Tender No : TPCODL/P&S/1000000163/2021-22

Empanelment of vendors for Design, Supply, Erection, Testing and Commissioning including warranty, comprehensive Operation & Maintenance of grid-connected rooftop solar plant of various capacities under Phase-II of GCRTS Scheme of MNRE being implemented in the State of Odisha

Replies tp Pre Bid Queries

Sl. No.	Section	Clause No	Page No	Clause Details	Query	TPCODL Replies to Queries
1	I	1.2 Note: i	25	All the above benchmark costs are inclusive of total system cost including Photo-Voltaic solar modules, inverters, balance of systems including cables, Switches/Circuit Breakers /Connectors/ Junction Boxes, mounting structure, earthing, Lightening arrester, cost of meters (if any other than net meter), local connectivity cost, cost of civil works, foundations etc. and its installation, commissioning, transportation, insurance, capital cost of online monitoring, comprehensive maintenanc charges for five years, applicable fees etc. .and are exclusive GST.	Any Meter Installation for the purpose of net Metering is out of the purview of Benchmark. So kindly remove "cost of meters (if any other than net meter)	As per the guidelines from MNRE RTS phase II the bench mark cost only excludes the cost of Net Meter and battery back up cost. Solar Generation meter costs is included in the benchmark cost.
2	I	9.0 Qualification Requirement / Eligibility Criteria	33	Technical Eligibility Criteria	Can a Bidder participate in More than one Part with the same Technical Criteria i.e Can a Bidder having one order of 100kWp Participate in more than one Part?	Yes
3	I	9.0 Qualification Requirement / Eligibility Criteria	33	Financial Eligibility Criteria	Can a Bidder participate in More than one Part with the same Financial Criteria i.e. Can a Bidder having Average Turnover of Rs.1 Cr. Particiape in more than one Part?	Yes
4	II	5 CFA Dibursement & Payment Clauses	59	The net amount of project cost (i.e. project cost - CFA) shall be paid by the concerned roof top owner to any of the empanelled vendors as per the following methodology: - 20% payment in advance after signing of agreement. - 20% payment after installation of structure - 20% payment after installation of SPV modules and inverters at site - 20% payment after completing plant installation (including net-metering) and submission of written inspection request to the implementing agency - Final 20% payment after commissioning of the plant and injection of power to the grid.	Kindly allow the payment terms to be decided mutually between Empanelled Vendor and Beneficiary	Payment Terms will be as per RFP. No deviation in payment methodology will be allowed.
5	III	3 Module Mounting Structure (MMS)	68	Module Mounting Structure	Please specify the Type/Category of Module Mounting Structure to be considered for Price Bid. It is not possible to Bid with a single rate with 3 Major Categories and 4 Sub-Categories under RCC Elevated Structures. Prices will vary for each category of MMS.	Structure wise price bidding is not feasible. Thus, consider the average price for implemetnation of MMS based on the climatic condition of Odisha.
6	III	3.14 Design Validation	72	The Structure design and drawing should be duly verified by a licensed Structural designer before installation for all types of structure arrangements including the extension made, as per specification.	Is Design Valication to be done Project Wise or Structure Wise (Once)	Structure design and drawing for a standard installation need to be verified by licensed structural designer only once after issue of PO. Further, wherever there is a deviation/alteration/amendament, the verification of strucutre design and drawing is imperative.
7	III	4.0 Metering	72	4.1. A Roof Top Solar (RTS) Photo Voltaic (PV) system shall consist of following energy meters: i. Net meter: To record import and export units ii. Generation meter: To keep record for total generation of the plant. 4.2. The installation of meters including CTs & PTs, wherever applicable, shall be carried out by the Empanelled Vendor as per the terms, conditions and procedures laid down by the concerned SERC/DISCOMs.	As this item is not part of Benchmark Cost Kindly add a point below Clause 4.2 "Cost of all Meters, Metering Units, CT & PT will be over and above L1 Rate"	Generation Meter cost is included in the Bench mark cost of MNRE along with cost of Metering Unit wherever there is a requirement to install along with Generation Meter.
8	III	10.4 Fire Fighting System	75	Portable fire extinguishers/sand buckets shall be provided wherever required as per norms.	As this item is not part of Benchmark Cost Kindly add a point below Clause 10.4 "Cost of Fire Fighting Equipment will be over and above L1 Rate"	All required measures to be taken for System protection as per the standard norms is included in the benchmarkcost.
9					That being said we have the technical qualifications to meet Category all the categories (100 KW On-grid projects) but Financially we do not meet the eligibility. Can you consider that aspect and update us, as even category A has a 1 Cr average requirement.	As per RFP
10		4.4. Page no 30		Consortium: Financial Consortium is not allowed in this Bidding Process. Consortium is only permitted for Technical partnership as per Format- 10.	We have more than 10 years experience in providing consultancy services for various capacity Solar PV projects from concept to commissioning.. We also have provided PMU services to state nodal agencies. Considering our technical experience and average annual turn from consultancy of more than Rs 50 Cr , we may please be allowed to form a consortium with any solar project developer, system integrator, module manufacturing company having the required technical eligibility.	As per RFP
11		Tender fee .Page no 12.		Submission of Tender Fee on 25th February 2022	The date for payment of tender feee may please be extended by another week	Extension in due date is not envisaged. Tender fee to be submitted within the stipulated time period.
12		TECHNICAL ELIGIBILITY CRITERIA: Page no 33.		Open Category: The bidders who do not have any prior experience or do not have minimum required prior experience in installation of grid connected solar PV power projects, shall not be allowed to quote L-1 price in bids. Such bidders will be allowed to implement rooftop solar projects subject to matching of L-1 price. The Implementing Agency reserves the right to allocate/sanction project capacities to such bidders in batches.	For the open category a fixed percentage may please reserved for open category bidders.	Implementing Agency reserves the right to allocate Quantity under Open Category subject to bidder match L1 price.
13		2.12	67	For CFA calculation, minimum of following two shall be considered: i. Solar PV array capacity in KWp ii. Inverter Capacity in KW	The nameplate capacity of PV array shall be taken as plant capacity. This will ensure benefits to the customer in the form of higher energy delivery. It is recommended to allow developers to bill at the DC capacity and DC Billing should decide the cost of the Solar PV system. Moreover, the bidders should be allowed to overload the inverter as per the inverter datasheet provided by the manufacturers. Through these two steps, customer will be able to reap significant benefits with substantially more energy generation from the plant for up to 25 years. It will also result in a significant increase in the inverter working hours.	As per RFP
14		3.12 (ii) (e)	69	All structure member should be of minimum 2 mm thickness.	It is recommended that the bidder shall be allowed to determine the minimum thickness as per the design requirement (STAAD Analysis and IS 801 code) which can withstand the wind speed of the zone that area falls into and the load of the Solar PV System. Flexibility in determining the material and thickness (subject to the standard requirements) will also result in cost savings for the developer as well as the consumer. Such flexibility can lead to better innovations regarding the MMS in the country and increase in competitiveness on a global scale	As per RFP

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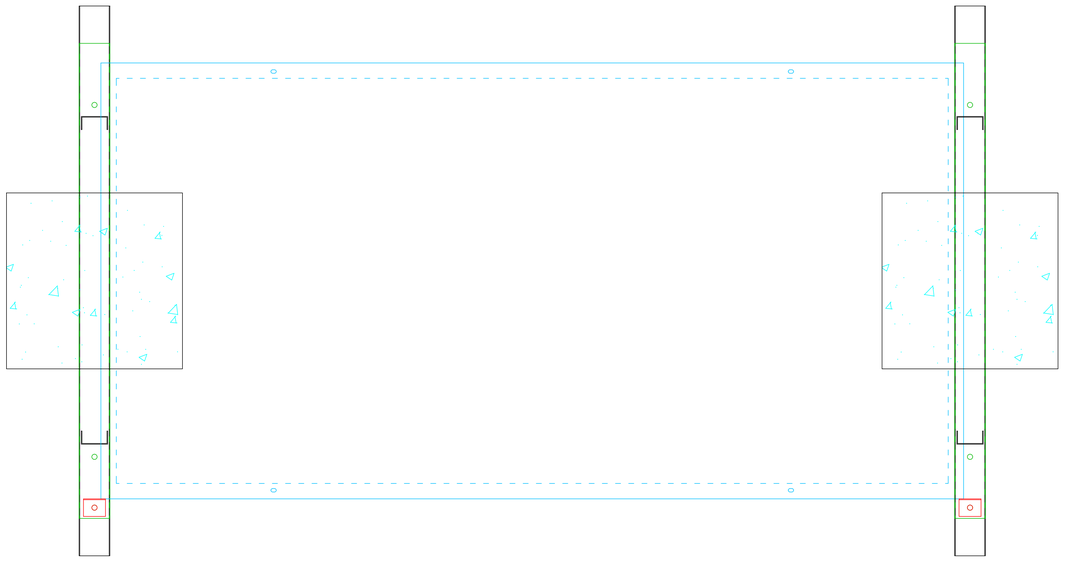
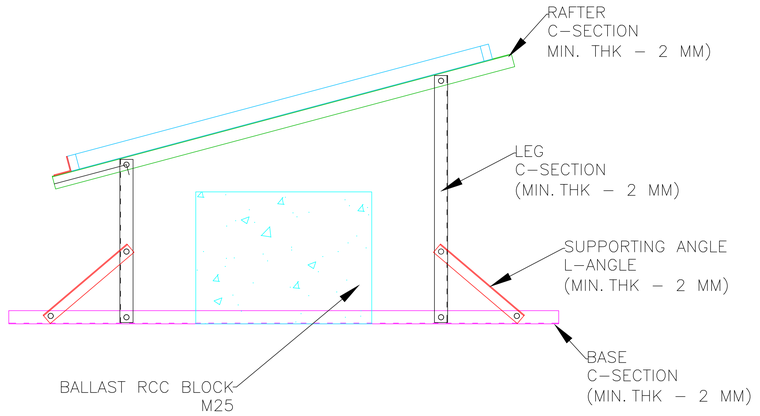
Replies tp Pre Bid Queries

Sl. No.	Section	Clause No	Page No	Clause Details	Query	TPCODL Replies to Queries
15		3.2	68	Module mounting structures can be made from three types of materials. They are Hot Dip Galvanized Iron, Aluminium and Hot Dip Galvanized Mild Steel (MS). However, MS will be preferred for raised structure.	Any material should be allowed as long as the structure meets standards of BIS approved testing lab. The bidder should also be allowed to use alternate material for HDG such as galvalume and pre-galv with corrosion coating as specified in the Indian Standard- IS2777- pre-galv, IS15961- Galvalume. Galvalume is one of the most popular roofing materials in the market today. It is a type of steel roof coating made from aluminum, zinc and silicon. Aluminum makes up more than 50% of the coating making it more resistant to corrosion. Pre-galvanized Steel refers to that steel which was galvanized while in sheet form prior to manufacturing. Permission to use such materials will give more space to the developers for innovations in the module mounting structures.	As per RFP
16		4.7	72	The junction boxes are to be provided in the PV array for termination of connecting cables.	It is recommended that the requirement for DCDB be removed from the requirements for smaller systems as the inverter already has an in-built feature of DCDB/AJB. Most modern inverters come with 2 MPPT ports, which allow for 2 strings to be separately installed with the inverter.	As per RFP
17		2.13 (iii)	67	MCB/MCCB or a manual isolation switch, besides automatic disconnection to grid, would have to be provided at utility end to isolate the grid connection by the utility personnel to carry out any maintenance. This switch shall be locked by the utility personnel.	It is recommended that the requirement for Isolator Panel be removed from the requirements given the MCCB function in ACDB. This can lead to cost savings of up to INR 1/Wp.	As per RFP
18		7.2 (i)	74	The SPV power plants shall be provided with lightning & over voltage protection.	The SPV power plant shall be provided with lightning and over voltage protection (1-10 kW residential systems are exempted from this requirement). Because of the the IEC 63205, the risk of lightning impacts is very less. Hence, for residential solar, the requirement for lightning arrestor should be optional and exempted if there is an already existing lightning arrestor.	As per RFP
19		6.4	73	All the Panel's shall be metal clad, totally enclosed, rigid, floor mounted, air -insulated, cubical type suitable for operation on 1-φ/3-φ, 415 or 230 volts, 50 Hz (or voltage levels as per CEA/State regulations)	We recommend that GRP/FRP/Polycarbonate with IP65 protection can be used for lesser kW capacities as it is efficient and is of lesser weight.	FRP IP65 may be used
20		1.1	8	Identification of prospective beneficiaries and providing necessary assistance to the prospective beneficiary in submitting online applications for installation of RTS project	The tender should specifically mention that demand aggregation does not come under the scope of the bidder adhering to the MNRE guidelines. There should be a mechanism to register demand from the residential prosumers. Such mechanisms can support heavily in scaling up RTS in the states. Programs like an information campaign can be carried out via DISCOM regional office to receive applications from interested customers. The demand aggregation by the DISCOM will ensure there is large pipeline of customers who are interested in setting up RTS in their homes.	DISCOMs shall have their own information campaigns and advertisemnets devised through which customer have been registering their interest in the respective RTS portal. Further, Bidder shall ensure meeting its obligations and responsibilities as per tender.
21			42	PBG : 5% X Allocated Capacity in KWp	Request for 3%, as per the latest MNRE office memorandum Dated 30th-Dec-2021.	As per RFP
22			42	If the Empanelled Vendor is not able to commission the projects to the satisfaction of implementing Agency, PBG (for I&C period) amount on prorata basis by the empanelled vendor shall be 100% encashed.	Request to waive this clause and allow Pro Rata basis on the actual Sanctioned Capacity post client's payment or say post Solar net metering connection application, not in allocation capacity during the LOA, this is market mode tender, or Provide list of interested Consumers/Clients during the LOA itself. Even The Agency/ DISCOM can't commit the 100% capacity installation to MNRE in MARKET mode.	As per RFP
23				Maximum & Minimum Bid Capacity Reg.	Request to make a restrictions or Capping on the MAXIMUM bid capacity, since it will help to provide chance to get allocation to multiple vendors. If any single bidders claim the full capacity and doesn't work in entire empanelment period then this will be a great failure for Solar mission. Request to provide chance to every vendors and make some limitation of Maximum bid capacity in each DOSCOM's and Part wise. All other DISCOM's like MGVCL Gujarat, UPNEDA, Jharkhand have provides this kind of Maximum & Minimum bid capacity for bidders in RTS MNRE tender.	As per RFP
24				OPEN Category Reg.	We request the Agency to Reserve the Capacity for Open Category to At least 5 MW, like other State DISCOM's RTS Tender had this facility. It will provide a clear picture for all the bidders for opting feasible category to participate , Even Agency will not face a challenge on later stage on allocation. As per the current situation General category bidders have more chance to claim entire tender capacity, which Open category bidders may not get chance for any allocation.	Implementing Agency reserves the right to allocate Quantity under Open Category subject to bidder match L1 price.
25					Technical documents to be submitted along with financial bid for "Open category"	No technical documents need to be submitted except for Company related documents. Open category are not allowed to submit price bid.
26					Is the past experience will be considered from the work orders from the Govt. sectors only or all the work orders from Govt. , private and individual consumers?	All orders are eligible. Bidder to submit necessary supporting Work Orders, Completion Certificate, etc.
27					We have past experience (upto 100 kw) cumulatively from TPCODL ,TPNODL & TPSODL. Can we participate as category A bidder in all the discom? And can we bid for all the discoms simultaneously?	Bidder may bid for any part in any discom. The minimum experience shall be as per RFP terms i.e. 100KW.
28					We have cumulative experience of 100 kw and the max. order we have 40KW in single purchase order and the rest all includes 1kw, 3kw, 5kw etc. i) Can we bid for all the parts(A,B,C,D,E,F) in all the discoms. ii)Or only we can bid for the Part E for the Discom under which the 40Kw Pv plant is installed.? iii) Or we can only bid for the part E for any Discom or can bid for part E for all the Discoms iv) Or we can bid for PART -A,B,C,D,E for all the discoms.	Bidder may bid for any part in any discom. The minimum experience shall be as per RFP terms i.e. 100KW.
29					1) What are eligible criteria for consortium agreement? 2) My consortium partner not have sufficient experience as you want 100kw, so can we go with?	As per RFP
30					As discussed in the meeting New structural drawing is to be released. Kindly share the updated drawing.	Drawing attached
31					Do we need individual 100KW experience in each part. E.g. If we want to quote for TPNODL Part D, Part E and Part F. Do we need a total of 300KW experience or with only 100KW experience we will be able to participate in all parts.	Bidder may bid for any part in any discom. The minimum experience shall be as per RFP terms i.e. 100KW.

BALLAST TYPE STRUCTURE





BALLAST STRUCTURE

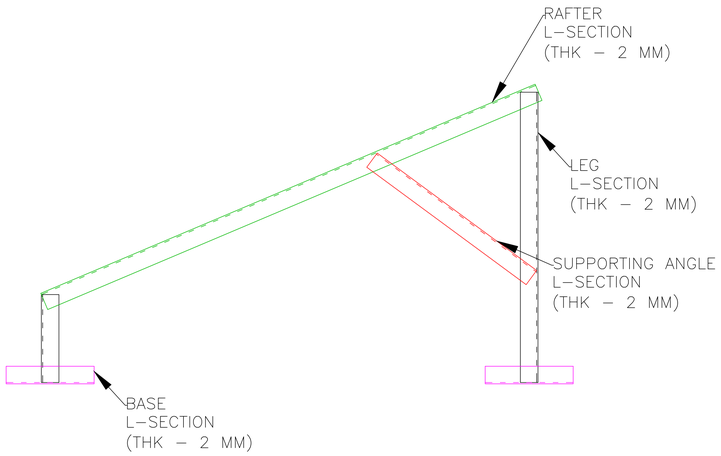
PART NAME	SECTION	DESCRIPTION
BASE	C–SECTION	MIN. THK – 2 MM
FRONT LEG	C–SECTION	MIN. THK – 2 MM
BACK LEG	C–SECTION	MIN. THK – 2 MM
RAFTER	C–SECTION	MIN. THK – 2 MM
SUPPORTING ANGLE	–	MIN. THK – 2 MM

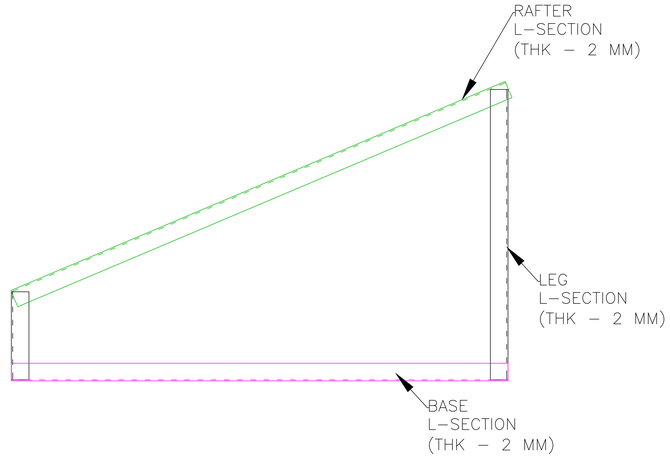
IDENTIFICATION MARKING

PART NAME	SECTION VIEW	SECTION SPECS.
BASE		MIN. THK – 2 MM
LEG		MIN. THK – 2 MM
RAFTER		MIN. THK – 2 MM
SUPPORTING ANGLE		MIN. THK – 2 MM
BALLAST RCC BLOCK		M25
MODULE		AS PER SUPPLIER

Note:–All dimensions are in mm.

TINSHED TYPE STRUCTURE





TINSHED STRUCTURE

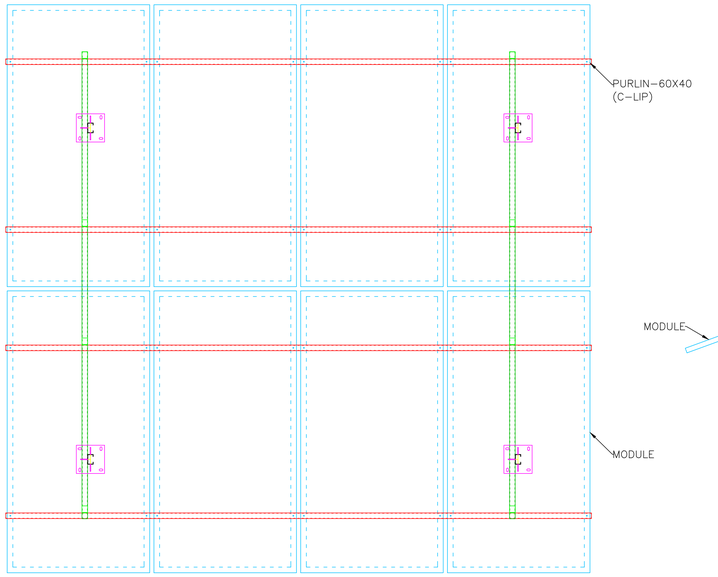
PART NAME	SECTION	DESCRIPTION
BASE	L–SECTION	MIN. THK – 2 MM
FRONT LEG	L–SECTION	MIN. THK – 2 MM
BACK LEG	L–SECTION	MIN. THK – 2 MM
RAFTER	L–SECTION	MIN. THK – 2 MM
SUPPORTING ANGLE	L–SECTION	MIN. THK – 2 MM

IDENTIFICATION MARKING

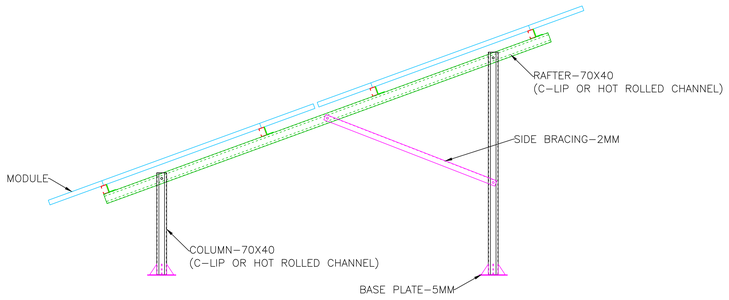
PART NAME	SECTION VIEW	SECTION SPECS.
BASE		MIN. THK – 2 MM
LEG		MIN. THK – 2 MM
RAFTER		MIN. THK – 2 MM
SUPPORTING ANGLE		MIN. THK – 2 MM
MODULE		AS PER SUPPLIER

Note:–All dimensions are in mm.

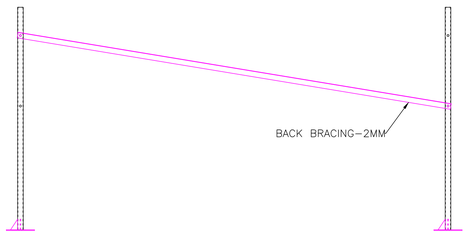
SOLAR ROOFTOP STRUCTURE
MINIMUM GROUND CLEARANCE
(300 – 1000 MM)



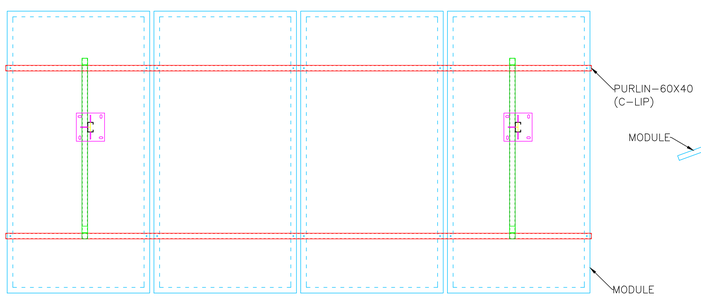
TOP VIEW



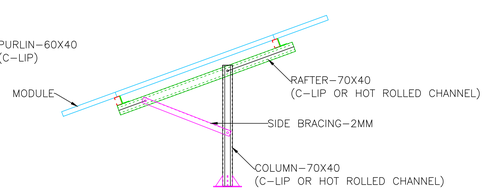
SIDE VIEW



BACK VIEW



TOP VIEW



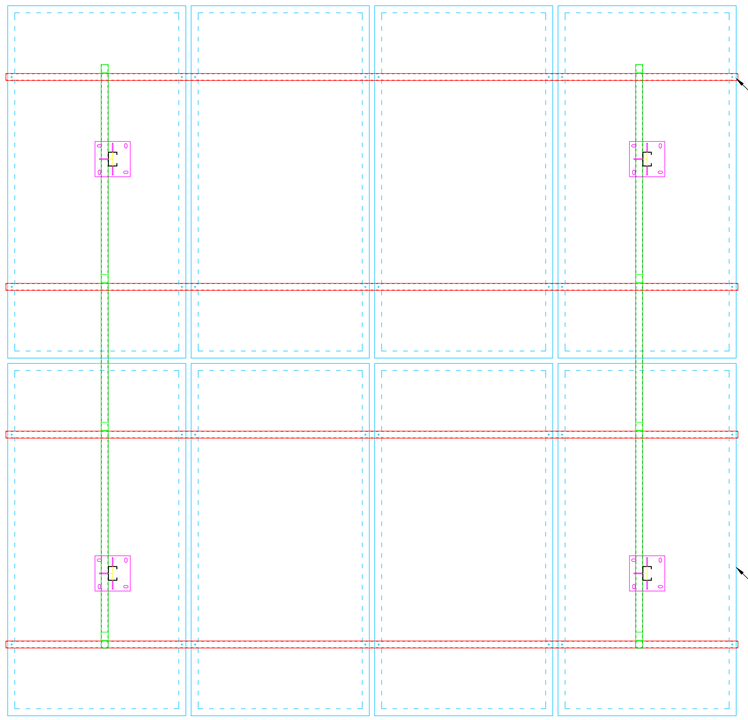
SIDE VIEW

MINIMUM GROUND CLEARANCE (300–1000 MM)		
PART NAME	SECTION	DESCRIPTION
BASE PLATE	–	MIN. THK – 5 MM
COLUMN	70X40 (MIN. THK – 2 MM)	C–LIP OR HOT ROLLED CHANNEL
RAFTER	70X40 (MIN. THK – 2 MM)	C–LIP OR HOT ROLLED CHANNEL
SIDE/BACK BRACING	–	MIN. THK – 2 MM
PURLIN	60X40 (MIN. THK – 2 MM)	C–LIP

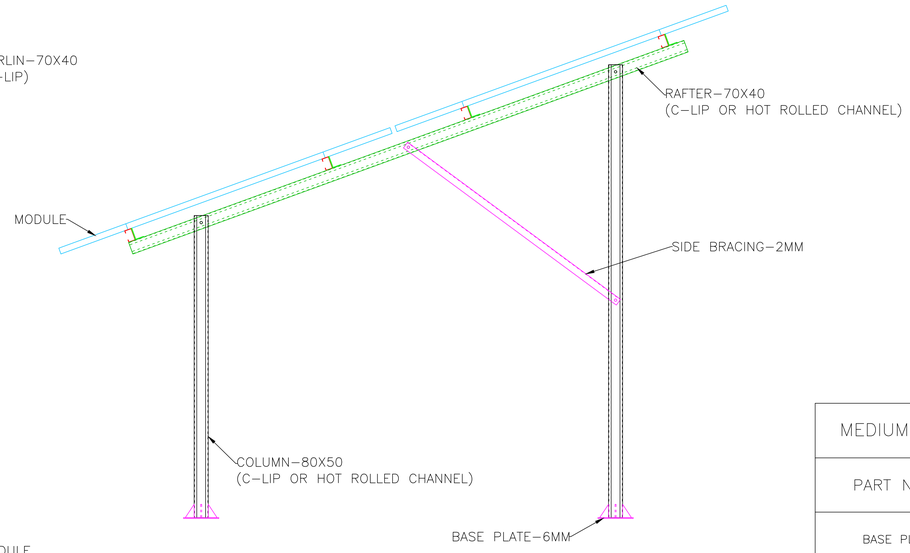
IDENTIFICATION MARKING		
PART NAME	SECTION VIEW	SECTION SPECS.
BASE PLATE		MIN. THK – 5 MM
COLUMN		C–LIP OR HOT ROLLED CHANNEL
RAFTER		C–LIP OR HOT ROLLED CHANNEL
SIDE/BACK BRACING		MIN. THK – 2 MM
PURLIN		C–LIP
MODULE		AS PER SUPPLIER

Note:–All dimensions are in mm.

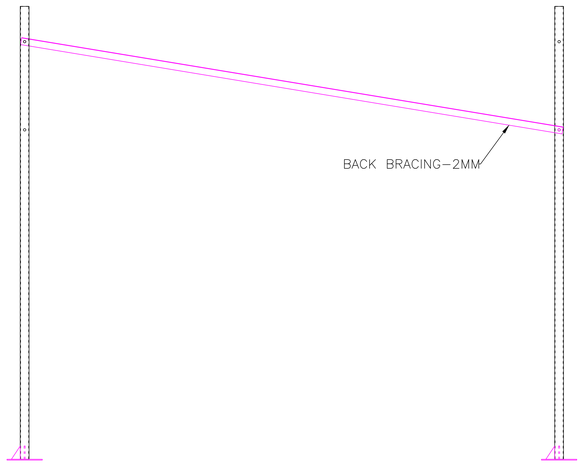
SOLAR ROOFTOP STRUCTURE
MEDIUM GROUND CLEARANCE
(1000 – 2000 MM)



TOP VIEW



SIDE VIEW



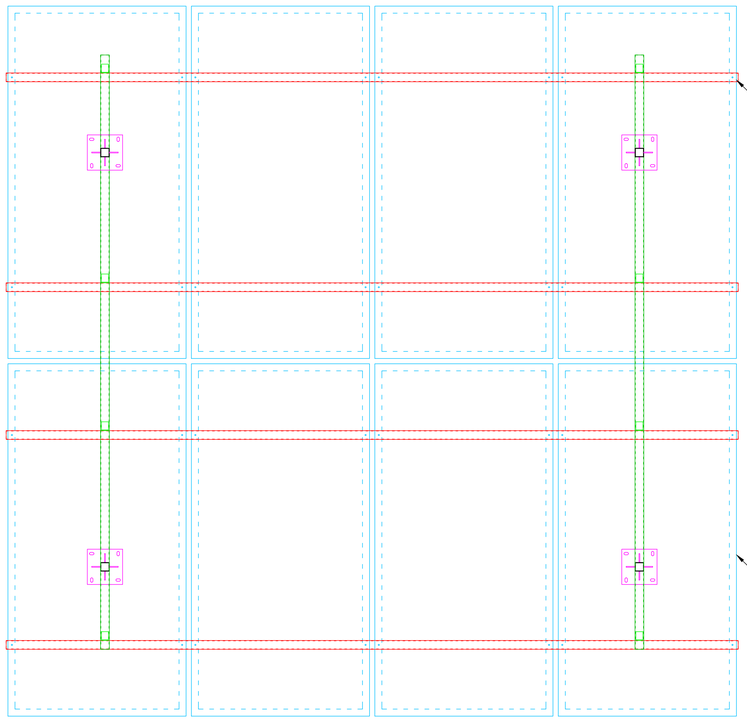
BACK VIEW

MEDIUM GROUND CLEARANCE (1000–2000 MM)		
PART NAME	SECTION	DESCRIPTION
BASE PLATE	–	MIN. THK – 6 MM
COLUMN	80X50 (MIN. THK – 2 MM)	C–LIP OR HOT ROLLED CHANNEL
RAFTER	70X40 (MIN. THK – 2 MM)	C–LIP OR HOT ROLLED CHANNEL
SIDE/BACK BRACING	–	MIN. THK – 2 MM
PURLIN	70X40 (MIN. THK – 2 MM)	C–LIP

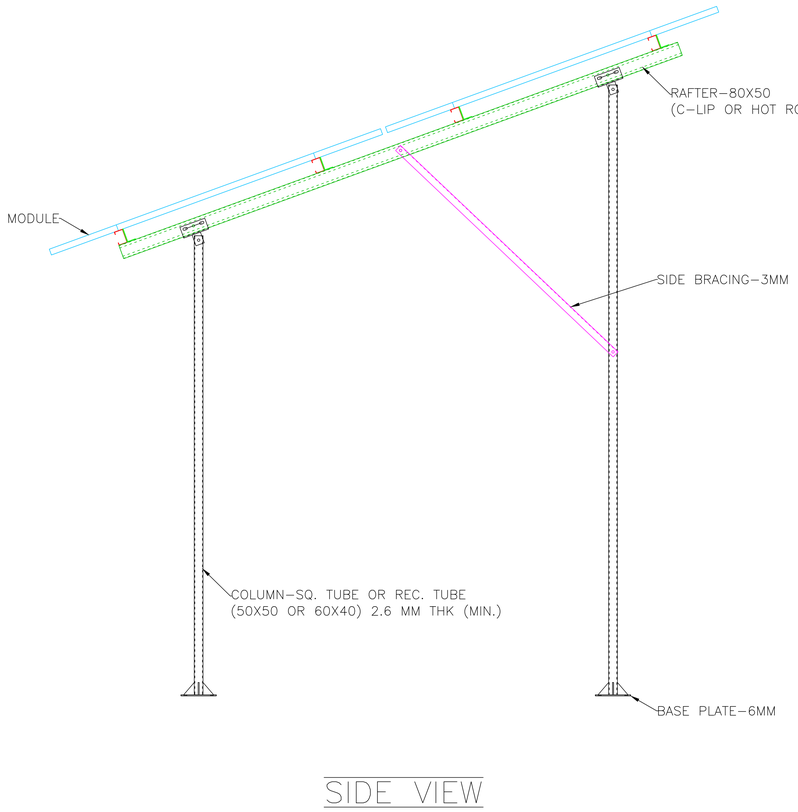
IDENTIFICATION MARKING		
PART NAME	SECTION VIEW	SECTION SPECS.
BASE PLATE		MIN. THK – 6 MM
COLUMN		C–LIP OR HOT ROLLED CHANNEL
RAFTER		C–LIP OR HOT ROLLED CHANNEL
SIDE/BACK BRACING		MIN. THK – 2 MM
PURLIN		C–LIP
MODULE		AS PER SUPPLIER

Note:–All dimensions are in mm.

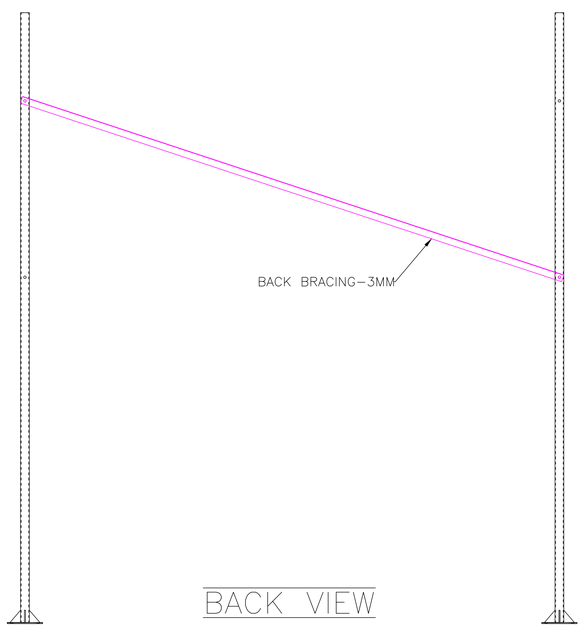
SOLAR ROOFTOP STRUCTURE
MAXIMUM GROUND CLEARANCE
(2000 – 3000 MM)



TOP VIEW



SIDE VIEW



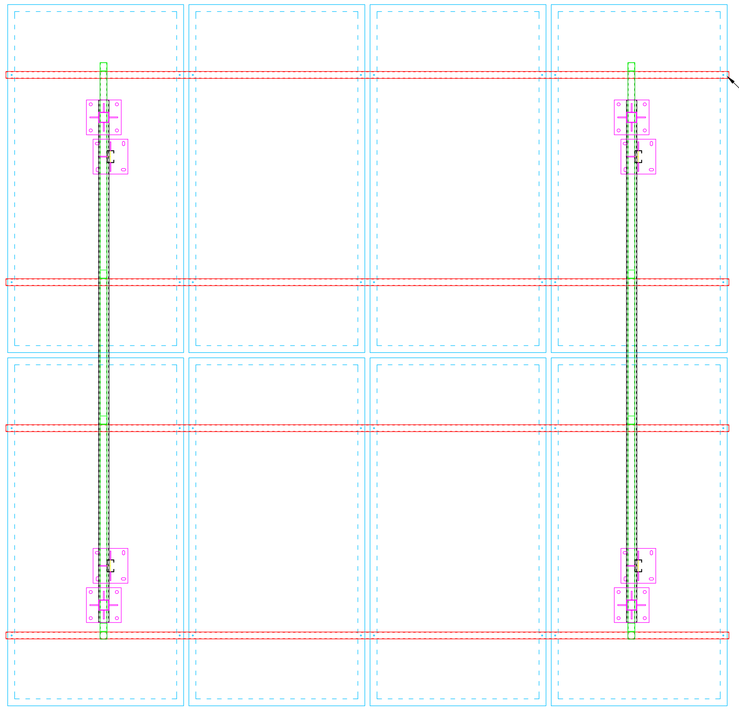
BACK VIEW

MAXIMUM GROUND CLEARANCE (2000–3000 MM)		
PART NAME	SECTION	DESCRIPTION
BASE PLATE	–	MIN. THK – 6 MM
COLUMN	50X50 OR 60X40 (MIN. THK – 2.6 MM)	SQ. OR REC. TUBE
RAFTER	80X50 (MIN. THK – 2 MM)	C–LIP OR HOT ROLLED CHANNEL
SIDE/BACK BRACING	–	MIN. THK – 3 MM
PURLIN	80X50 (MIN. THK – 2 MM)	C–LIP

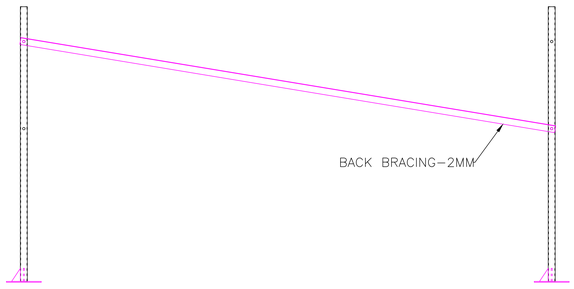
IDENTIFICATION MARKING		
PART NAME	SECTION VIEW	SECTION SPECS.
BASE PLATE		MIN. THK – 6 MM
COLUMN		SQ. OR REC. TUBE
RAFTER		C–LIP OR HOT ROLLED CHANNEL
SIDE/BACK BRACING		MIN. THK – 3 MM
PURLIN		C–LIP
MODULE		AS PER SUPPLIER

Note:–All dimensions are in mm.

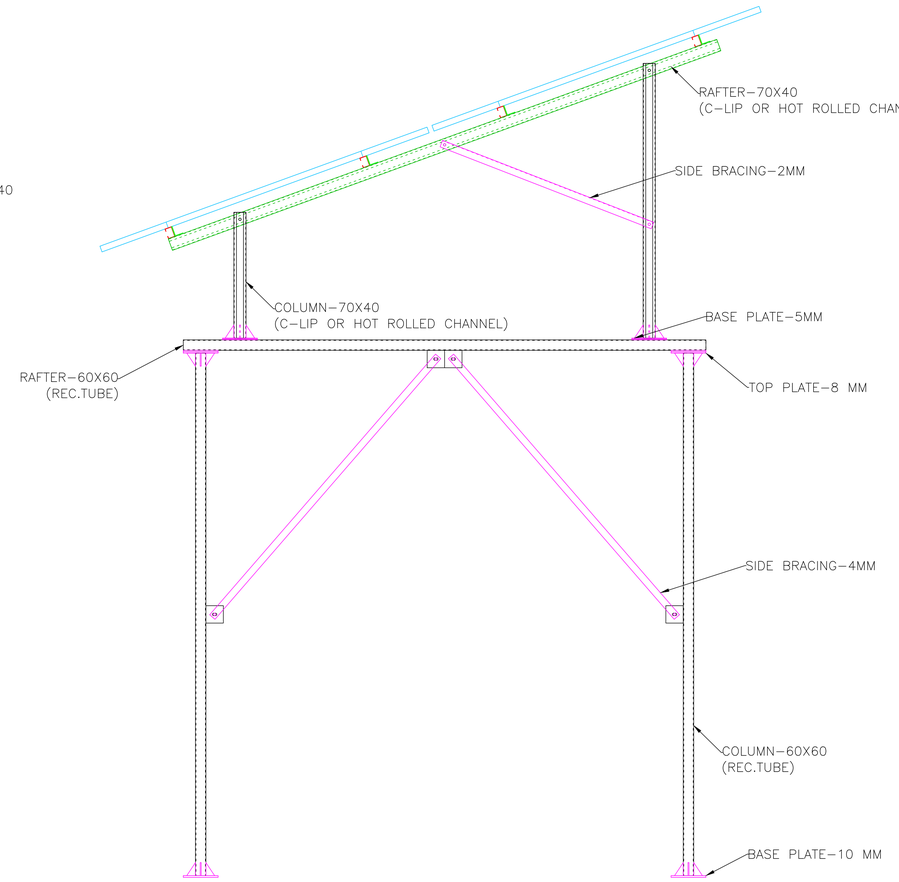
SOLAR ROOFTOP STRUCTURE
SUPER STRUCTURE
(MORE THAN 3000 MM)



TOP VIEW



BACK VIEW



SIDE VIEW

SUPER STRUCTURE (MORE THAN 3000 MM)		
PART NAME	SECTION	DESCRIPTION
BASE PLATE	–	MIN. THK – 10 MM
BASE COLUMN	60X60 OR 80X40 (MIN. THK – 2.9 MM)	SQ. TUBE OR REC. TUBE
BASE RAFTER	60X60 OR 80X40 (MIN. THK – 2.9 MM)	SQ. TUBE OR REC. TUBE
CROSS BRACING	–	MIN. THK – 4 MM
UPPER COLUMN	70X40 (MIN. THK – 2 MM)	C–LIP OR HOT ROLLED CHANNEL
UPPER RAFTER	70X40 (MIN. THK – 2 MM)	C–LIP OR HOT ROLLED CHANNEL
SIDE/BACK BRACING	–	MIN. THK – 2 MM
PURLIN	60X40 (MIN. THK – 2 MM)	C–LIP

IDENTIFICATION MARKING		
PART NAME	SECTION VIEW	SECTION SPECS.
BASE PLATE		MIN. THK – 10 MM
BASE COLUMN		SQ. OR REC. TUBE
BASE RAFTER		SQ. OR REC. TUBE
CROSS BRACING		MIN. THK – 4 MM
UPPER COLUMN		C–LIP OR HOT ROLLED CHANNEL
UPPER RAFTER		C–LIP OR HOT ROLLED CHANNEL
SIDE/BACK BRACING		MIN. THK – 2 MM
PURLIN		C–LIP
MODULE		AS PER SUPPLIER

Note:–All dimensions are in mm.