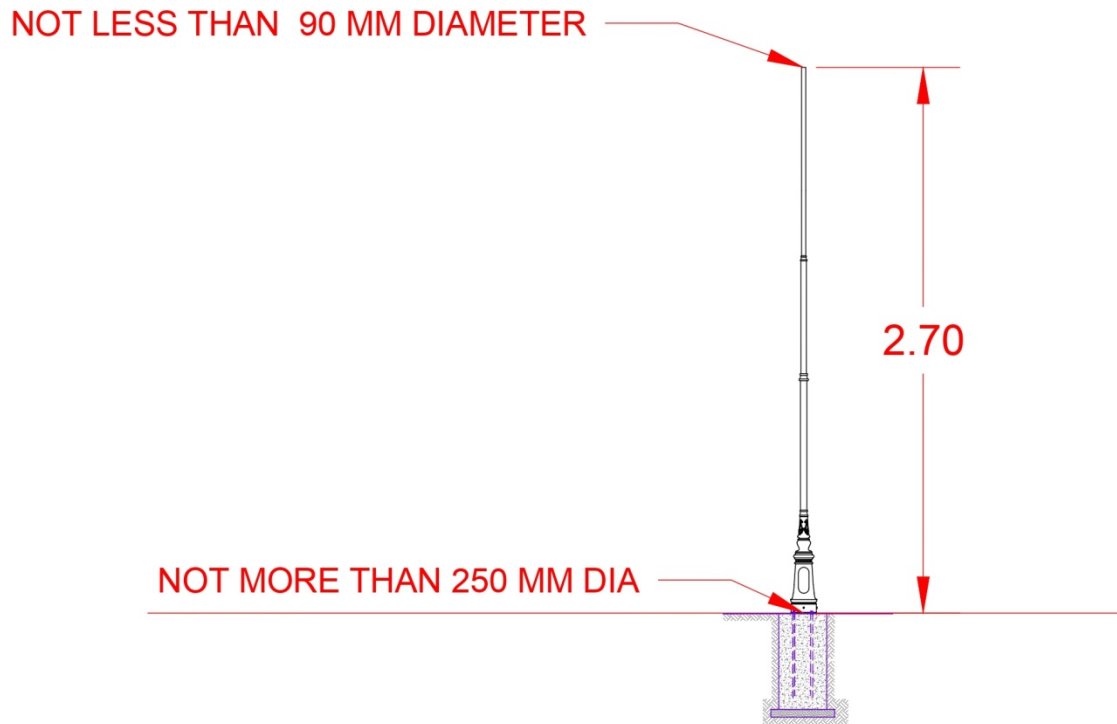


4.SPECIFICATION FOR CAST IRON DECORATIVE PILLARS FOR ROOF STRUCTURE

Nos.

Supplying, Erection and testing of 2.7m (minimum)height decorative cast iron pole with CI embellishment duly welded. The bottom CI portion should have round mounting base of not more than 250mm dia.

The top portion should not be less than 90mm dia. Foundation bolts and Templates included. The work shall be carried out as per the instructions of Architect of the PMC and incharge Executive Engineer of MSCL.



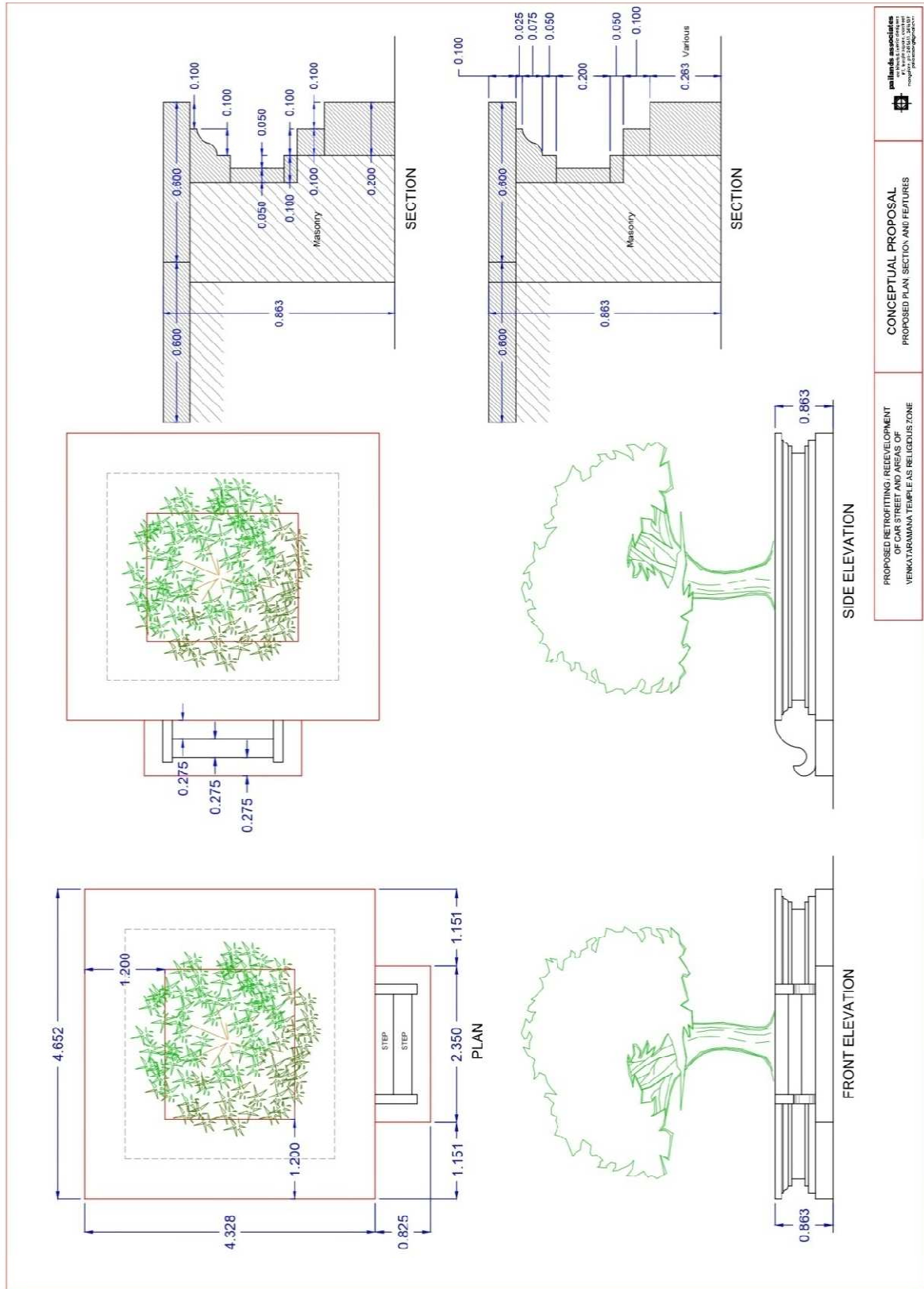
PROVISION FOR GRANITE CLADDING FOR KATTE FINISH (In Sft)

Providing and fixing of good quality Karkala granite stone with minimum 3 line dressing of thickness and sizes as shown in drawing using cement mortar and finished with sandblasting before handover. The cost shall include removal of existing tree planter box, delivery of materials to site, handling, labour, construction of additional masonry / filling for foundation and support for carved granite stone as required at site as per instructions of Architect of the PMC and incharge Executive Engineer of MSCL.

Sandblasting and cleaning of existing granite stone masonry of temple tree planter box , steps and carvings as per instructions of Architect of the PMC and Incharge Executive Engineer of MSCL.

(Drawing attached in next page)

PROPOSED "RETROFITTING/REDEVELOPMENT OF CAR STREET AND AREAS OF
SRI VENKATRAMANA TEMPLE AS RELIGIOUS ZONE"



PROVISION FOR SUPPLY OF MANGALORE ROOF TILES - (In Nos.)

Supply of class AA Mangalore roof tile (IS 654-1972 or as amended from time to time double channelled flat tiles of the Mangalore pattern of approved make). All tiles must be thoroughly well burnt throughout of regular shape and uniform size sharp, even and free from winds, cracks, laminations, bends and flaws. The roofing tiles shall also be free from impurities like particles of stone, lime or other foreign materials visible to naked eye either on the surface or on the fractured face of the tile obtained. They must be approved colour (deep red) and ring clearly when struck. Tiles shall be of uniform colour and shall not absorb more than 16% of their dry weight when soaked in water for full 24 hours.

1. Mangalore Single Groove Roofing tile - 16" x 9"



2. Clay Ceiling Tiles - 12.75" x 9.25 "



3. Mangalore tile with glass - Skylight Tiles - 16" x 9"



PROVISION FOR SUPPLY OF MS BOLLARDS

1.SPECIFICATION FOR M.S. BOLLARDS - FIXED BOLLARDS

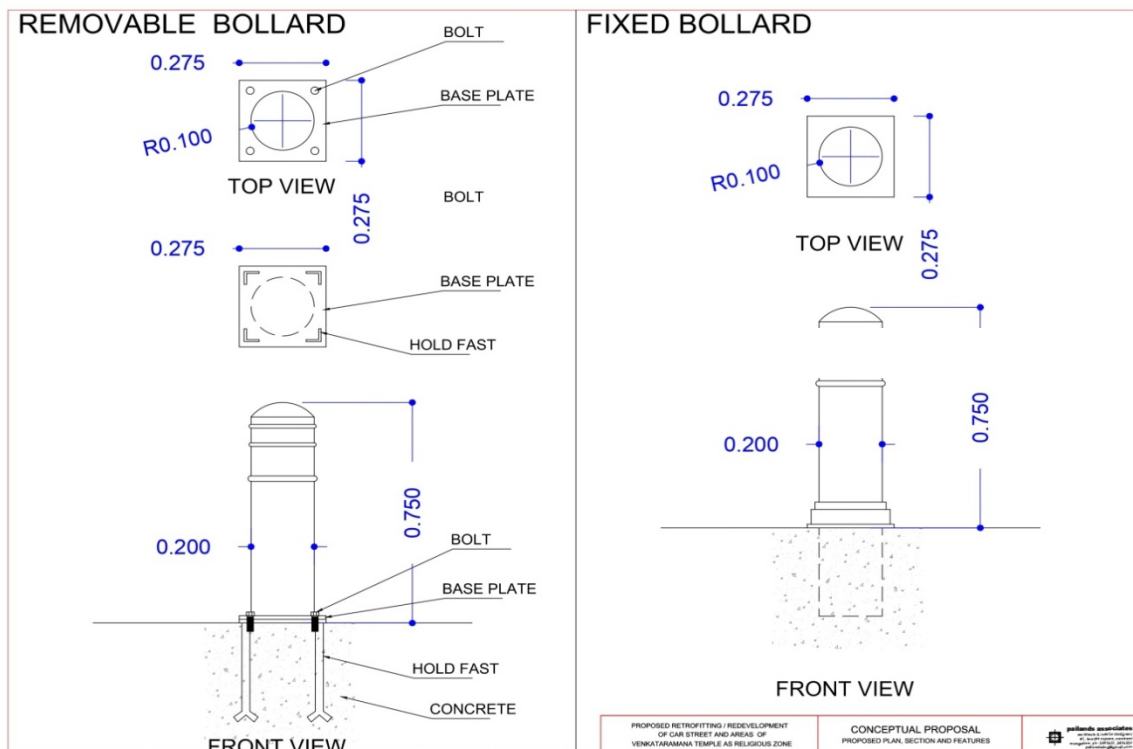
Nos.

Fabricating and providing M.S.Circular Bollards of 750 mm height above ground and 200mm dia, 10 Gauge with steel pedestal & steel cap as per designs given by the Architect including cutting, welding, riveting, polishing. The foundation shall be with base plate of 275x275x6mm thk and embedding pipe in foundation of 1:2:4 concrete as shown in drawing . The assembly shall be treated with Rusticised solution of approved company & applied with two coats of epoxy painting over one coat of epoxy primer to resist rusting of material (the treatment shall be given as per Manufacture's specifications and certificate to that effect shall be submitted along with Guarantee Certificate). The work shall be carried out as per the instructions of Architect of the PMC and Executive Engineer, MSCL.

2.SPECIFICATION FOR M.S. BOLLARDS - REMOVABLE BOLLARDS

Nos.

Fabricating and providing M.S.Circular Bollards of 750 mm height above ground and 200mm dia, 10 Gauge with steel pedestal , 275x275x6mm thk base plate(provision for fixing bolts to foundation base plate) & steel cap as per designs given by the Architect including cutting, welding, riveting, polishing. The foundation shall with base plate of 275x275x6mm thk with 20mm Diax6 nos holdfasts embedded in 1:2:4 concrete as shown in drawing , and provided with 4 Nos. 16 mm dia J Bolts for fixing bollards .The assembly shall be treated with Rusticised solution of approved company & applied with two coats of epoxy painting over one coat of epoxy primer (the treatment shall be given as per Manufacture's specifications and certificate to that effect shall be submitted along with Guarantee Certificate). The work shall be carried out as per the instructions of Architect of the PMC and Executive Engineer, MSCL.



PROVISION FOR SUPPLY OF CAST IRON + STAINLESS STEEL RAILING

SPECIFICATIONS FOR CAST IRON ORNAMENTAL GRILL WITH STAINLESS STEEL FRAME RAILING -

Nos./Rmt

Fabricating and providing of Cast Iron grills with Stainless steel pipes of specified size (matt finish/brushed steel finish)frame as per design.

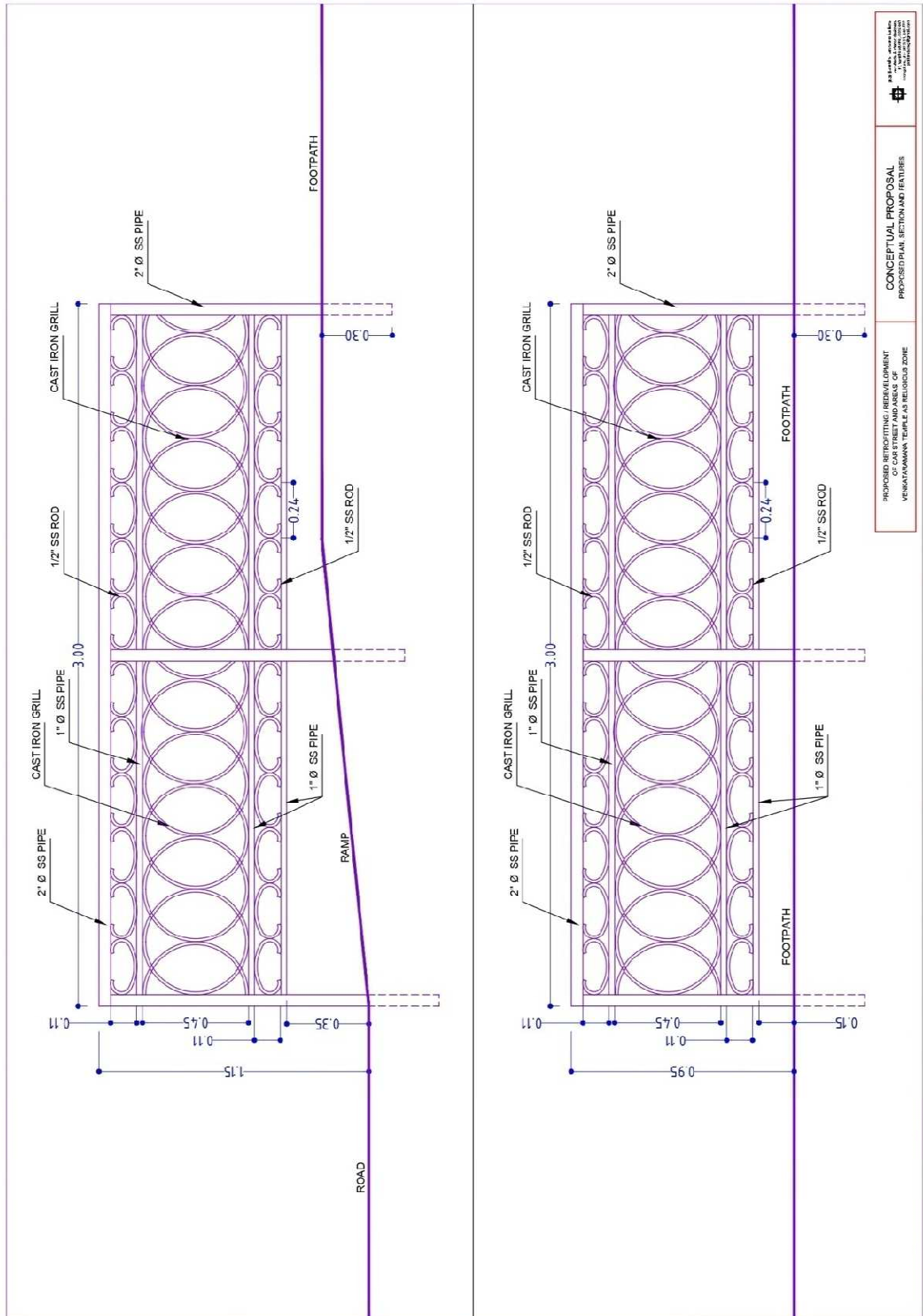
The ornamental grills made of Cast Iron of weight upto 45kg/sqm shall be framed by Stainless steel frame of 0.025 m diameter and 0.0127 m diameter circular sections as per design.

The vertical and horizontal frame supports should be made up of Stainless steel pipe sections for height 0.95 m above ground of 304 grade and have brushed steel finish. The horizontal member of 50 mm dia 16 guage hollow pipe shall be welded to vertical hollow pipe of 50 mm dia 16 guage at intervals as marked in the drawing.

The work includes providing two coats of enamel painting of approved colour over one coat of primer to the Cast Iron elements and shall include cost of all materials, fabrication, labour, painting, transportation , accessories charges as per specification and drawings given . The work shall be carried out as per the instructions of Architect of the PMC and Executive Engineer, MSCL.

(drawing attached in next page)

PROPOSED "RETROFITTING/REDEVELOPMENT OF CAR STREET AND AREAS OF
SRI VENKATRAMANA TEMPLE AS RELIGIOUS ZONE"



PROVISION FOR SUPPLY OF EAVES BOARD

(in Sqm)

Supplying of Wood Polymer Composite Hybrid board of minimum density 650 kg/cum having 18mm thickness and 200 mm height as eaves board as per the approved design using CNC cutting machine.

The scope of work shall include the supply of material, cutting the board in CNC machine , necessary labour, accessories complete as per the specification and requirements as per the instructions of the Architect of the PMC and incharge Executive Engineer of MSCL.

ಮಂಗಳೂರು ಸ್ಮಾರ್ಟ್ ಸಿಟಿ ಲಿಮಿಟೆಡ್

ಮಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ ಕಟ್ಟಡ, 2ನೇ ಮಹಡಿ, ಎಮ್.ಜಿ. ರಸ್ತೆ, ಲಾಲ್‌ಬಾಗ್, ಮಂಗಳೂರು - 575 003, ದ.ಕ.

Ref: MSCL/TECH/EE3/AEE3/AE9/CR01/2020-21/EOI2

ಸ್ಮಾರ್ಟ್‌ಸಿಟಿ ಲಿಮಿಟೆಡ್ ಮಂಗಳೂರು, ಪ್ರಧಾನ ವ್ಯವಸ್ಥಾಪಕರು(ತಾಂತ್ರಿಕ) ಇವರ ನಡವಳಿ

ದಿನಾಂಕ: 06.08.2020

ಉಪಸ್ಥಿತರು : ಶ್ರೀ ಅರುಣ್ ಪ್ರಭಾ, ಪ್ರಧಾನ ವ್ಯವಸ್ಥಾಪಕರು (ತಾಂತ್ರಿಕ)

ವಿಷಯ : ಮಂಗಳೂರು ಸ್ಮಾರ್ಟ್‌ಸಿಟಿ ಲಿಮಿಟೆಡ್‌ನ ಯೋಜನೆಯಡಿ ಕಾಮಗಾರಿಗಳಿಗೆ ವಿವಿಧ ವಿಶೇಷ ಸಾಮಗ್ರಿಗಳಿಗೆ ಅಂದಾಜು ಪಟ್ಟಿ ತಯಾರಿಸುವ ಸಲುವಾಗಿ ದರಗಳನ್ನು ಆಹ್ವಾನಿಸಿದ್ದು, ತಯಾರಕರು/ ಸಾಮಗ್ರಿ ಪೂರೈಕೆದಾರರು/ ಗುತ್ತಿಗೆದಾರರಿಂದ ಆಸಕ್ತಿ ವ್ಯಕ್ತಪಡಿಸುವಿಕೆ ಅಂಗೀಕರಿಸುವ ಬಗ್ಗೆ.

ಈ ಮೇಲಿನ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ, ಮಂಗಳೂರು ಸ್ಮಾರ್ಟ್‌ಸಿಟಿ ಲಿಮಿಟೆಡ್‌ನ ಯೋಜನೆಯಡಿ ವಿವಿಧ ಕಾಮಗಾರಿಗಳಿಗೆ ಅಂದಾಜು ಪಟ್ಟಿ ತಯಾರಿಸುವ ಸಲುವಾಗಿ ವಿಶೇಷ ಸಾಮಗ್ರಿಗಳಿಗೆ ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆ ದರಪಟ್ಟಿಯಲ್ಲಿ ದರ ಇಲ್ಲದ ಕಾರಣ ಮಾರುಕಟ್ಟೆ ದರಗಳಿಗೆ ತುಲನೆ ಮಾಡುವ ಸಲುವಾಗಿ ದರಸೂಚಿಯನ್ನು (Expression of Interest)ನ್ನು ಪ್ರಕಟಣೆ ಸಂಖ್ಯೆ: MSCL/TECH/EE-3/AEE-3/AE-9/CR-01/2020-21/EOI2 ದಿನಾಂಕ: 13.08.2020 ರಂತೆ ಆಹ್ವಾನಿಸಲಾಗಿದ್ದು, ಸದ್ರಿ ಪ್ರಕಟಣೆಯು ದಿನಾಂಕ: 19.08.2020 ರಂದು ವಾರ್ತಾ ಭಾರತಿ ದಿನಪತ್ರಿಕೆಯಲ್ಲಿ ಪ್ರಕಟಣೆಗೊಂಡಿರುತ್ತದೆ.

ಸದ್ರಿ ವಿಶೇಷ ಸಾಮಗ್ರಿಗಳಿಗೆ ಸಂಬಂಧಿಸಿದ ಈ ಕೆಳಗೆ ಸೂಚಿಸಿರುವ ವಿಶಿಷ್ಟ ವಿವರಣೆಗಳಿಗೆ ಅದರ ಮುಂದೆ ಸೂಚಿಸಿರುವ ದರಗಳು ಮಾರುಕಟ್ಟೆ ಧಾರಣೆ ದರಗಳಲ್ಲಿ ಅತೀ ಕಡಿಮೆ ದರಗಳಾಗಿದ್ದು, ದರಸೂಚಿ ಕರೆಯೋಲೆ ಮೂಲಕ ಬಂದ ದರಗಳನ್ನು ಪರಿಶೀಲಿಸಿ ಅಂಗೀಕರಿಸಲಾಗಿದೆ.

Sl. No	Description of work	Qty	Unit	Approved Lowest Rate
1	Providing and fixing Precast Bollard of 750mm height and 200 mm dia cast in M-30 Grade Concrete with Ordinary Portland Cement using vibro-compaction technique for a compressive strength of concrete for 30MPa at 28 days. Reinforcements include fabrication of micro trusses using 4.7 mm Torkari TMT Bars and 3 mm MS Rods and they are welded to achieve the required shape. As per the detailed specification and drawings attached and with acrylic painting finish, Including transportation , loading unloading and fixing at site as per Executive Engineer in charge directions.	1	No	2700.00
2	Providing and fixing of Precast Benches of size 1500 mm x 500 mm x 450 mm which is cast using M-30 grade concrete with Ordinary Portland Cement by using vibro-compaction technique for a compressive strength of concrete for 30MPa at 28 days. Reinforcements include fabrication of micro trusses using 4.7 mm Torkari TMT Bars and 3 mm MS Rods	1	No	10620.00

	and they are welded to achieve the required shape.As per the detailed specification and drawings attached , Including transportation , loading unloading and fixing at site as per Executive Engineer in charge directions.			
3	Providing and fixing of RCC rings, M25 grade of clear internal diameter of minimum 1 m and height of 0.3m and width of 0.1m with provision for minimum 2 no. of circular openings to connect 200 mm dia PVC pipes for water entry and over flow. Circular openings of 50mm dia for connecting 1.0m apart PVC pipe should be placed around the ring for percolation . The ring shall be reinforced using 10mm dia tor at 150mm spacing in vertical direction for main rod and 8mm dia tor in horizontal direction as a distribution rod. The cost shall include bare cost of all materials, cost of reinforcements, transportation charges, fixing charges, labour, HOM etc., As per the detailed drawing and specification attached. The work shall be carried out as per the instructions of Executive Engineer incharge of MSCL.	1	Set	1600.00
4	Supplying, Erection and testing of 6.0mtr height decorative cast iron pole with CI embellishments welded. The bottom CI portion should have round mounting base of not more than 450mm dia and must be provided with service window comprising of 4way, 25Amp connector terminal and a MCB. The top portion should not be less than 90mm dia. Foundation bolts and Templates included . As per the detailed drawings and specifications attached. The work shall be carried out as per the instructions of Executive Engineer in charge of MSCL.	1	No	44840.00
5	Supplying and fixing of following size single ornamental Cast Iron bracket & fixing on the existing pole for mounting LED street light fitting including necessary accessories etc. as required - 1 m in length . As per the detailed drawing and specification attached. The work shall be carried out as per the instructions of Executive Engineer incharge of MSCL.	1	No	
6	Supplying, Erection and testing of 4.0mtr. height decorative cast iron pole for post top light with CI embellishments welded. The bottom CI portion should have round mounting base of not more than 400mm dia and must be provided with service window comprising of 4way, 25Amp connector terminal and a MCB. The top portion should not be less than 90mm dia. Foundation bolts and Templates included. As per the detailed drawing and specification attached. The	1	No	41770.00

	the detailed drawing and specification attached. The work shall be carried out as per the instructions of Executive Engineer in charge of MSCL.			
7	Supplying, Erection and testing of 2.7m (minimum) height decorative cast iron pole with CI embellishment duly welded. The bottom CI portion should have round mounting base of not more than 250mm dia. The top portion should not be less than 90mm dia. Foundation bolts and Templates included. As per the detailed drawing and specification attached. The work shall be carried out as per the instructions of Executive Engineer in charge of MSCL	1	No	29700.00
8	Providing and fixing of good quality Karkala granite stone with minimum 3 line dressing of thickness and sizes as shown in drawing using cement mortar and finished with sandblasting before handover. As per the detailed drawing and specification attached. The cost shall include removal of existing tree planter box, delivery of materials to site, handling, labour, construction of additional masonry / filling for foundation and support for carved granite stone as required at site as per instructions of Executive Engineer incharge of MSCL.Sandblasting and cleaning of existing granite stone masonry of temple tree planter box , steps and carvings as per instructions of Executive Engineer incharge of MSCL.		Sqm	
	3 line dressed karkala stone work		Sqm	36612.00
	Elephant Stone and Steps		Complete	120000.00
	Flooring		Sqm	3600.00
	Sand Blasting		Sqm	475.00
9	Supply and fixing of class AA Mangalore roof tile (IS 654-1972 or as amended from time to time double channelled flat tiles of the Mangalore pattern of approved make). All tiles must be thoroughly well burnt throughout of regular shape and uniform size sharp, even and free from winds, cracks, laminations, bends and flaws. The roofing tiles shall also be free from impurities like particles of stone, lime or other foreign materials visible to naked eye either on the surface or on the fractured face of the tile obtained. They must be approved colour (deep red) and ring clearly when struck. Tiles shall be of uniform colour and shall not absorb more than 16% of their dry weight when soaked in water for full 24 hours.			
	A. Mangalore Single Groove Roofing tile - 16" x 9"	1	Sqm	362.00
	B. Clay Ceiling Tiles - 12.75" x 9.25 "	1	Sqm	377.00

	C. Mangalore tile with glass - Skylight Tiles - 16" x 9"	1	Sqm	1356.00
10	M.S. BOLLARDS - FIXED BOLLARDS :Fabricating , Supplying and fixing of M.S.Circular Bollards of 750 mm height above ground and 200mm dia, 10 Gauge with steel pedestal & steel cap as per designs given by the Architect including cutting, welding, riveting, polishing. The foundation shall be with base plate of 275x275x6mm thk and embedding pipe in foundation of 1:2:4 concrete as shown in drawing . The assembly shall be treated with Rusticised solution of approved company & applied with two coats of epoxy painting over one coat of epoxy primer to resist rusting of material (the treatment shall be given as per Manufacture's specifications and certificate to that effect shall be submitted along with Guarantee Certificate). As per the detailed drawing and specification attached.The work shall be carried out as per the instructions of Executive Engineer, MSCL.	1	No	4350.00
11	M.S. BOLLARDS - REMOVABLE BOLLARDS : Fabricating , Supplying , fixing of M.S.Circular Bollards of 750 mm height above ground and 200mm dia, 10 Gauge with steel pedestal ,275x275x6mm thk base plate(provision for fixing bolts to foundation base plate) & steel cap as per designs given by the Architect including cutting, welding, riveting, polishing. The foundation shall with base plate of 275x275x6mm thk with 20mm Diax6 nos holdfasts embedded in 1:2:4 concrete as shown in drawing , and provided with 4 Nos. 16 mm dia J Bolts for fixing bollards .The assembly shall be treated with Rusticised solution of approved company & applied with two coats of epoxy painting over one coat of epoxy primer (the treatment shall be given as per Manufacture's specifications and certificate to that effect shall be submitted along with Guarantee Certificate). As per the detailed drawing and specification attached.The work shall be carried out as per the instructions of Executive Engineer, MSCL.	1	No	7575.00
12	Fabricating , Supplying and fixing of Cast Iron grills with Stainless steel pipes of specified size (matt finish/brushed steel finish)frame as per design.The ornamental grills made of Cast Iron of weight upto 45kg/sqm shall be framed by Stainless steel frame of 0.025 m diameter and 0.0127 m diameter circular sections as per design.The vertical and horizontal frame supports should be made up of Stainless steel pipe sections for height 0.95 m above ground of 304 grade and have brushed steel finish. The horizontal	1	Rmt	11975.00

	member of 50 mm dia 16 guage hollow pipe shall be welded to vertical hollow pipe of 50 mm dia 16 guage at intervals as marked in the drawing. The work includes providing two coats of enamel painting of approved colour over one coat of primer to the Cast Iron elements and shall include cost of all materials, fabrication, labour, painting, transportation , accessories charges as per specification and drawings given including fixing at site . The work shall be carried out as per the instructions of Executive Engineer, MSCL.			
13	Providing and fixing FRP Chamber covers of the following sizes			
	A) FRP Water Gully Covers with Frame 300x620mm clear width – 25T	1	No	4355.00
	B) FRP Recessed Covers 600 x 600 mm clear width - 2.5 T	1	No	7150.00
	C) FRP Recessed Covers 600 x 600 mm clear width - 25 T	1	No	14950.00
	D). FRP Square Chamber Cover 450 X 450 mm clear width - 2.5T	1	No	2145.00
	E) FRP Square Chamber Cover 450 X 450 mm clear width - 25T	1	No	4550.00
	F) FRP Rectangular Chamber Cover 600 x 900 mm clear width - 2.5T	1	No	5005.00
	G) FRP Rectangular Chamber Cover 600 x 900 mm clear width - 25T	1	No	10270.00
	H). FRP 900 Dia. Circular Cover - 25T	1	No	10725.00
14	Supplying of Wood Polymer Composite Hybrid board of minimum density 650 kg/cum having 18mm thickness and 200 mm height as eaves board as per the approved design using CNC cutting machine. The scope of work shall include the supply of material, cutting the board in CNC machine , necessary labour, accessories complete as per the specification and requirements as per the instructions of the Executive Engineer of incharge MSCL.	1	Sqm	4925.00

ಪ್ರಧಾನ ಪೈಪ್‌ಲೈನ್‌ಗಳಿಗೆ, ತಾಂತ್ರಿಕ
ಮಂಗಳೂರು ಸ್ಮಾರ್ಟ್‌ಸಿಟಿ ಲಿಮಿಟೆಡ್.

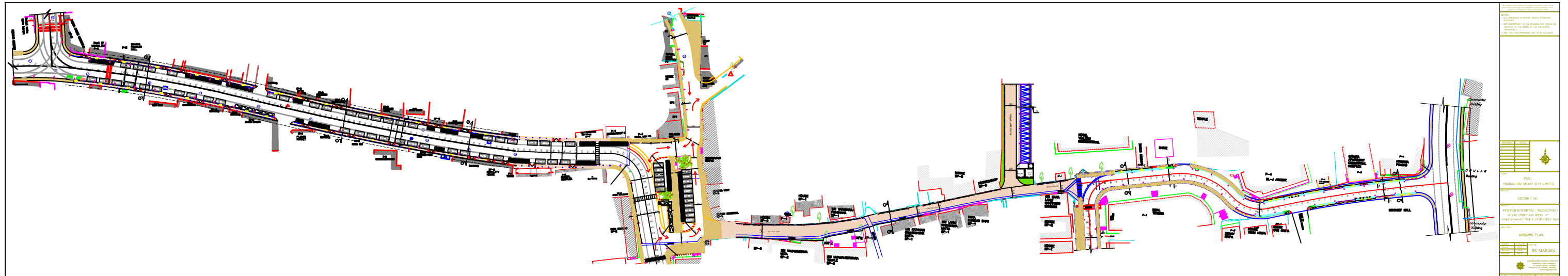
ಷರತ್ತುಗಳು :

- 1) Expression of Interest ನಂತೆ, ಐಟಂವಾರು ಬಂದ ದರಗಳು ಮಂಗಳೂರು ಸ್ಮಾರ್ಟ್‌ಸಿಟಿ ಲಿಮಿಟೆಡ್‌ನ ಪ್ರಸ್ತಾವಿತ ಕಾಮಗಾರಿಗಳಿಗೆ ಮಾತ್ರ ಅನ್ವಯವಾಗುತ್ತದೆ.

2) ಸದ್ರಿ ಕಾಮಗಾರಿಗೆ ಈ ಮೇಲಿನ ಅನುಮೋದಿತ ವಿಶಿಷ್ಟ ವಿವರಣೆ ಮತ್ತು ದರಗಳನ್ನು ಅಳವಡಿಸಿ ಅಂದಾಜು ಪಟ್ಟಿಯನ್ನು ತಯಾರಿಸಿ ಸಕ್ಷಮ ಪ್ರಾಧಿಕಾರದಿಂದ ತಾಂತ್ರಿಕ ಹಾಗೂ ಆಡಳಿತಾತ್ಮಕ ಅನುಮೋದನೆಯನ್ನು ಪಡೆಯತಕ್ಕದ್ದು.

ಪ್ರತಿಯನ್ನು :

- 1) ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು, ಮಂಗಳೂರು ಸ್ಮಾರ್ಟ್‌ಸಿಟಿ ಲಿಮಿಟೆಡ್, ಮಂಗಳೂರು.
- 2) ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು, ಮಂಗಳೂರು ಸ್ಮಾರ್ಟ್‌ಸಿಟಿ ಲಿಮಿಟೆಡ್, ಮಂಗಳೂರು.



LEGEND

STREET LIGHT - 6 M HEIGHT

PRECAST CC BOLLARD

PRECAST BENCH

FOOTPATH RAMP

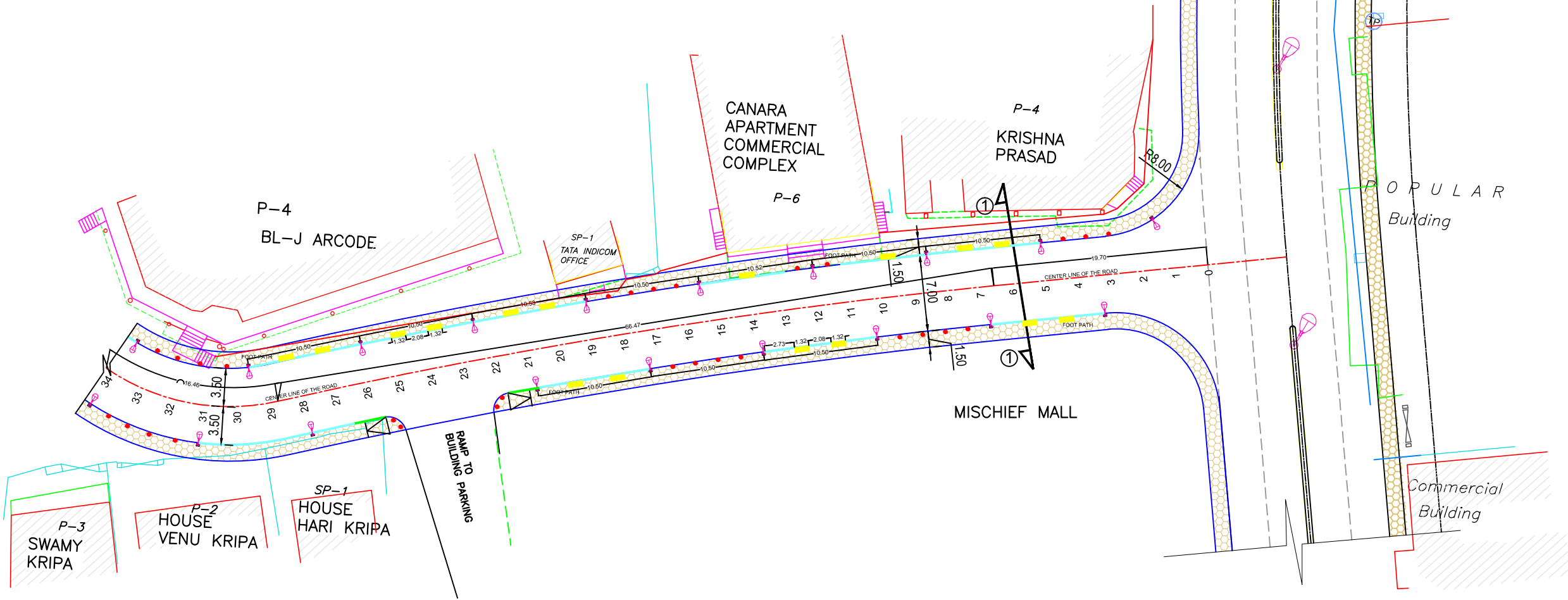
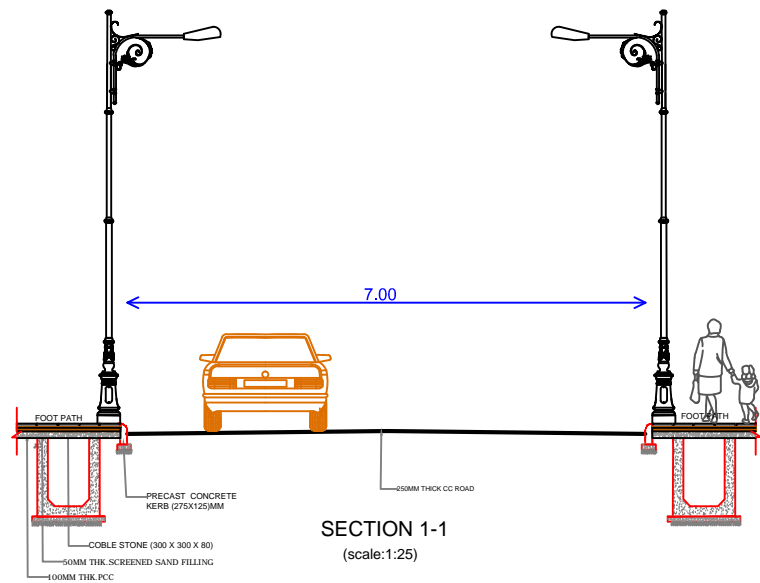
RAILING

POTENTIAL LENGTH FOR CONSTRUCTION OF NEW COMPOUND WALL

SIGN BOARD

FOOTPATH RAILING

POST TOP LIGHT



THIS DRAWING IS THE PROPERTY OF PAILANDS ASSOCIATES & SHALL NOT BE USED WITHOUT PERMISSION. ANY DISCREPANCY SHOULD BE BROUGHT TO THE NOTICE OF THE ARCHITECTS PRIOR TO EXECUTION OF WORKS.

- NOTES:
- * ALL DIMENSIONS IN METERS UNLESS OTHERWISE MENTIONED
 - * ANY DISCREPANCY IN THE DRAWING/SITE SHOULD BE BROUGHT TO THE NOTICE OF THE ARCHITECTS IMMEDIATELY.
 - * ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.

REVISIONS	DATED

CLIENT :
MSCL
MANGALURU SMART CITY LIMITED

SECTOR :
SECTOR 1 (A)

PROJECT :
PROPOSED RETROFITTING / REDEVELOPMENT
OF CAR STREET AND AREAS OF
VENKATARAMANA TEMPLE AS RELIGIOUS ZONE

DWG. TITLE :
WORKING PLAN

ISSUED:	17-08-2020	DWG. NO
SCALE	N.T.S	SC-1(a):001
DRAWN	V.K.S	
CHECKED	M.V.P	

pailands associates
architects & interior designers
#1, temple square, carstreet
mangalore. ph- 2495651, 2496539
pailands@gmail.com

LEGEND

STREET LIGHT - 6 M HEIGHT

PRECAST CC BOLLARD

PRECAST BENCH

FOOTPATH RAMP

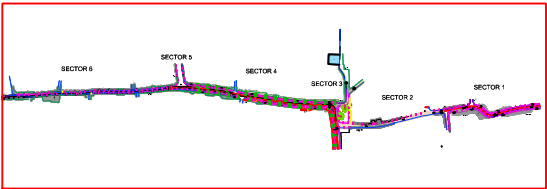
RAILING

POTENTIAL LENGTH FOR CONSTRUCTION OF NEW COMPOUND WALL

SIGN BOARD

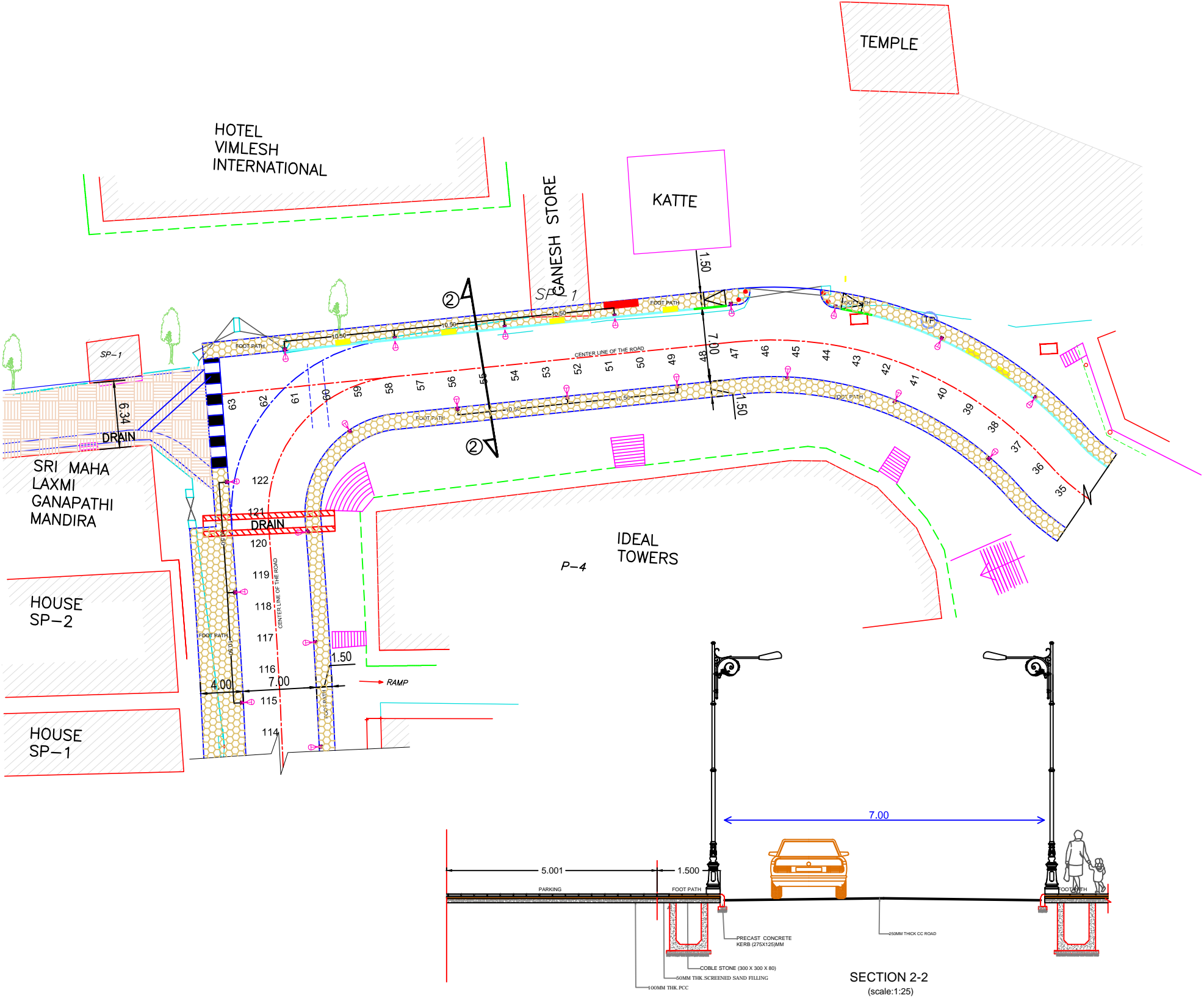
FOOTPATH RAILING

POST TOP LIGHT



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- NOTES:
- * ALL DIMENSIONS IN METERS UNLESS OTHERWISE MENTIONED
 - * ANY DISCREPANCY IN THE DRAWING/SITE SHOULD BE BROUGHT TO THE NOTICE OF THE ARCHITECTS IMMEDIATELY.
 - * ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.



REVISIONS	DATED

CLIENT :
MSCL
MANGALURU SMART CITY LIMITED

SECTOR :
SECTOR 1 (B)

PROJECT :
PROPOSED RETROFITTING / REDEVELOPMENT
OF CAR STREET AND AREAS OF
VENKATARAMANA TEMPLE AS RELIGIOUS ZONE

DWG. TITLE :
WORKING PLAN

ISSUED:	17-08-2020	DWG. NO
SCALE	N.T.S	SC-1(b):002
DRAWN	V.K.S	
CHECKED	M.V.P	

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LEGEND

STREET LIGHT - 6 M HEIGHT

PRECAST CC BOLLARD

PRECAST BENCH

FOOTPATH RAMP

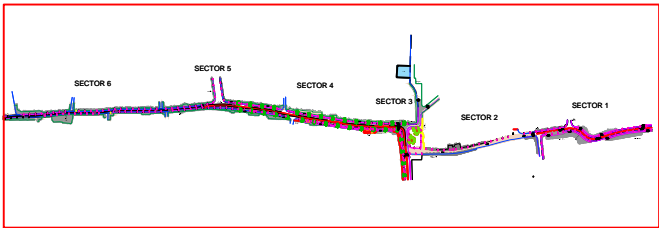
RAILING

POTENTIAL LENGTH FOR CONSTRUCTION OF NEW COMPOUND WALL

SIGN BOARD

FOOTPATH RAILING

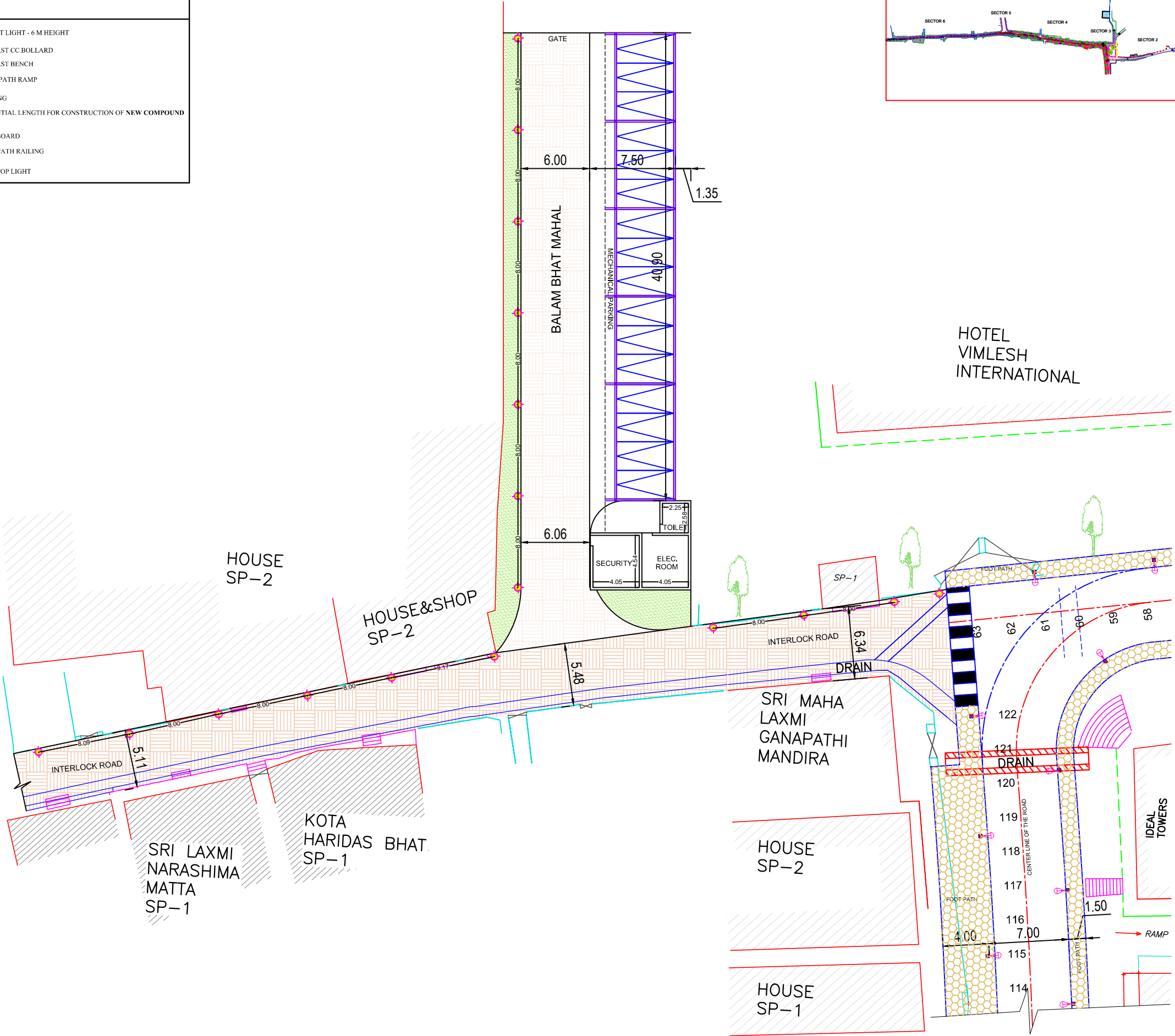
POST TOP LIGHT



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REVISIONS	DATED

CLIENT :
MSCL
MANGALURU SMART CITY LIMITED

SECTOR :
SECTOR 2 (A)

PROJECT :
PROPOSED RETROFITTING / REDEVELOPMENT
OF CAR STREET AND AREAS OF
VENKATARAMANA TEMPLE AS RELIGIOUS ZONE

DWG. TITLE :
WORKING PLAN

ISSUED:	17-08-2020	DWG. NO
SCALE	N.T.S	SC-2(a):003
DRAWN	V.K.S	
CHECKED	M.V.P	

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#1, temple square, carstreet
mangalore. ph- 2495651, 2496539
pailands@gmail.com

LEGEND

STREET LIGHT - 6 M HEIGHT

PRECAST CC BOLLARD

PRECAST BENCH

FOOTPATH RAMP

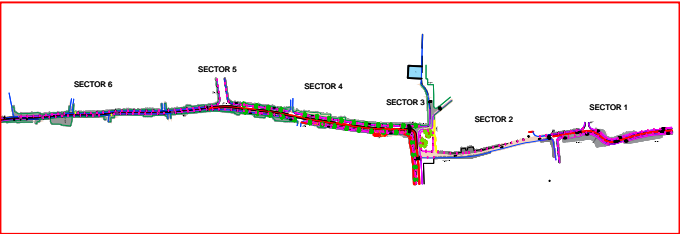
RAILING

POTENTIAL LENGTH FOR CONSTRUCTION OF NEW COMPOUND WALL

SIGN BOARD

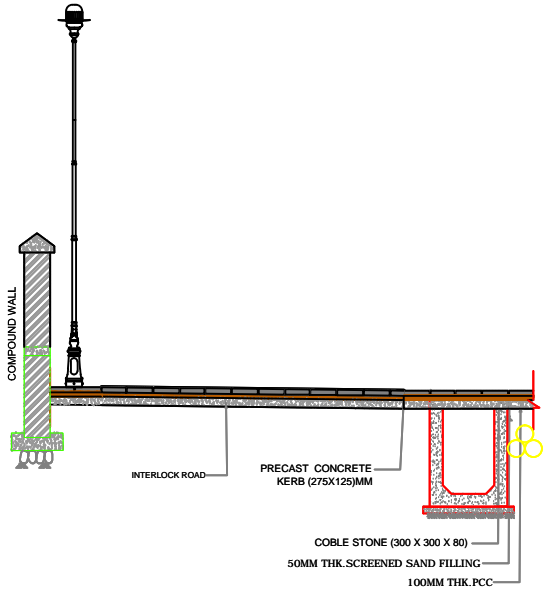
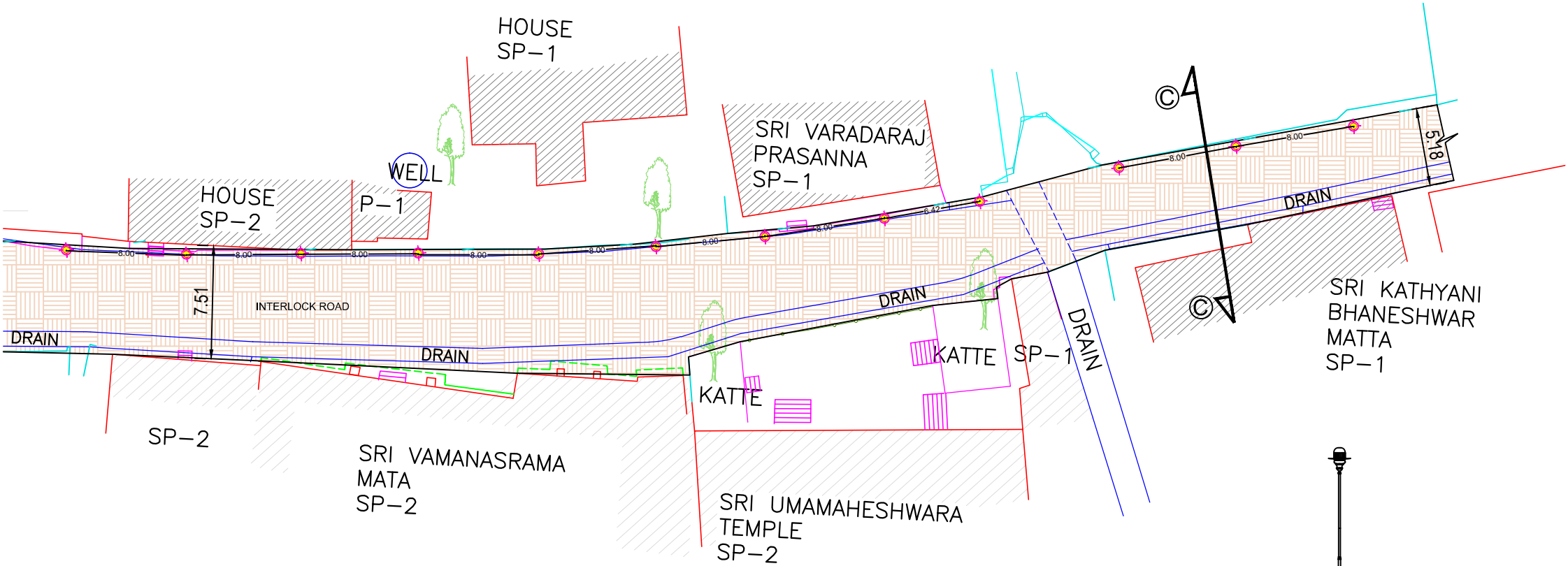
FOOTPATH RAILING

POST TOP LIGHT



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SECTION @ C-C
(scale:1:25)

REVISIONS	DATED

CLIENT :
MSCL
MANGALURU SMART CITY LIMITED

SECTOR :
SECTOR 2 (B)

PROJECT :
PROPOSED RETROFITTING / REDEVELOPMENT
OF CAR STREET AND AREAS OF
VENKATARAMANA TEMPLE AS RELIGIOUS ZONE

DWG. TITLE :
WORKING PLAN

ISSUED:	17-08-2020	DWG. NO
SCALE	N.T.S	SC-2(b):004
DRAWN	V.K.S	
CHECKED	M.V.P	

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pailands@gmail.com

LEGEND

STREET LIGHT - 6 M HEIGHT

PRECAST CC BOLLARD

PRECAST BENCH

FOOTPATH RAMP

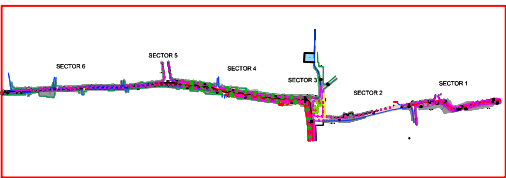
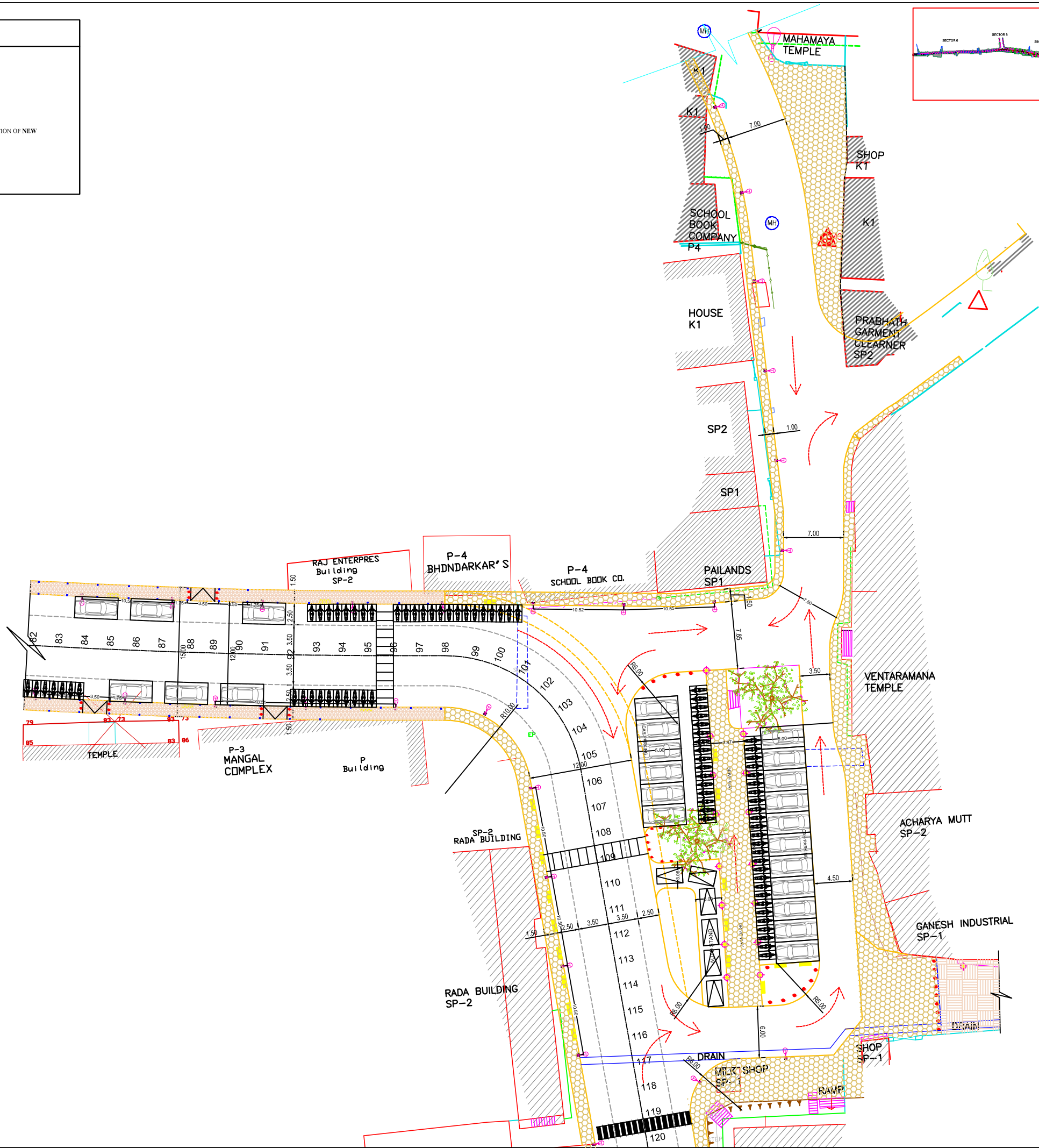
RAILING

POTENTIAL LENGTH FOR CONSTRUCTION OF NEW COMPOUND WALL

SIGN BOARD

FOOTPATH RAILING

POST TOP LIGHT



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REVISIONS	DATED

CLIENT :
MSCL
MANGALURU SMART CITY LIMITED

SECTOR :
SECTOR 3

PROJECT :
PROPOSED RETROFITTING / REDEVELOPMENT
OF CAR STREET AND AREAS OF
VENKATARAMANA TEMPLE AS RELIGIOUS ZONE

DWG. TITLE :
WORKING PLAN

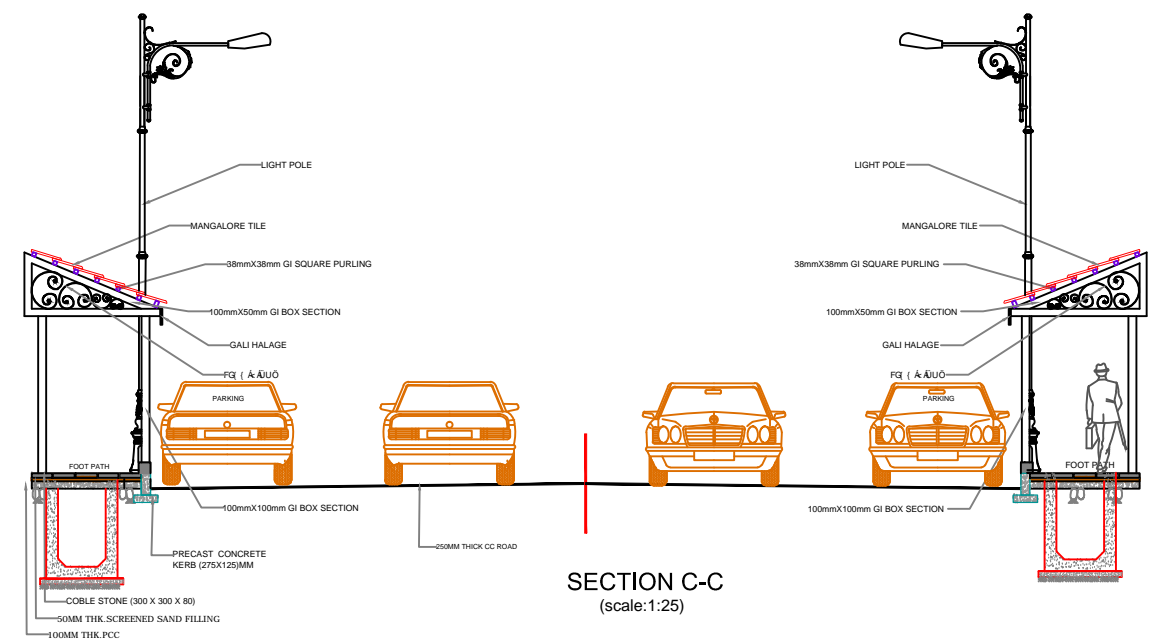
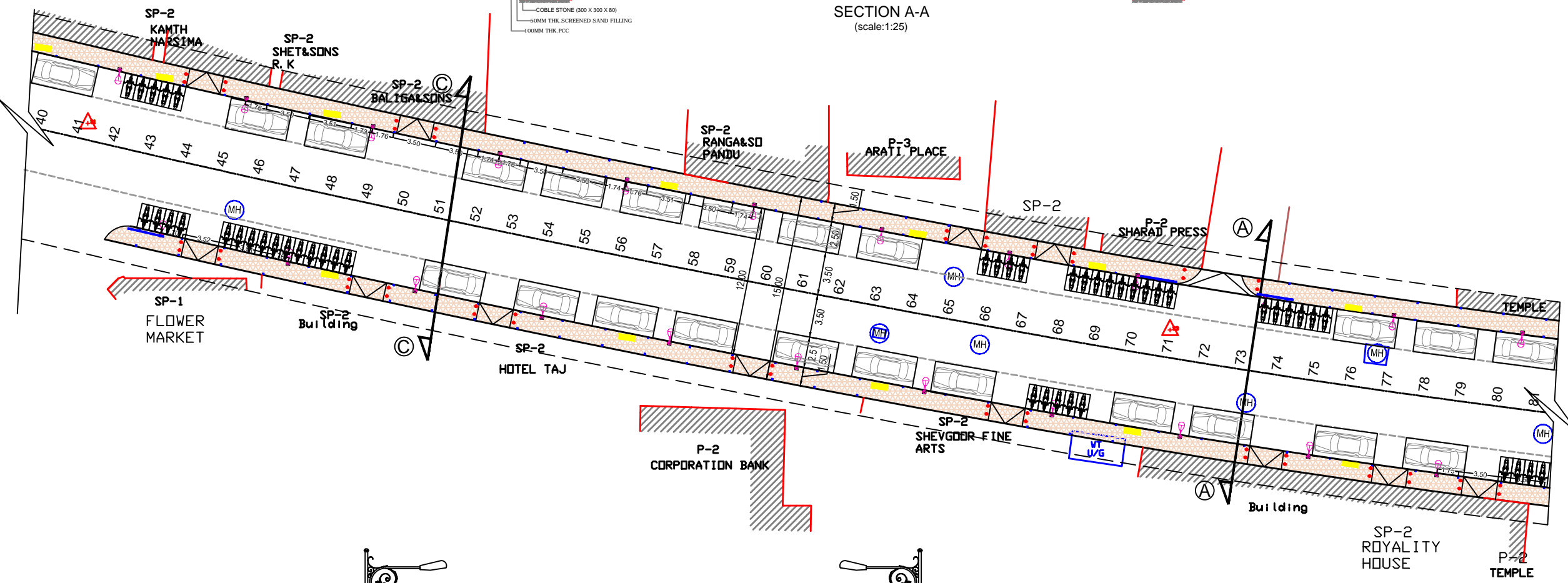
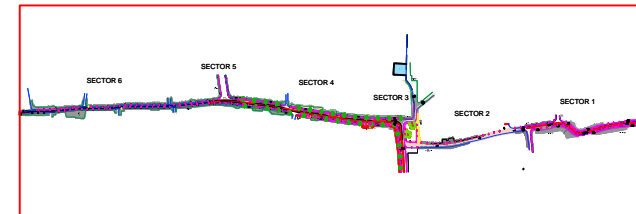
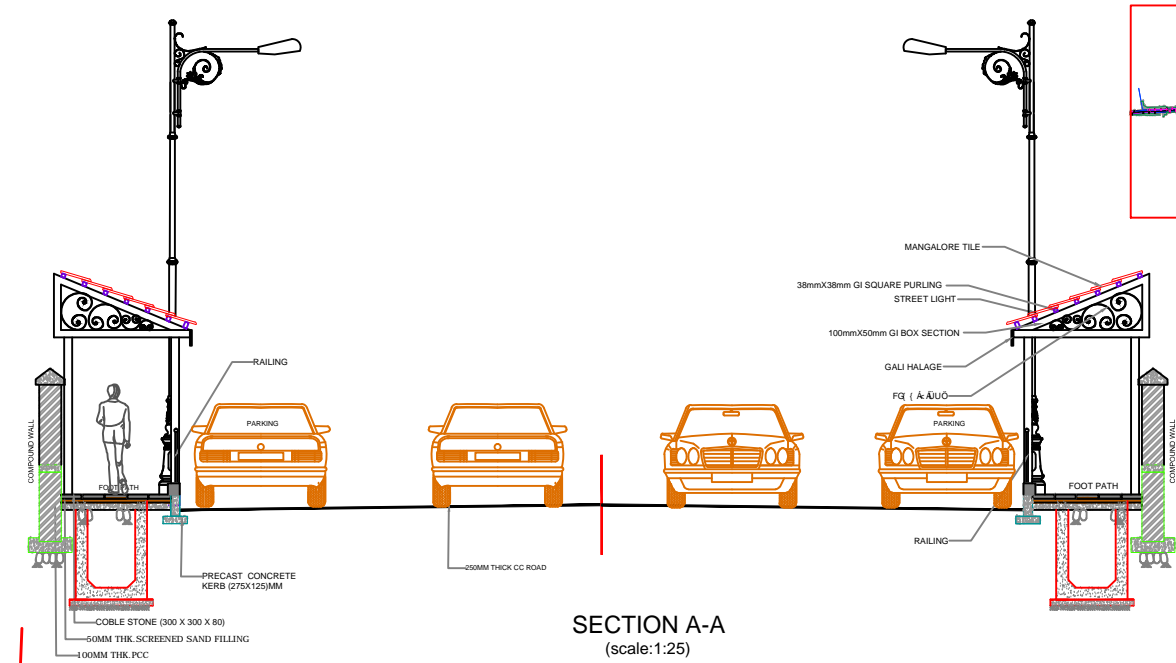
ISSUED:	17-08-2020	DWG. NO
SCALE	N.T.S	SC-3(a):005
DRAWN	V.K.S	
CHECKED	M.V.P	



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LEGEND

- STREET LIGHT - 6 M HEIGHT
- PRECAST CC BOLLARD
- PRECAST BENCH
- FOOTPATH RAMP
- RAILING
- POTENTIAL LENGTH FOR CONSTRUCTION OF NEW COMPOUND WALL
- SIGN BOARD
- FOOTPATH RAILING
- POST TOP LIGHT



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REVISIONS	DATED

CLIENT :
MSCL
MANGALURU SMART CITY LIMITED

SECTOR :
SECTOR 4


PROJECT :
PROPOSED RETROFITTING / REDEVELOPMENT
OF CAR STREET AND AREAS OF
VENKATARAMANA TEMPLE AS RELIGIOUS ZONE


DWG. TITLE :
WORKING PLAN


ISSUED:	17-08-2020	DWG. NO
SCALE	N.T.S	SC-4:006
DRAWN	V.K.S	
CHECKED	M.V.P	


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pailands@gmail.com


LEGEND


 STREET LIGHT - 6 M HEIGHT


 PRECAST CC BOLLARD


 PRECAST BENCH


 FOOTPATH RAMP

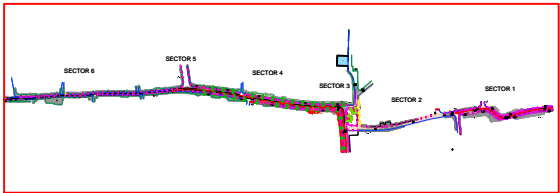
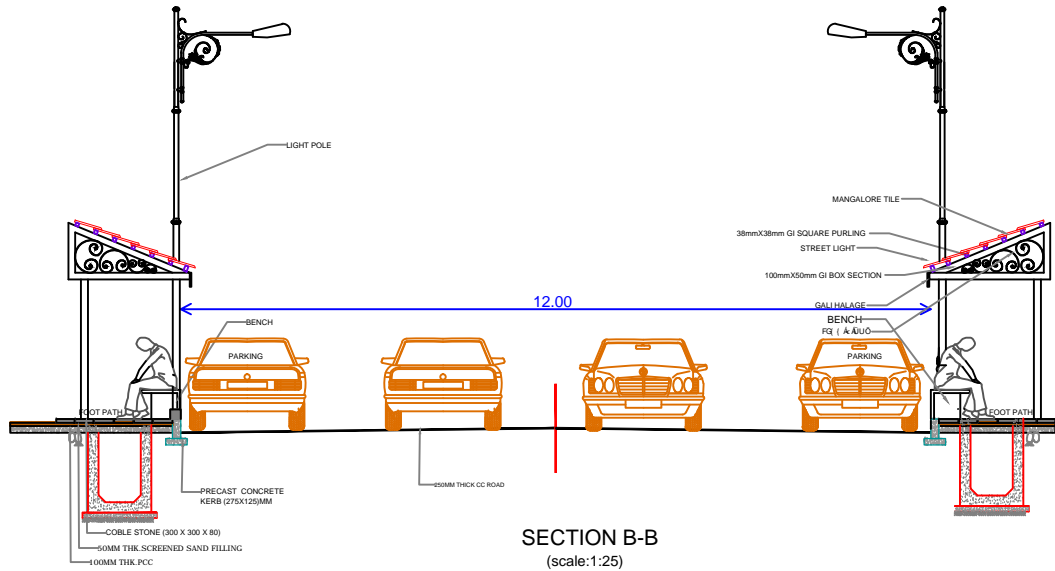
 RAILING

 POTENTIAL LENGTH FOR CONSTRUCTION OF NEW COMPOUND WALL

 SIGN BOARD

 FOOTPATH RAILING

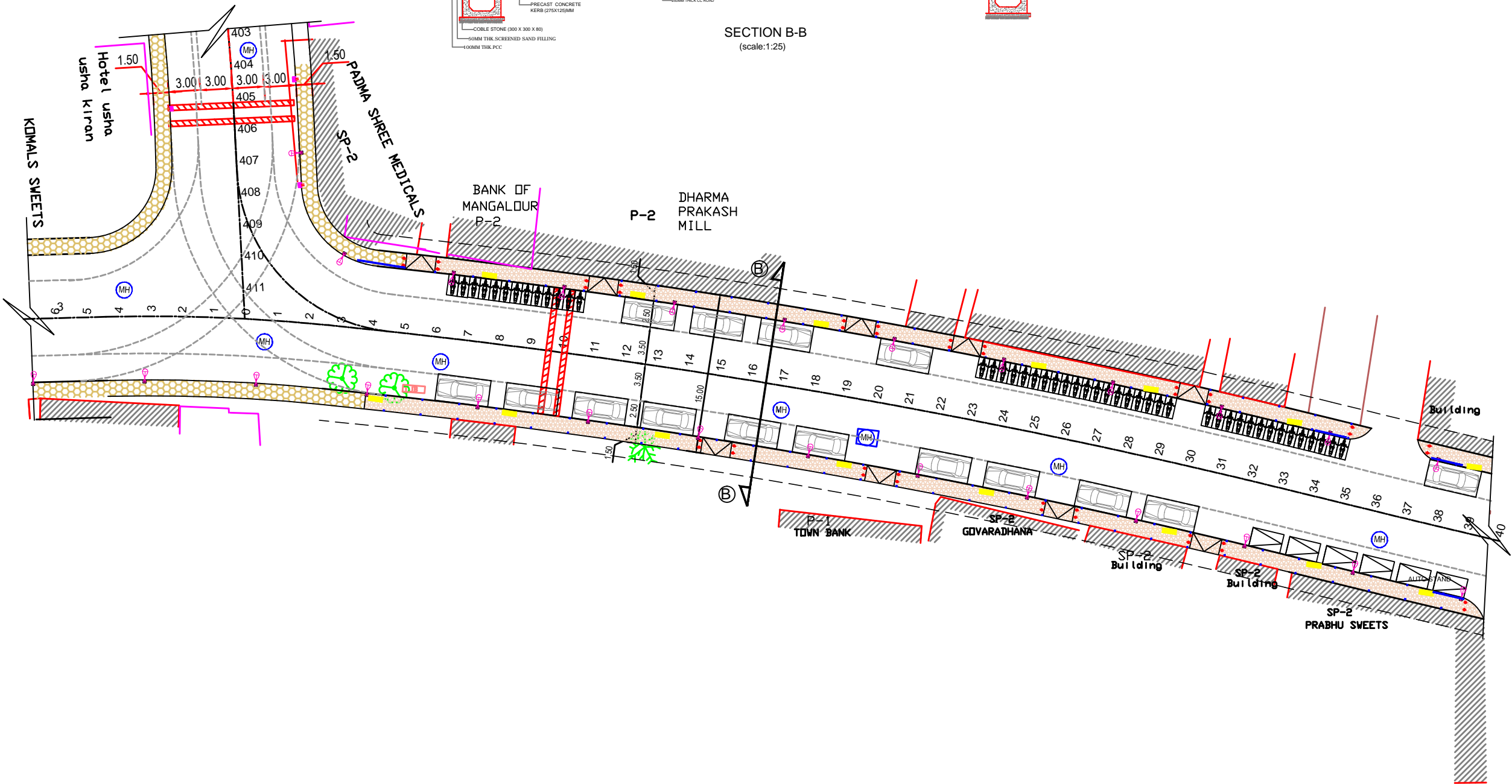
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REVISIONS	DATED



CLIENT :
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MANGALURU SMART CITY LIMITED

SECTOR :
SECTOR 5

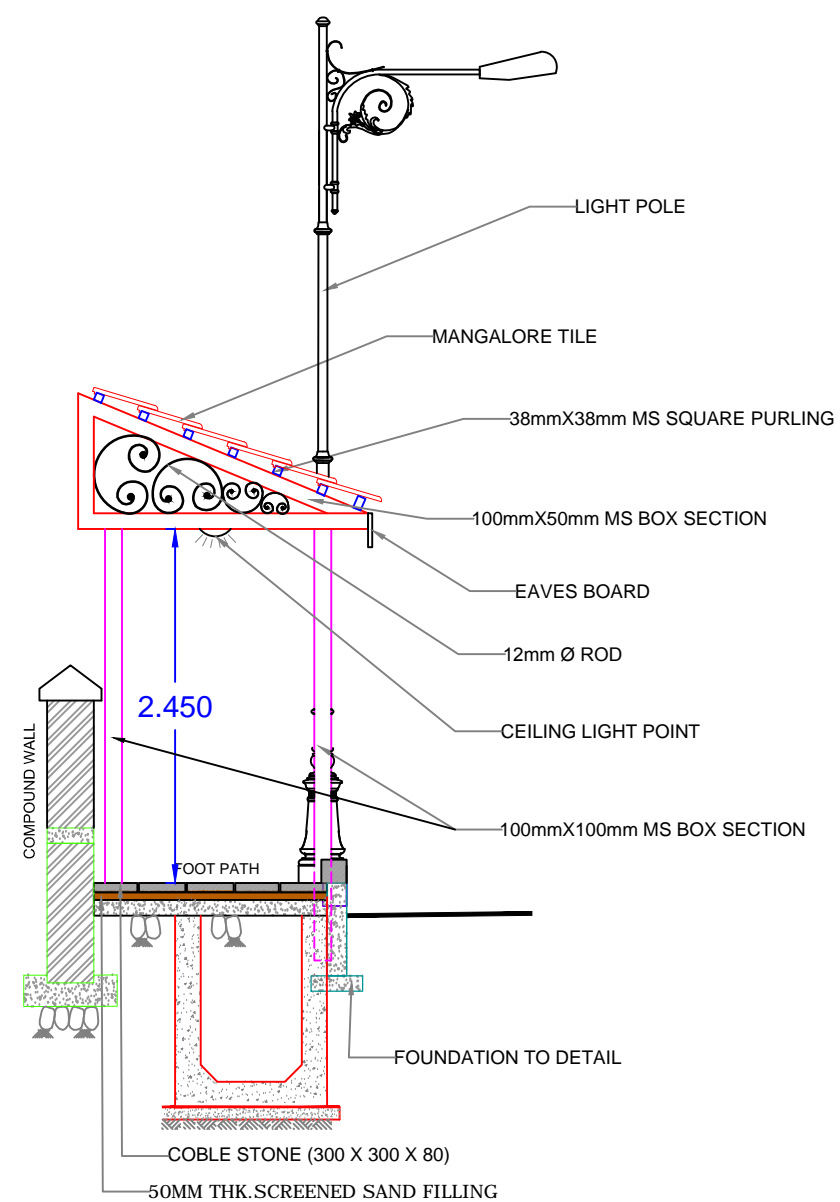
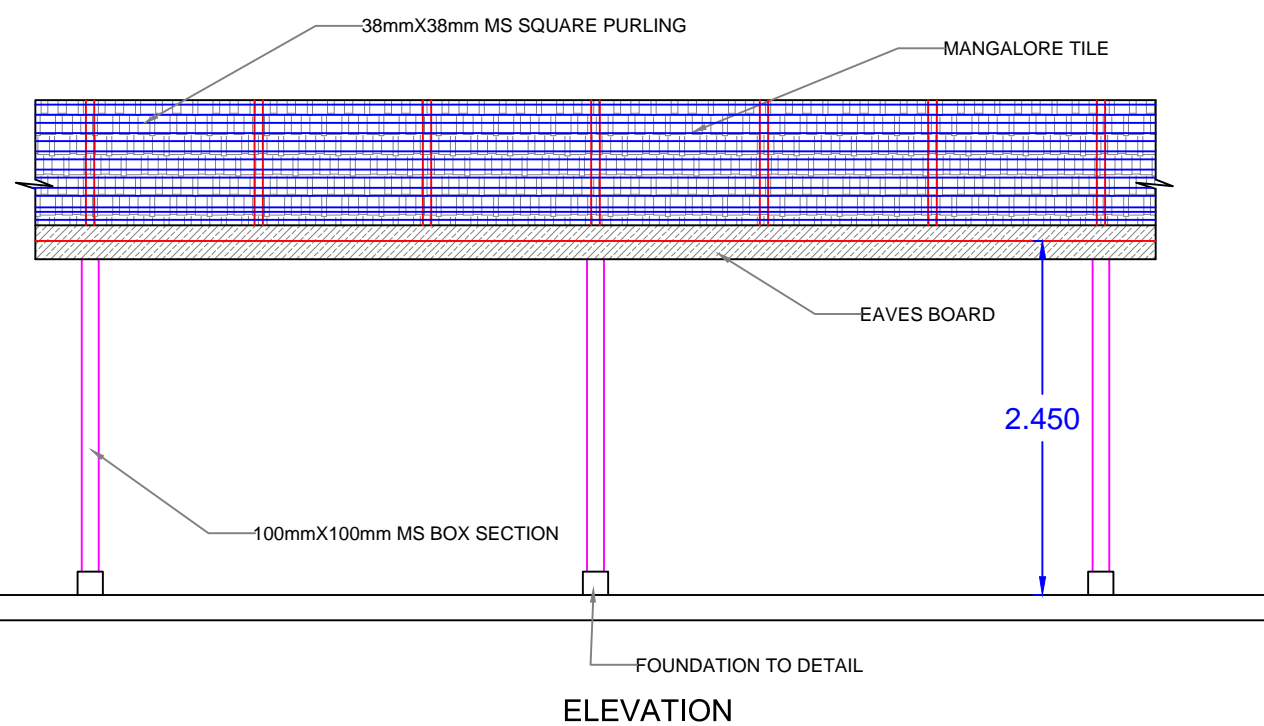
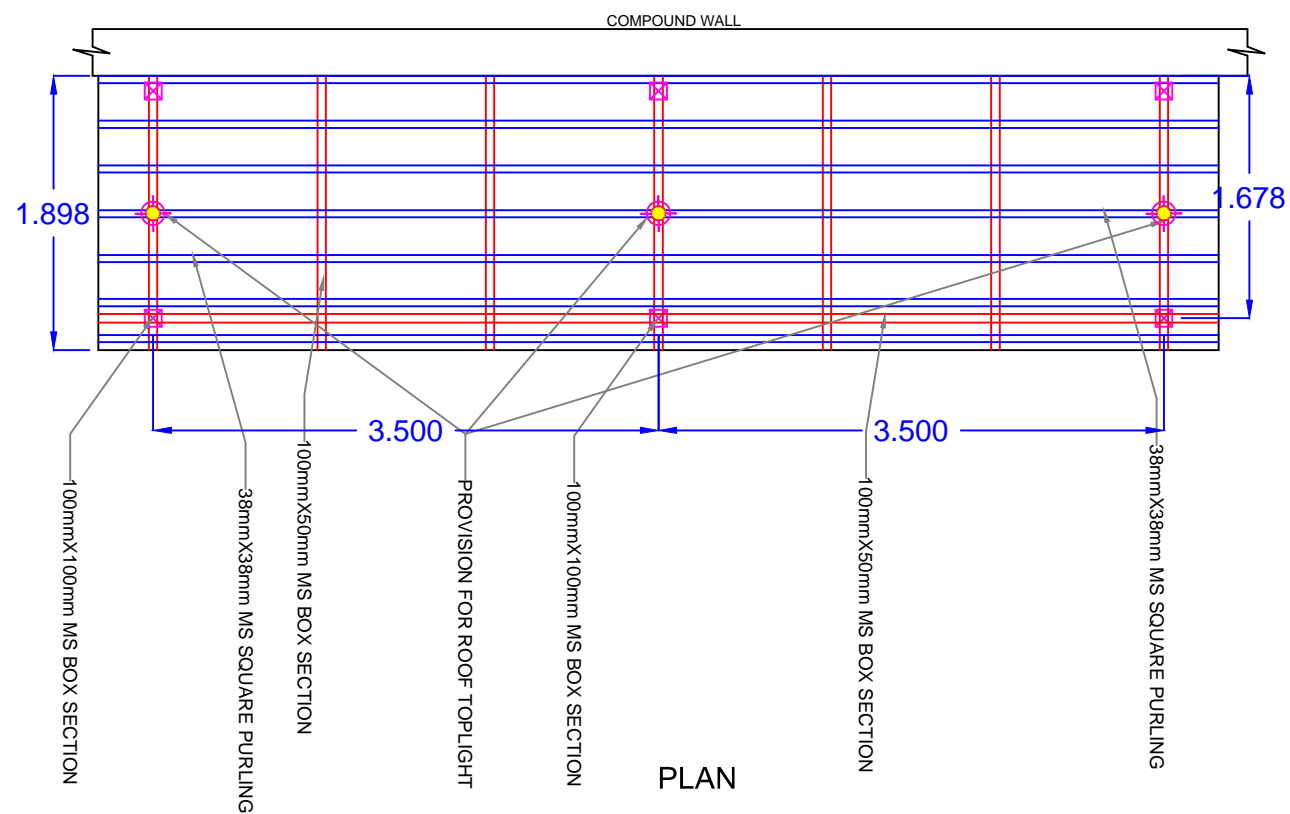
PROJECT :
PROPOSED RETROFITTING / REDEVELOPMENT
OF CAR STREET AND AREAS OF
VENKATARAMANA TEMPLE AS RELIGIOUS ZONE

DWG. TITLE :
WORKING PLAN

ISSUED:	17-08-2020	DWG. NO
SCALE	N.T.S	SC-5:007
DRAWN	V.K.S	
CHECKED	M.V.P	



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[illegible]

CLIENT :
MSCL
MANGALURU SMART CITY LIMITED

SECTOR : SECTOR 4&5

PROJECT :
PROPOSED RETROFITTING / REDEVELOPMENT
OF CAR STREET AND AREAS OF
VENKATARAMANA TEMPLE AS RELIGIOUS ZONE

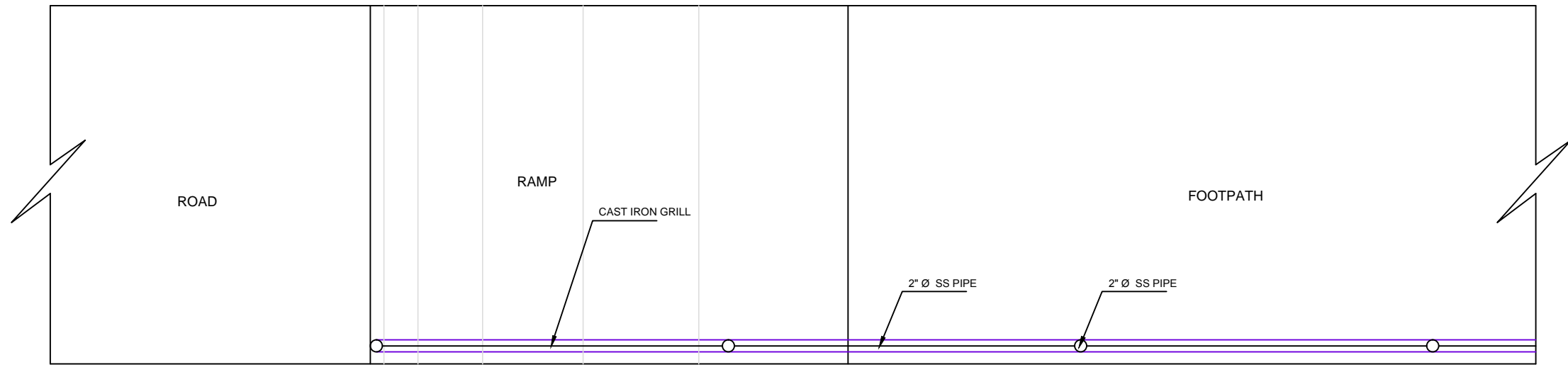
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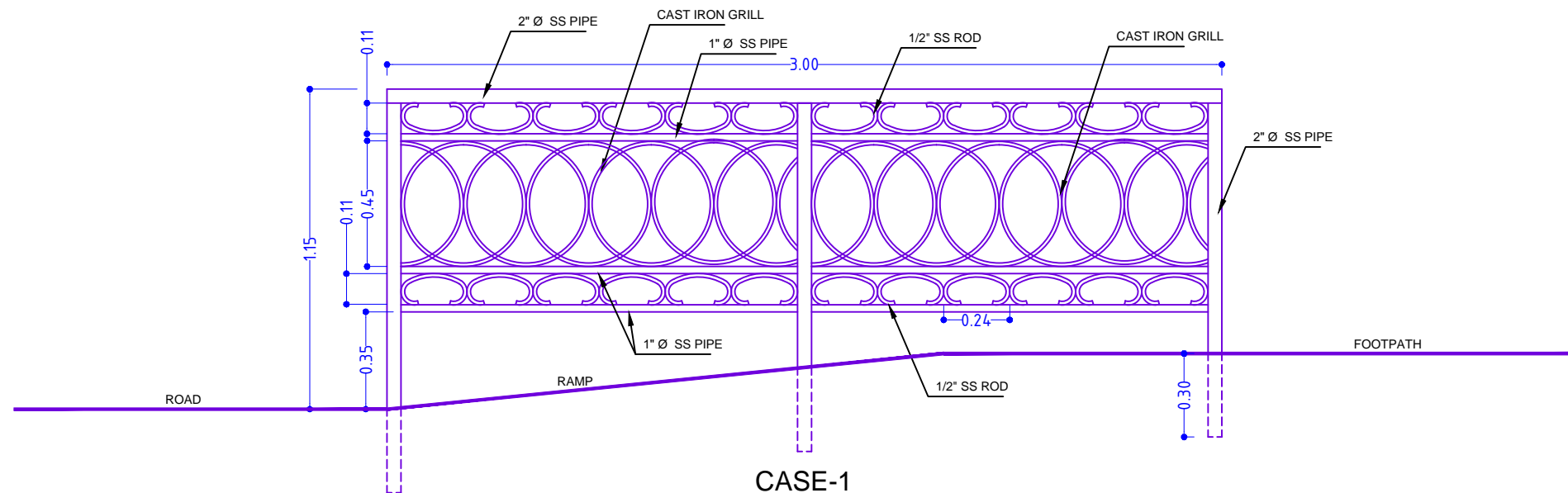
ISSUED:	17-08-2020	DWG. NO SC : 008
SCALE	N.T.S	
DRAWN	V.K.S	
CHECKED	M.V.P	

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pailands@gmail.com

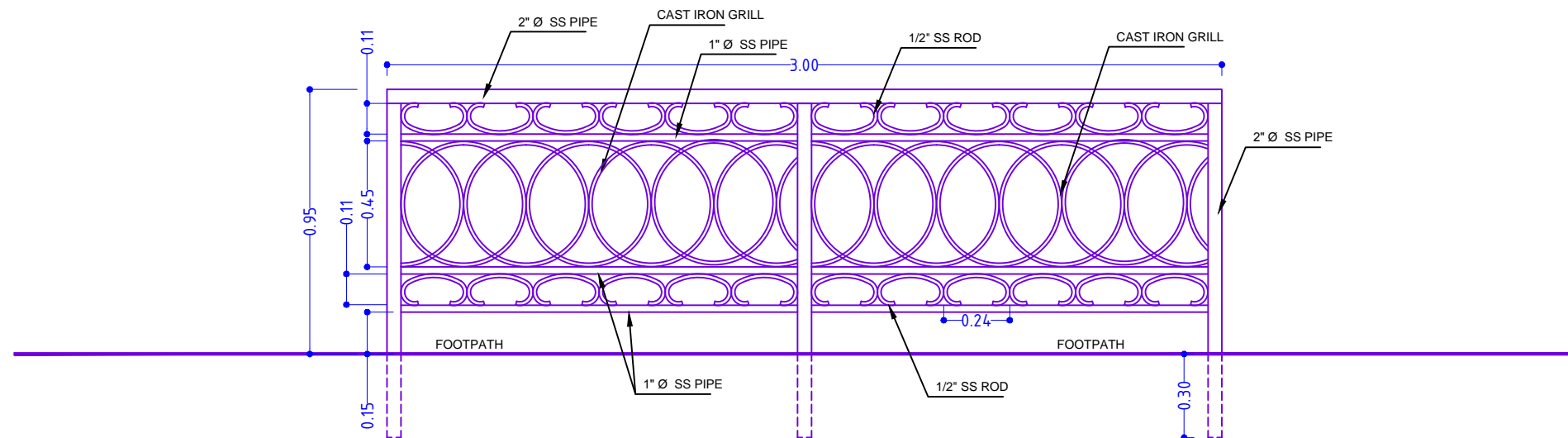
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PLAN



CASE-1



CASE-2

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REVISIONS	DATED	

CLIENT :
MSCL
MANGALURU SMART CITY LIMITED

SECTOR :

PROJECT :
**PROPOSED RETROFITTING / REDEVELOPMENT
OF CAR STREET AND AREAS OF
VENKATARAMANA TEMPLE AS RELIGIOUS ZONE**

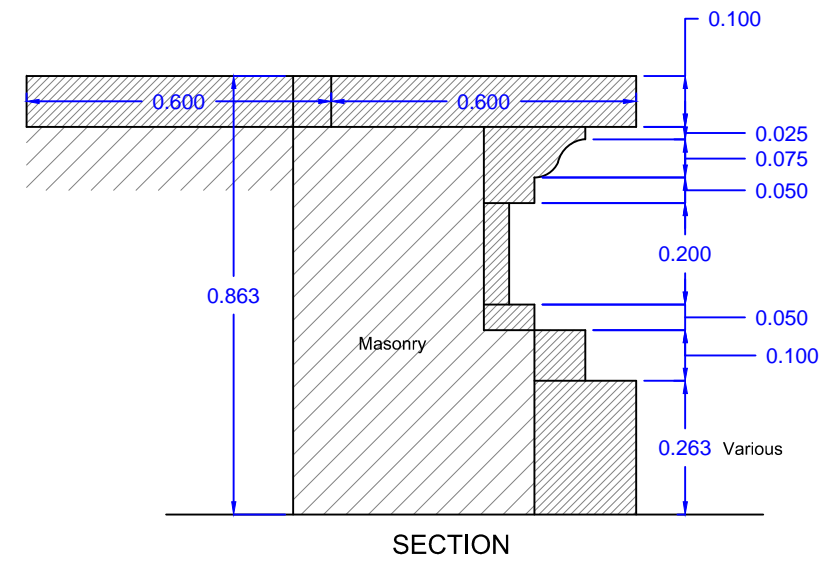
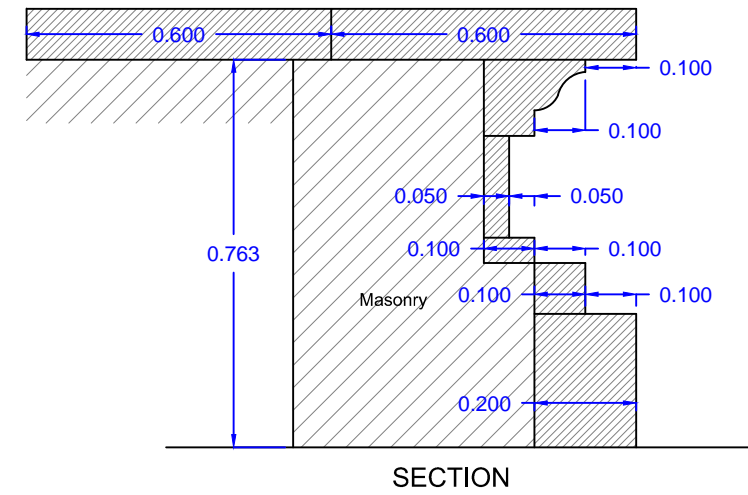
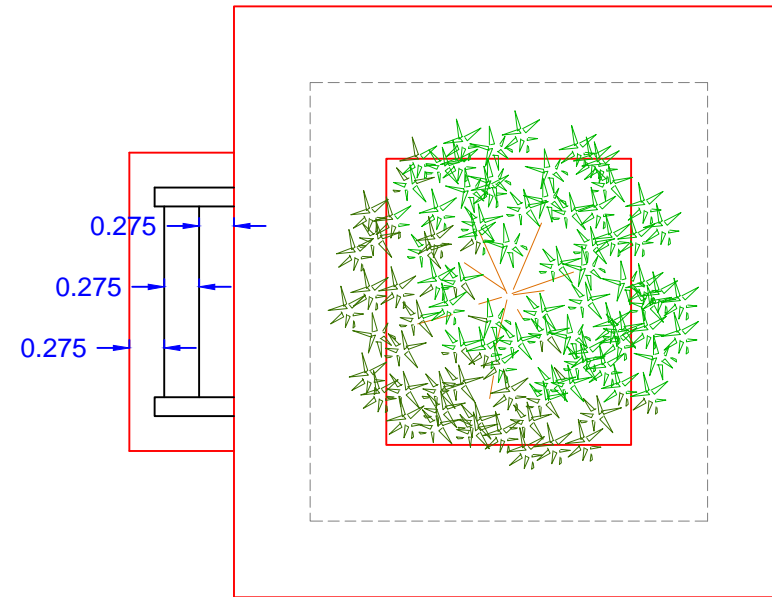
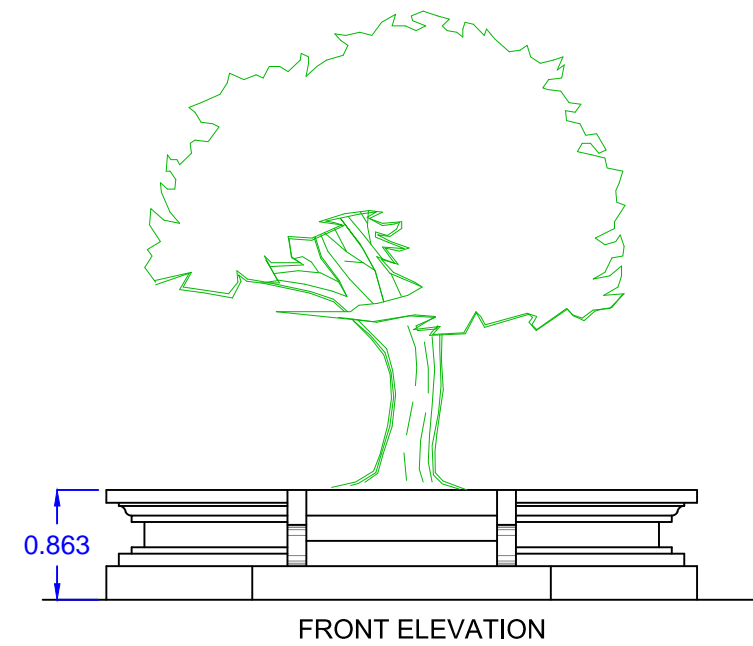
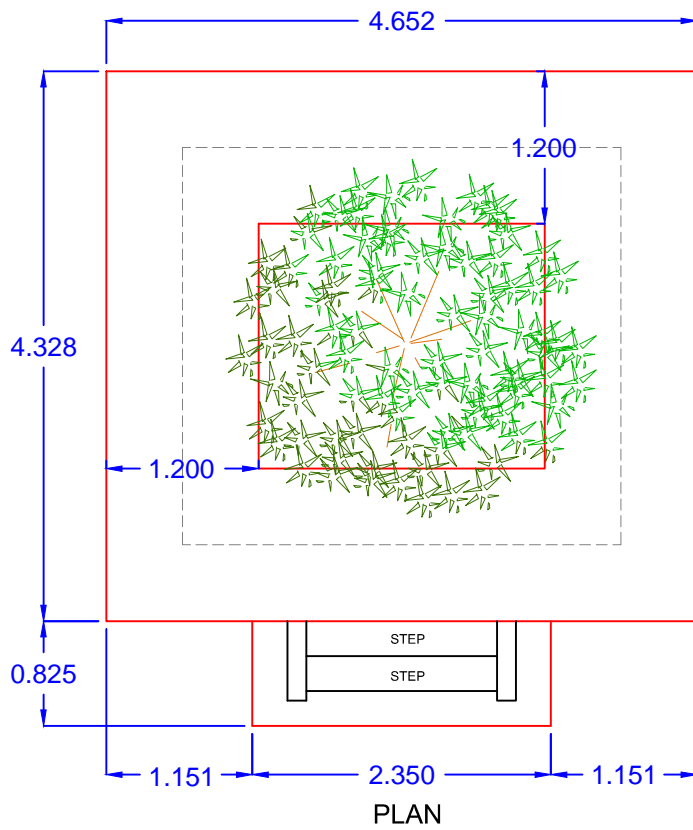
DWG. TITLE :
RAILING DETAIL

ISSUED:	17-08-2020	DWG. NO SC : 009
SCALE	N.T.S	
DRAWN	V.K.S	
CHECKED	M.V.P	



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#1, temple square, carstreet
mangalore, ph- 2495651, 2496539
pailands@gmail.com

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REVISIONS	DATED	

CLIENT :
MSCL
MANGALURU SMART CITY LIMITED

SECTOR :
SECTOR 3

PROJECT :
PROPOSED RETROFITTING / REDEVELOPMENT
OF CAR STREET AND AREAS OF
VENKATARAMANA TEMPLE AS RELIGIOUS ZONE

DWG. TITLE :
KATTE DETAIL

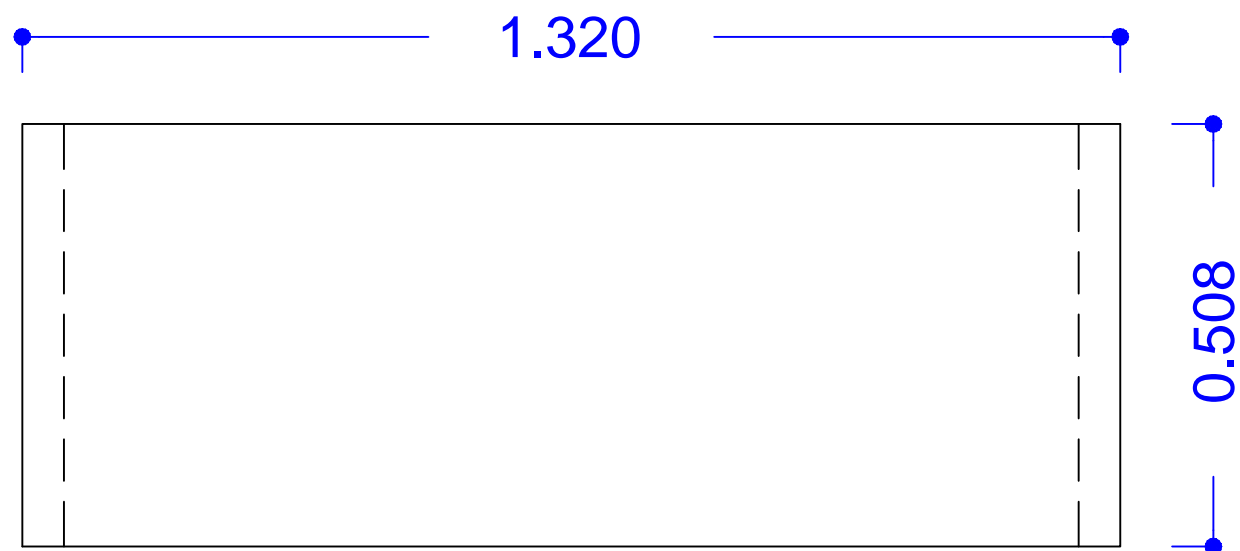
ISSUED:	17-08-2020	DWG. NO
SCALE	N.T.S	
DRAWN	V.K.S	
CHECKED	M.V.P	

SC : 010

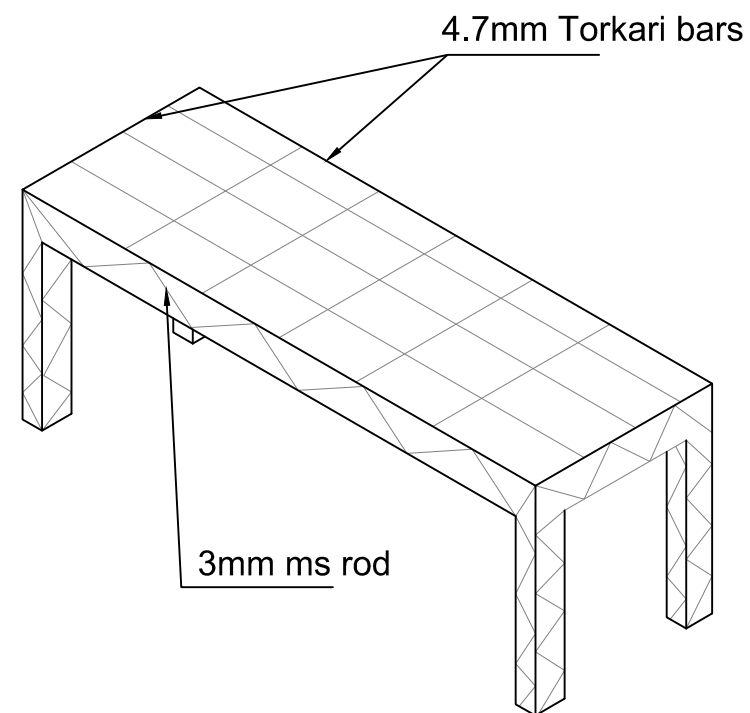


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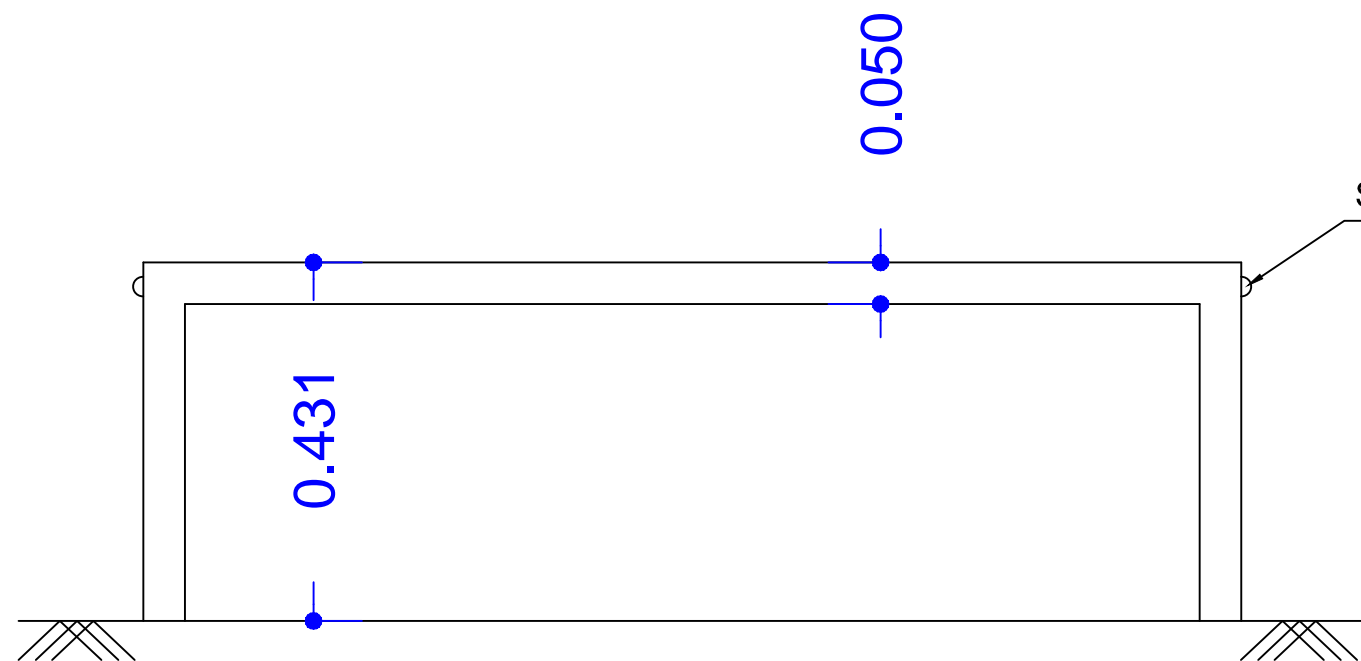
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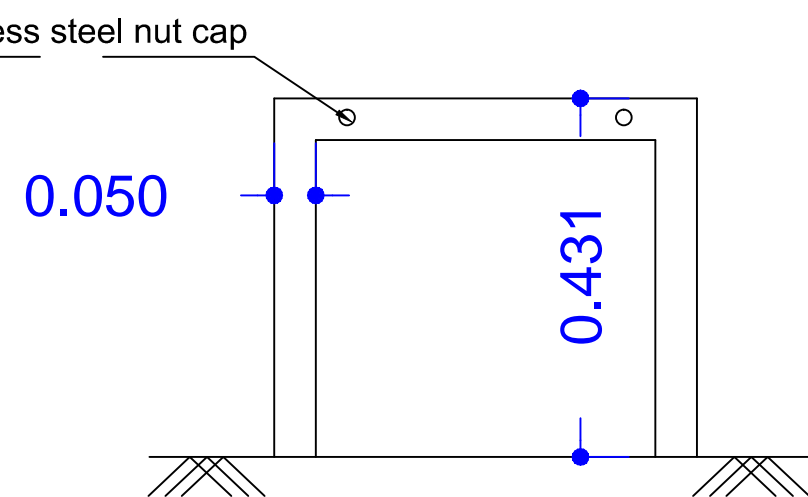
PLAN



REINFORCEMENT DETAILS OF
PRECAST BENCH



FRONT ELEVATION



SIDE ELEVATION

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REVISIONS	DATED	

CLIENT :
MSCL
MANGALURU SMART CITY LIMITED

SECTOR :

PROJECT :
PROPOSED RETROFITTING / REDEVELOPMENT
OF CAR STREET AND AREAS OF
VENKATARAMANA TEMPLE AS RELIGIOUS ZONE

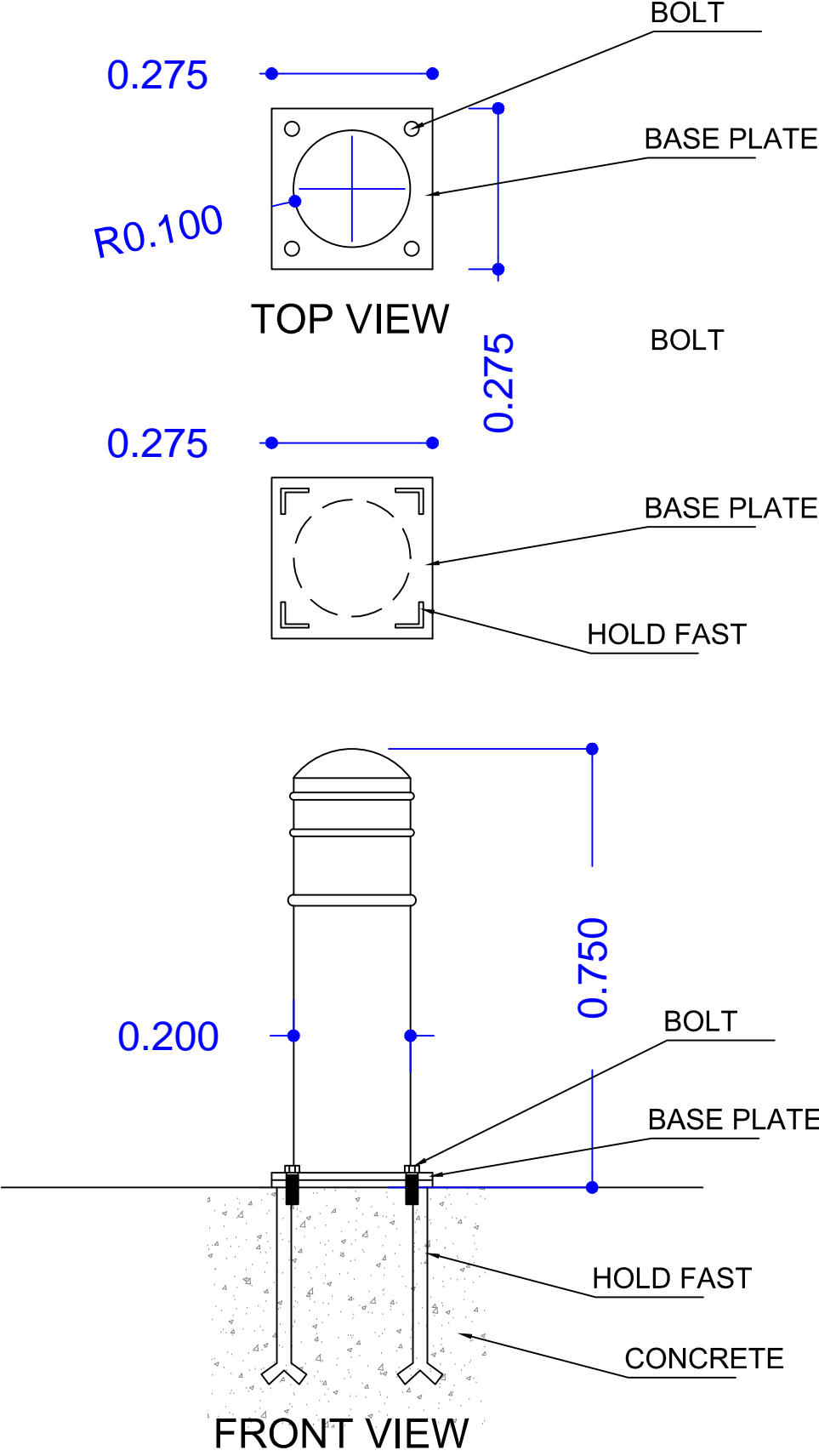
DWG. TITLE :
BENCH DETAIL

ISSUED:	17-08-2020	DWG. NO SC : 011
SCALE	N.T.S	
DRAWN	V.K.S	
CHECKED	M.V.P	

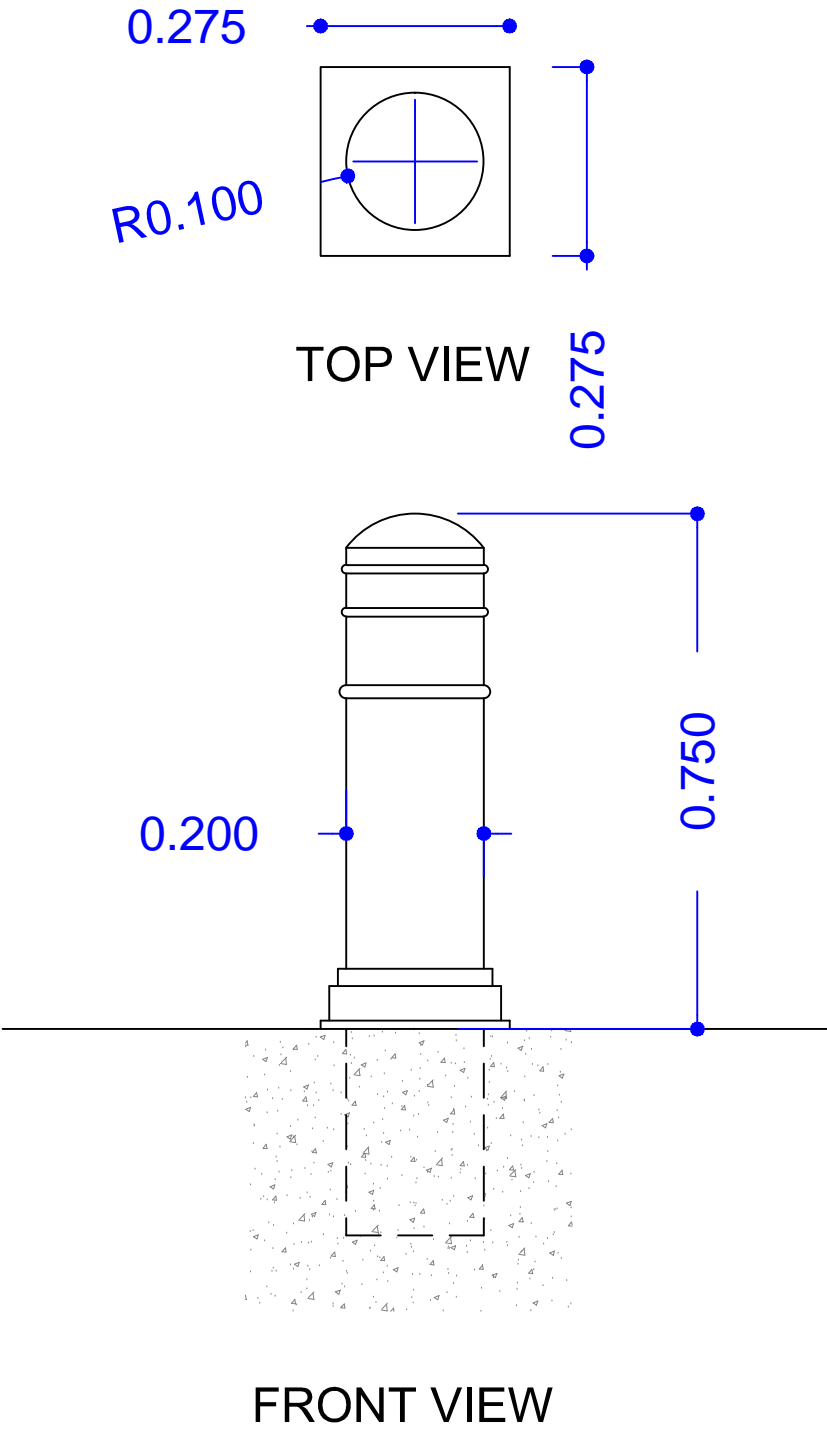


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REMOVABLE BOLLARD



FIXED BOLLARD



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REVISIONS	DATED	

CLIENT :
MSCL
MANGALURU SMART CITY LIMITED

SECTOR :

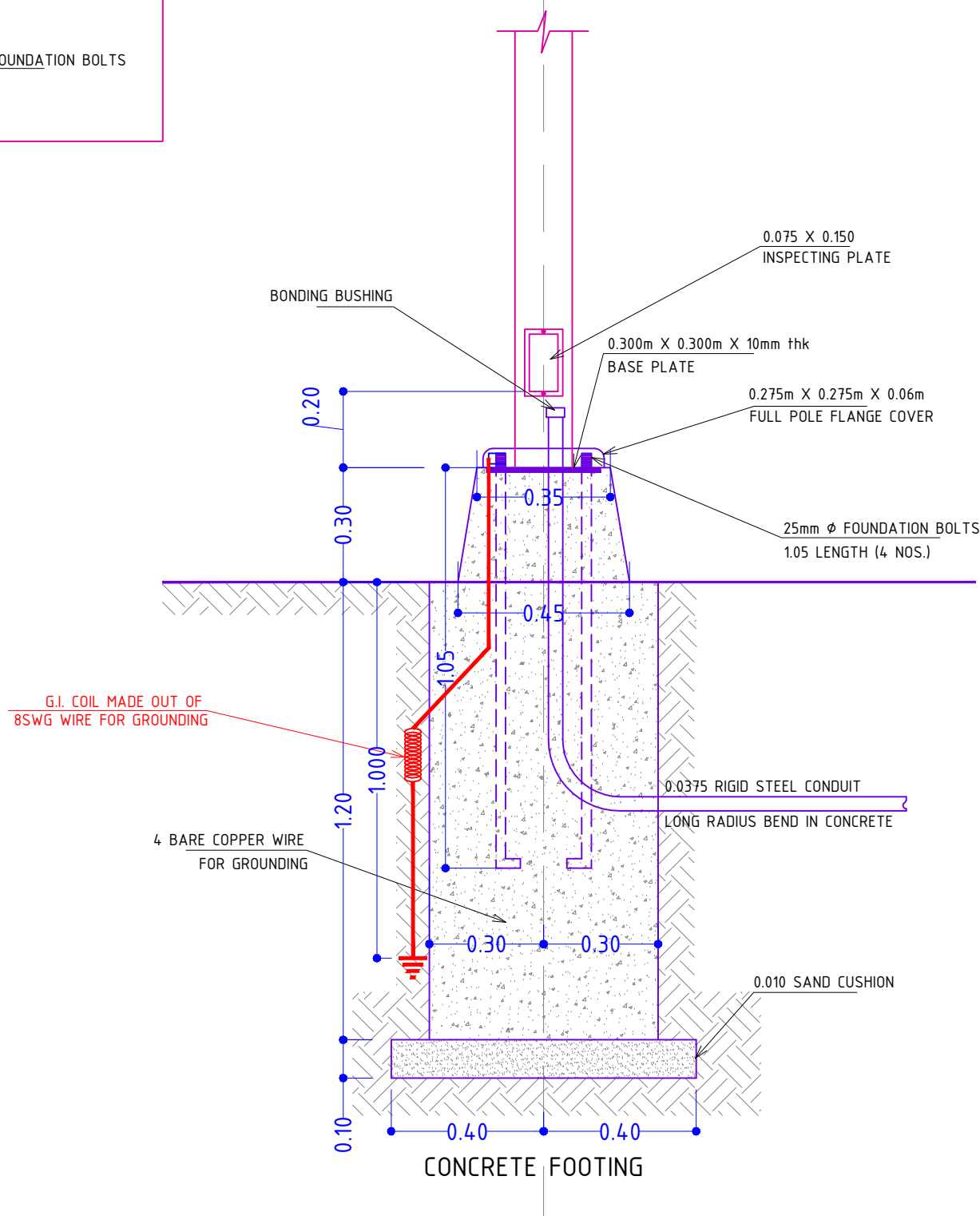
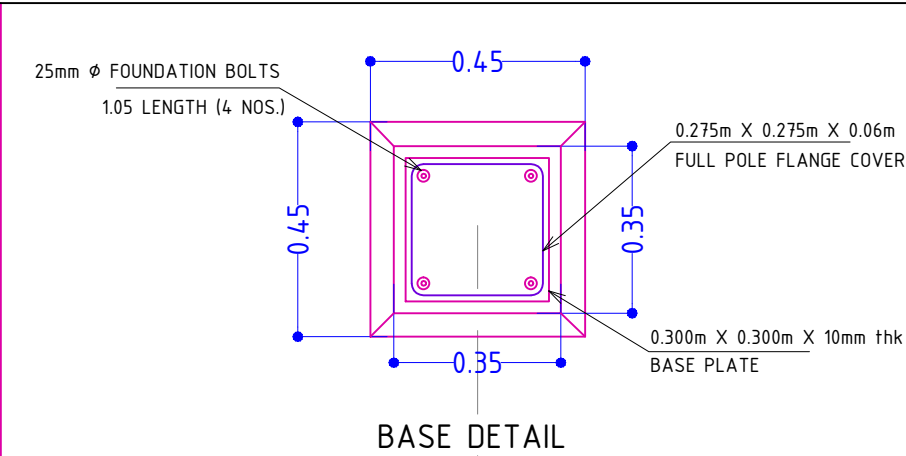
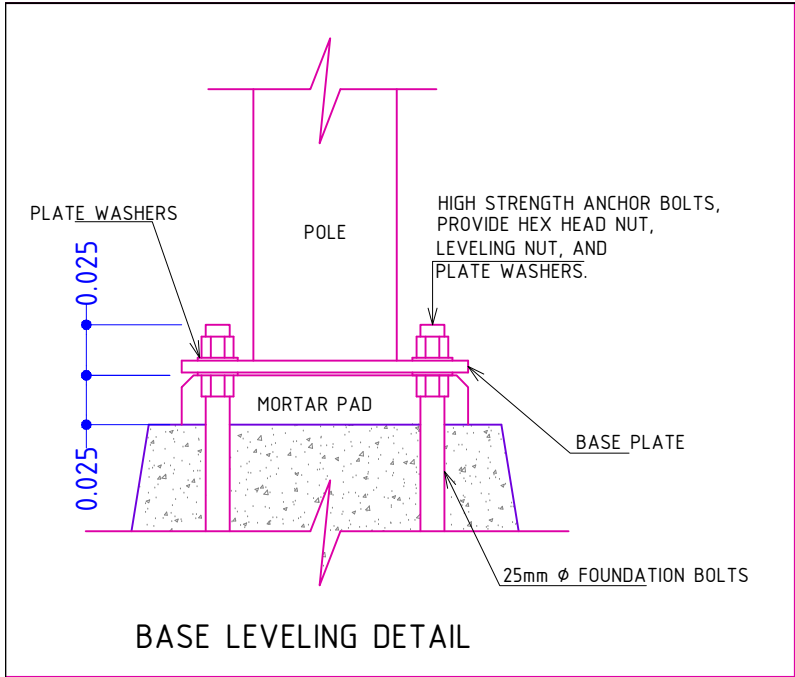
PROJECT :
PROPOSED RETROFITTING / REDEVELOPMENT
OF CAR STREET AND AREAS OF
VENKATARAMANA TEMPLE AS RELIGIOUS ZONE

DWG. TITLE :
BOLLARDS DETAIL

ISSUED:	17-08-2020	DWG. NO SC : 012
SCALE	N.T.S	
DRAWN	V.K.S	
CHECKED	M.V.P	



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REVISIONS	DATED	

CLIENT :
MSCL
MANGALURU SMART CITY LIMITED

SECTOR :

PROJECT :
PROPOSED RETROFITTING / REDEVELOPMENT
OF CAR STREET AND AREAS OF
VENKATARAMANA TEMPLE AS RELIGIOUS ZONE

DWG. TITLE :
LIGHT POLE
FOUNDATION DETAIL

ISSUED:	17-08-2020	DWG. NO
SCALE	N.T.S	SC : 013
DRAWN	V.K.S	
CHECKED	M.V.P	



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