

**OFFICE OF THE CDAO-CUM-PROJECT DIRECTOR  
ATMA MALKANGIRI**

Mv-2, Malkangiri-764048, Odisha  
Ph:06861-231381, E-Mail:ddamal.dag@nic.in

Letter No 252

Date 22.02.2021

**Tender Call Notice**

Sealed Quotations are invited from interested reputed Authorized suppliers/ Authorized Dealers / Manufacturers/ Authorized fabricator for providing **fabricated Galvanized Iron semi circular Arch/Truss , 40mm GI pipe vertical column , flat plate for semi circular truss and vertical column , Purlin pipe with fabricated flat plate , Side bar with fabricated flat plate etc** as per the **technical manual** attached in the tender paper under the Special Programme For Promotion of Integrated Farming Programme in Tribal Areas, Malkangiri by the nodal agency PD,ATMA in prescribed Gram Panchayats & Blocks of Malkangiri District under SPPIF. The evaluation forms & format of quotation completed in all respect should reach the undersigned on or before by **15-03-2021 at 6:00 PM** and shall be **opened on Dated 16-03-2021 at 4.00 PM** in presence of the bidders or their authorized representatives.

The undersigned reserves the right to reject all or any of the quotation without assigning any reason thereof.

**Name of the Items:-**

TECHNICAL SPECIFICATION OF POLYSHEDNET		
SL NO	Description of Item	Specification
1	Circular Arch- Semi circular Truss	Semi circular truss with flat plate weld at the bottom section of the truss as per the diagram 1.1
		25mm(1") GI pipe should be used for fabrication of the truss including Apex , Top chord Rafter , Bottom chord Rafter , Purlin and Web runner as per the design 1.1
		Total 9 nos of Truss should be fabricated including 27 nos of flat plate as per the technical manual
2	Flat Plate for semi circular Truss or circular arch	Flat plate should be fabricated in each vertical column as per the design PNTD-001.
		Specification of the flat plate has been described in the design 2.1
		27 nos of flat plate should be fabricated in 27 nos of vertical column.
3	Purlin Pipe Joint	25mm(1" ) Pipe should be used for purlin. Please refer to the diagram 3.1 and 3.2.
		Total 12 nos of pipe should be fabricated as per the design . Flat plate should be fitted with 6 nos of pipe for one end and same should be fitted with another 6 nos of pipe for both the end.

		Flat plate size should be as per the design 3.2 as describe in the technical manual.
<b>4</b>	<b>Side Bar Joint</b>	<p><b>25mm (1" )</b> Pipe should be used for Side bar. Please refer to the diagram 4.1 and 4.2 .</p> <p>Total 10 nos of pipe should be fabricated as per the design . Flat plated should be fitted with 4 nos of pipe for one end and same should be fitted with another 4 nos of pipe for both the end.</p> <p>Flat plate size is mentioned in the design 4.2 as describe in the techincal manual.</p>
<b>5</b>	<b>Vertical Column</b>	<p><b>40mm (1.5")</b> Pipe should be used for Vertical column.Each pipe length should be 3.048 m so one full length pipe is cut into two equal pieces with flat plates fabricate in both the ends as shown in the Technical manual 5.1</p> <p>In each pipe a bore hole should be marked 1.22 m from the top so that side bar should be tie with the column with nut and bolt .</p> <p>Total 27 nos of pipe need to be fabricated for this purpose .</p>
<b>6</b>	<b>Flat Plate (Upside of the vertical column )</b>	<p>Minimum clear cover should be provided between base pipe and hole to avoid any damage to the base plate and crack in the GI Plate with 4 no's of hole should be provided in the flat plate as per the dra</p> <p>Total 27 nos of base plate need to be fabricated in the vertical column Please refer figure 6.1 .</p>
<b>7</b>	<b>12 mm GI Nut and Bolt</b>	Per Piece

#### INSTRUCTION TO BIDDERS

1. Sealed tenders are hereby invited from reputed, experienced and eligible suppliers for **fabricated Galvanized Iron semi circular Arch/Truss , 40mm GI pipe vertical column , flat plate for semi circular truss and vertical column , Purlin pipe with fabricated flat plate , Side bar with fabricated flat plate** to this office. The terms and conditions of the tender are detailed in the tender form and its schedules. Please submit your rates in the tender forms if you are in a position to supply the requisite items/products in accordance with the requirements stated in the attached schedules.
2. The cost of tender document containing detailed specifications with terms & conditions has been priced Rs.1000/- (Rupees One Thousand) only which can be obtained directly from our office or by post through cash or DD in favour of “ **PD , ATMA , Malkangiri**”, MV-2 AT/PO-Lathiaguda , Malkangiri -764048 , Odisha. Tender documents are not transferrable and cost of tender document is not refundable. The undersigned will not be held responsible for any kind of postal delay or delay in delivery of the documents/or non-receipt of the documents (if any).
3. The original copy of the tender is to be enclosed in double cover. The inner cover should be sealed. The outer cover should be subscribed as "Tender for supply of **Fabricated Galvanized**

**Iron semi circular Arch/Truss , 40mm GI pipe vertical column , flat plate for semi circular truss and vertical column , Purlin pipe with fabricated flat plate , Side bar with fabricated flat plate “ PD , ATMA , Malkangiri** and the tenderer shall place two envelopes clearly marked containing technical bid and financial bid separately in the main envelop.

4. All Tenders should be sent by Speed post/Registered Post. Addressing “ **PD , ATMA , Malkangiri**” , MV-2 AT/PO- Lathiaguda , Malkangiri -764048 , Odisha not later than on dated- **15.03.2021 before 6.00 PM.**

**5. Bid Security (Earnest Money):**

- a) Bid Security to be deposited **@1% of total tender value** only in the shape of Demand Draft issued by a reputable nationalized bank duly pledged in favour of “ **PD , ATMA , Malkangiri**” , **under Special Programme for Promotion Of Integrated Farming In Tribal Areas “ and payable at Malkangiri.**
- b) The particulars of the earnest money deposited must also be super scribed on the top of the **envelope by indicating the demand draft no and date, failing which the tenders will not be opened.**
- c) The tender will not be considered if earnest money is not deposited or insufficient earnest money is deposited with the tender.
- d) The tenderer will not resale from his offer or modify the terms and conditions thereof. If the tenderer fail to observe and comply with the foregoing stipulation the aforesaid amount of EMD will be forfeited.
- e) Unsuccessful Tenderer’s Earnest Money will be discharged or returned as promptly as possible as but not later than ninety days.
- f) The successful Tenderer’s Earnest Money will be discharged upon successful supply of the requisite items/products.
- g) The Earnest Money may be forfeited if a Tenderer withdraws its tender during the period of tender validity specified by the Tenderer on the Tender form, or in case of a successful Tenderer, if the Tenderers fails to supply the requisite item(s)/product(s).
- h) Late Tenders: Any tender(s) received after the deadline for submission of tender will be rejected and returned unopened to the tenderer.

**6. Opening of the Tenders:**

- a) The tender will be opened on dated- **16-03-2021 at 4.00 P.M.** at the office of the “**PD, ATMA, Malkangiri**”, MV-2 AT/PO- Lathiaguda , Malkangiri -764048 , Odisha. In the event of any kind of holiday falls on the specified dates, the proceedings will take place on the next working day, at the same time & venue.
- b) Tenderer is at liberty to be present or to authorize a representative to be present at the time of opening of the tenders. The name and address of the representative who would be attending the opening of the tenders on tenderer's behalf should have a proper authorization to attend the tender meeting.

**7. Period of validity of Tenders:**

- a) Validity of Tenders shall be 3 months after the date of tender openings.
- b) A tender valid for a shorter period shall be rejected by the undersigned as non-responsive.

**8. Quotation of rate:**

- a) The rate should be quoted keeping in view of supply the material as per specification, delivery at F.O.R **Nayakguda, Somnathpur**, inclusive of all costs, GST etc, transportation charges, charges for loading & unloading of the materials, etc.

- b) The rates quoted for supply of material in tender be given both in words and figures failing which the same is liable to be rejected. Overwriting/erasing in rates to be quoted by the tenderer will not be allowed otherwise the tenders may be rejected.
- c) The rates quoted shall remain valid for three months and no enhancement whatsoever shall be claimed by the tenderer.
- d) Any other tax which is as per the rules of the Govt. shall be deducted at source from the bills of the successful tenderer, as per rules/instructions made applicable from time to time by government.

**9. Evaluation of financial Bid:**

- a) The order shall ordinarily be awarded to the lowest evaluated bidder and whose bid has been found to be responsive and who is eligible and qualified to supply the material satisfactorily.
- b) The undersigned is not bound to accept the lowest or any other tenders and also reserve to itself the right of accepting the tenders in whole or in part. You are however at liberty to Tenders for the whole or any portion or to state in the tenders that the rates quoted shall apply only if the tenders are considered fully. Other conditional Tenders will not be accepted.

**10. Notification of Award:**

- a) Prior to the expiration of the period of tender validity, the undersigned will notify the successful tenderer in writing by mail or any other form of communication. Formal letter of acceptance and order of the Tenders will be forwarded as soon as possible, but the earlier instructions in the mail or other mode etc, should be acted upon immediately.
- b) Upon the successful Tenderer's furnishing of the acceptance the undersigned will promptly notify each unsuccessful tenderer and will discharge its Earnest Money.
- c) If tenderer does not accept the offer, after issue of letter of award by the undersigned within 10 days, the offer made shall be deemed to be withdrawn without any notice & earnest money will be forfeited.

**11. Security Money:**

- a) The security money equivalent to the extent of 10% of total estimate value of the tender has to be deposited by the successful tenderer for the contract in form of Bank guarantee from a nationalized bank drawn in favour of " PD , ATMA , Malkangiri) , under" **Special Programme for Promotion of Integrated Farming In Tribal Areas " Saving Bank Account No. 46560100012732 , Bank of Baroda, Branch Malkangiri ,IFSC- BARBOMALODI"**.
- b) **Total tender value for the supply of polished net materials under SPPIF is Rs. 2,45,470/-**
- c) Security deposit remains valid for a period of 3 months from the date of acceptance of the award. In the event of non-deposition of the same within 15 days after issue of letter of award by undersigned, the earnest money will be forfeited.
- d) The Security Deposit (as performance Security) shall be returned to the supplier on the expiry of the stipulated period.
- e) Failure of the successful Tenderer to accept the award and/or furnish the Security Deposit shall constitute sufficient grounds for the annulment of the award and forfeiture of the Earnest Money, in which event the undersigned may make the award to the next lowest evaluated tenderer or call for new tenders.
- f) No interest on security deposit and earnest money deposit shall be paid by the undersigned to the tenderer.

12. The Schedules of the tender form should be returned intact and pages should not be detached. In the event of the space provided on the schedule form being insufficient for the required purpose, additional pages may be added. Each additional page must be numbered consecutively and be signed in full by the tenderer. In such cases reference to the additional pages must be made in the tender form. If any modification of the schedule is considered necessary it should be communicated by means of a separate letter along with the tender.
13. The tenders are liable to be ignored if complete information as required is not given therein or if the particular asked for in the schedules to the tenders is not fully filled in. Individual signing the tenders or other documents connected with the contract may specify whether he signs it in the capacity of (i) a sole proprietor of the firm or constituted attorney of such sole proprietor, or (ii) a partner of the firm if it be partnership in which case he must have authority to refer to arbitration dispute concerning the business of the partnership whether by virtue of the partnership agreement or power of attorney or (iii) constituted attorney of the firm if it is a company.
14. In case of partnership firms, where no authority has been given to any partner to execute the contract/agreement concerning the business of the partnership, the tender and all other related documents must be signed by every partner of the firm. A person signing the tender form or any other documents forming part of the contract on behalf of another shall be deemed to warranty that he has authority to bind such other and if, an enquiry it appears that the persons so signing had no authority to do so, the undersigned shall without prejudice to other civil and criminal remedies cancel the contract and hold the signatory liable for all costs and damages. Each page of the tender and the schedules to the tenders and annexure, if any, should be signed by the tenderer.
15. The undersigned reserves the right at the time of contract award to increase or decrease the quantity of material without any change in unit price or other terms and conditions.
- 16. Signing of Contract:**

The Agency, on award of the tender should execute an agreement on with undersigned incorporating of the terms and conditions.
- 17. Resolution of Disputes - Arbitration:**
  - a) Decision of the undersigned shall be final for any aspect of the contract and binding to all parties.
  - b) Any disputes are subject to the jurisdiction to the court of Malkangiri.
18. The undersigned reserves the right to accept or reject any tender, and to annual tender process and reject all tenders at any time prior to contract award, without thereby incurring any liability to the affected tenderer or tenderers or any obligation to inform the affected tenderer or tenderer of the grounds for the action.
19. Only those firms will be considered for financial bid who will qualify in the technical bid.
20. The tender being submitted by the firm, all pages along with enclosures must be numbered. The following self-attested documents are required to be enclosed with the tenders in a separate cover as technical bids. Only those firms providing the following documents would be

considered eligible and also fill the page number for claiming the fulfilment of requisite conditions as given in the column item wise:

### GENERAL TERMS AND CONDITIONS

1. The original copy of the tender is to be enclosed in double cover. The inner cover should be sealed. The outer cover should be subscribed as "Tender for supply of **fabricated Galvanized Iron semi circular Arch/Truss , 40mm GI pipe vertical column , flat plate for semi circular truss and vertical column , Purlin pipe with fabricated flat plate , Side bar with fabricated flat plate** " **PD , ATMA , Malkangiri**" , MV-2 AT/PO- Lathiaguda , Malkangiri -764048 , Odisha and the tenderer shall place two envelopes clearly marked containing technical bid and financial bid separately in the main envelop.
2. The technical bids and financial bids may be submitted in separate envelopes to be sealed and put in a main cover.
3. The tenders will not be considered and summarily rejected if the firm do not enclose the following documents:
  - a) A copy of Latest Income Tax Clearance certificate of current year/Latest Income Tax Returns.
  - b) A copy of PAN Card issued by the concerned authorities.
  - c) Financial Status of Firm: The firm must have a reputed one and financially sound to execute supplies. Minimum Rs. **50 lakh** turnover per annum is required. Copies of supply orders executed to Central/State/Autonomous Bodies/Local Bodies may be submitted.
  - d) Duly completed Questionnaires**
4. **Price schedule duly completed enclosed with Financial bidding documents & Price should be valid for 3 months from the date of opening of bids.**
5. The Tenderer after submission of his tender shall not reverse or modify the rates, terms and conditions of the tender, failing which the EMD deposited by him shall be forfeited.
6. Any erasures or alterations that may have been in the Tender Form before it is received by the prospective tenderer(s) and also any further erasures or alterations(if any) that may be made the course of completing the form should be initialed by the Tenderer(s).
7. Only in the event of the offer not being accepted, the EMD will be refunded after he had applied for the same. The request should be signed by the same person who signed the tender and its documents. However, he may authorize any agent under his signature to collect the refund of EMD from the undersigned.
8. The EMD and Security Deposit shall not carry any interest.
9. EMD in the shape of Cheques from the bidders will not accept in any case.
10. Conditional tenders shall not be accepted.
11. The entire tender documents should be returned in tact as per the serial page numbers and without removing any pages. In the event of space provided on the tender form(s) being insufficient for the required purpose, additional pages may be added. Each added page must be numbered consecutively and signed in full by the tenderer. In such case, reference to the additional pages must be made in the tender form(s). If any modification of the tender form/documents is considered necessary, it should be communicated by means of a separate letter along-with the tender.
12. The tender is liable to be ignored if complete information required is not given therein or if the particulars asked in the tender and the documents connected with the tender are not furnished in complete. He is required to sign each and every page of this tender documents and additional sheets, if any as acceptance to the contents.
13. Tenderer is required to specify whether he signs in the capacity of "sole proprietor" or "partner of the firm." In such case he must have the authority to refer to arbitration dispute concerning the business of the partnership.

14. In case of partnership firms, where no authority to refer disputes concerning the business of the partnership has been concerned on any partner, every partner of the firm must sign the tender and other related documents. A person signing the tender form or any other documents forming part of the tender on behalf of another person shall be deemed to warranty that he has authority to bind such other person. However, on enquiry if the person so signing had no authority to do so, the undersigned shall without prejudice to other civil and criminal remedies cancel the contract and hold the signatory liable for all costs and damages.
15. The rate quoted should be inclusive of cost of delivery at F.O.R **Nayakguda, Somnathpur, Dist- Malkangiri** inclusive of all costs, sales tax, VAT etc, transportation charges, charges for loading & unloading the materials, etc.
16. Demand Draft for EMD as mentioned in schedule should accompany the Tender document.
17. All the rates/conditions should be quoted in the space provided in the tender form and for more information, additional pages may be added. Over writing on rates is not allowed. The tenderer should duly sign the changes, if any made in the tender documents.
18. State and Central taxes and excise duty, if any, should be mentioned separately in the tender form.
19. The undersigned at his discretion can change the terms and conditions mentioned in the tender document.
20. Incomplete tender for want of valid GST Registration No., PAN No. etc and required amount of Bid security shall be liable to be rejected summarily and no correspondence in this regard shall be entertained.
21. In all disputes, the decision of the undersigned will be final and binding on the supplier.
22. The undersigned reserves the right to reject a part or entire tender without assigning any reasons.
23. The purchaser of the form only should use the same and it is not transferable. The tender not submitted in prescribed form will be summarily rejected. This office reserves the right to reject all or any tender, lowest or otherwise without assigning any reason thereof.
24. Performance security (Security Money) @10% of total contract/tender value in the shape of Fixed Deposit Receipt (FDR) only shall be deposited within 10 days from the date of issue of award of contract. FDR should be valid for the period of 60 days beyond the contract period of three months from the date of opening of tender. No consignment will be accepted if the Security Money is not deposited by the contractor.
25. Any bid security will not be linked to any pending amount in this organization.
26. Validity of offer should be strictly in accordance with the condition of tender and validity of offer should be for 3 months from the opening of tender.
27. All the bills should be submitted in triplicate as per the details in the Purchase Order (PO) for payment.
28. No part payment will be made. 100% payment will be made after receiving of the requisite items/goods.
29. The applicable taxes (if any) will be deducted at source from the bills.

  
**CDAO-Cum-Project Director**  
**ATMA, Malkangiri**  
22.02.24

Memo No. 253

Copy to the notice board of this office and Programme Secretariat, Malkangiri for information.

Dated. 22.02.2021

  
CDAO-Cum-Project Director  
ATMA, Malkangiri

Memo No. 254

Copy forwarded to the State Consultant/State Coordinator, Bhubaneswar for information.

Dated. 22.02.2021

  
CDAO-Cum-Project Director  
ATMA, Malkangiri

Memo No. 255

Copy forwarded to SPMU Cell, Bhubaneswar for Information

Dated. 22.02.2021

  
CDAO-Cum-Project Director  
ATMA, Malkangiri

Memo No. 256

Copy forwarded to the DIO, NIC Malkangiri for information and request to web host the tender call notice in the District website till 12.02.2021.

Dated. 22.02.2021

  
CDAO-Cum-Project Director  
ATMA, Malkangiri

Memo No. 257

Copy submitted to the Collector and district Magistrate Malkangiri for favour of kind information.

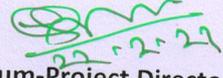
Dated. 22.02.2021

  
CDAO-Cum-Project Director  
ATMA, Malkangiri

Memo No. 258

Copy submitted to the Director of Agriculture and Food Production, Odisha Bhubaneswar for favour of kind information.

Dated. 22.02.2021

  
CDAO-Cum-Project Director  
ATMA, Malkangiri

## EVALUATION FORM

1	Name of the Supplier	
2	Full address of Supplier's shop/showroom Telephone no. Fax no. E-mail address :	
3	Are you a dealer/reseller (Dealer Certificate to be attached)	
4	GST Registration no (Copy to be attached)	
5	GTIN / PAN No. (with copy of certificate)	
6	GST Certificate	
7	Self-Certified copy of PAN issued by dept. of Income Tax	
8	Self- Certified copy of GST Registration Certificate	
9	Photocopy of Bank details along with name of bank, A/C No. and Address proof etc.	
10	Turnover of Rs.50 lakh per annum for last three financial years. As an evidence/proof, copy of audited Balance Sheet certified by the Chartered Accountant and IT return/IT clearance certificate for last 2 years should be enclosed	
11	Product Literature / Leaflets, if any	
12	Bid Security (EMD) in shape of Demand Draft	

I / We do hereby certify that the above mentioned particulars are true and correct.

**Full Signature of the Bidder:**

**Name of the Bidder :-**

**Seal of the firm**

**Date:**

**DECLARATION BY THE BIDDER:**

It is hereby declared that I/We the undersigned, have read and examined all the terms and conditions etc. of the quotation document for which I/We have signed and submitted the bid under proper lawful Power of Attorney. It is also certified that all the terms and conditions of the tender document are fully acceptable to me/us and I/We will abide by the conditions of the terms and conditions. This is also certified that our principal manufacturing firm have no objection in signing the purchase contract if the opportunity for the supply of the items against this quotation is given to me/us.

**Date:-**

**Signature of the Bidder**

**Name:-**

**Seal of the firm**



**Note :**

(a) In case of discrepancy between unit price and total price, unit price shall prevail.

I/We agree to supply the above goods in accordance with the technical specifications for total contract price of Rs. \_\_\_\_\_ (amount in figures) (Rs. \_\_\_\_\_ amount in words) within a period of 15 days from the receipt of purchase order.

(b) I/We agree to other terms and conditions of the tender and also confirm we will provide the materials as per the standard specified in the document

**Name of the Firm/Agencies:-**  
**Address :-**

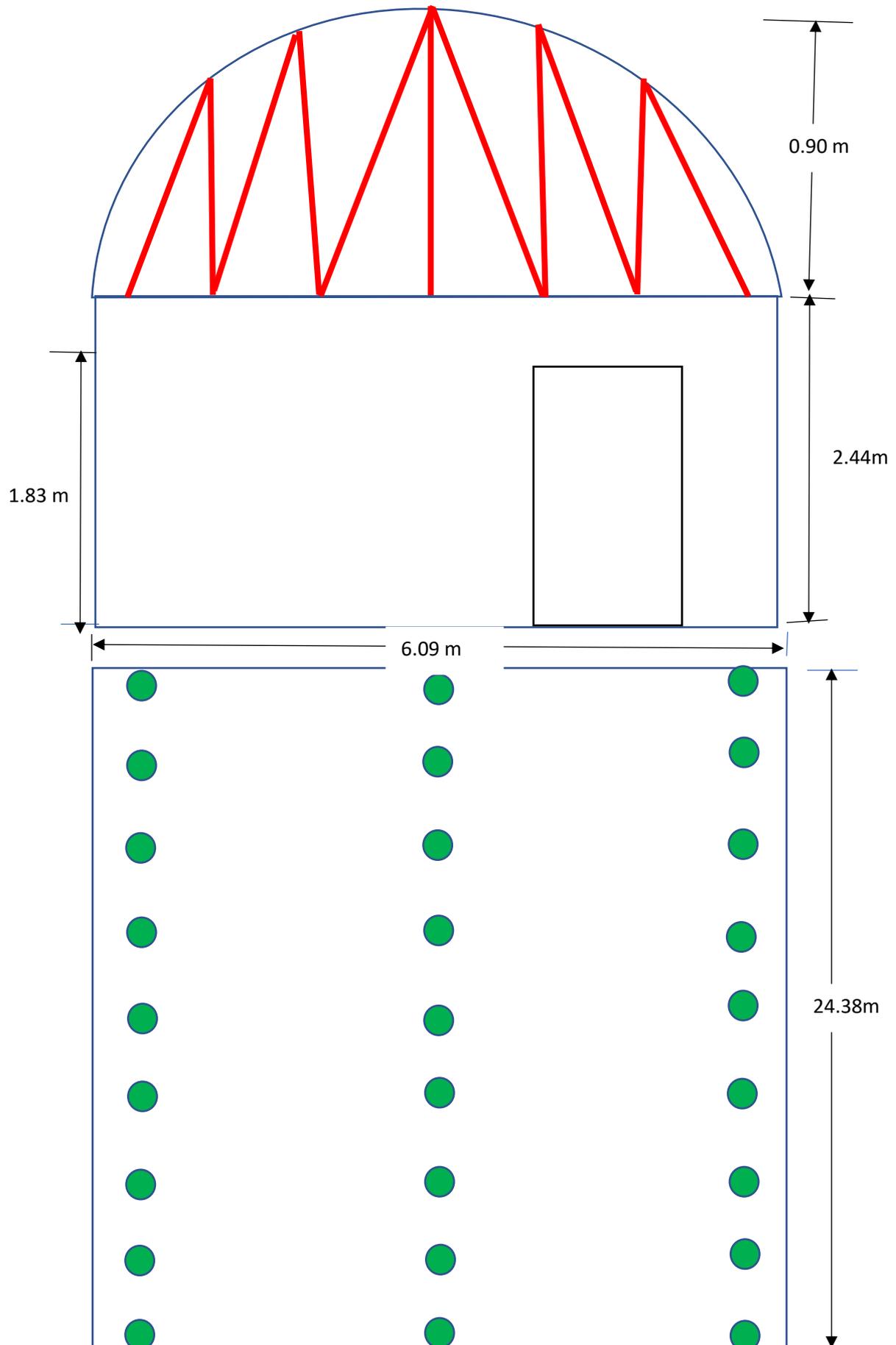
**Signature of the Bidder**

**Name:-**

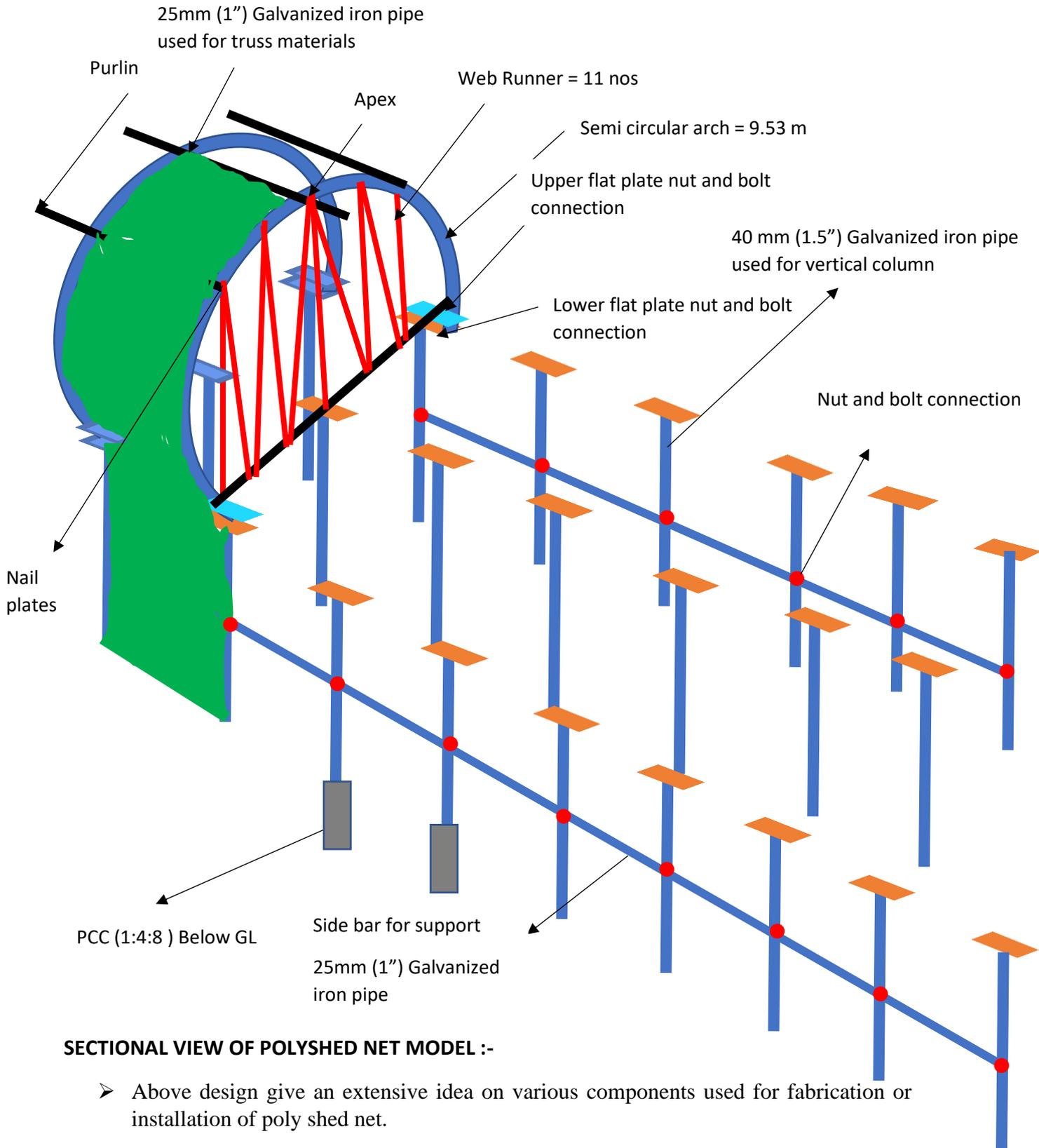
**Date:-**

**Seal of the firm**

# POLYSHED NET TECHNICAL MANUAL:-



**POLYSHED NET TECHNICAL DRAWING :- PNTD-001**



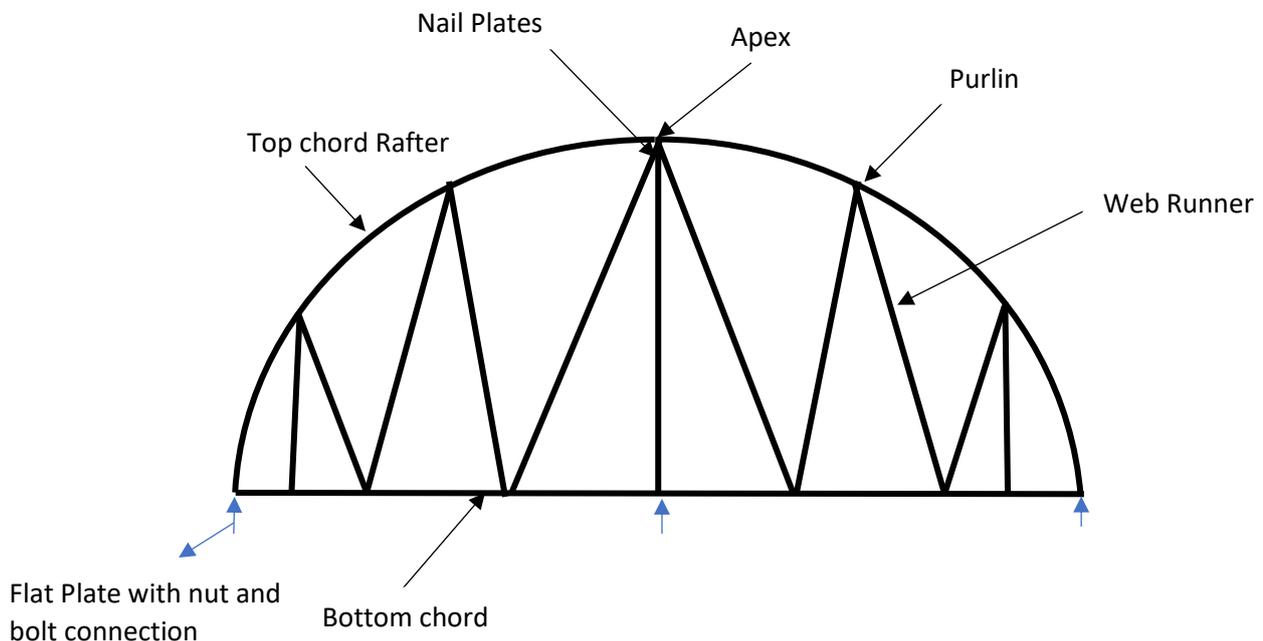
**SECTIONAL VIEW OF POLYSHED NET MODEL :-**

- Above design give an extensive idea on various components used for fabrication or installation of poly shed net.

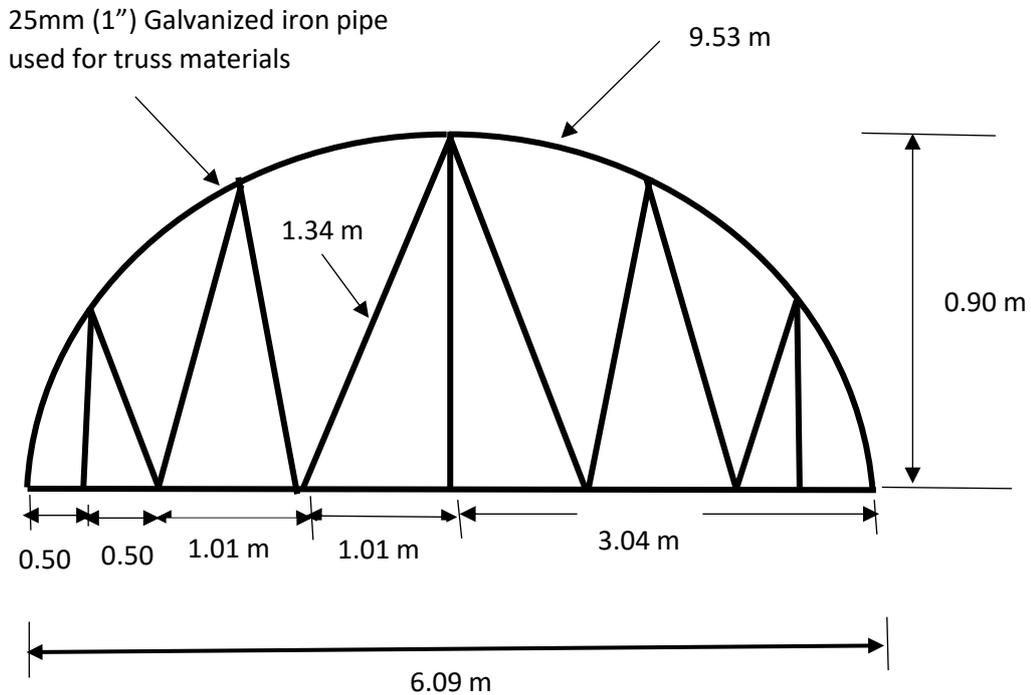
- Please go through the sectional view to have a clear understanding of the components describe below.
- In general two types of Galvanized iron pipe i.e 25mm and 40 mm should be used for fabrication of the structure . Pipe details are describe below according to the Indian standard code 1239( PART-1) 2004/2011 .
- These pipes are widely used for conveying raw water & distribution of treated water in majority of rural water supply schemes, where the requirement of water is less. Mostly medium quality GI pipes are used. These pipes are cheap, light in weight and easy to handle & transport & easy to join. Their sizes vary from 15mm to 150mm.
- For each size of tube, the outside diameter is fixed by the corresponding screw thread dimension of IS 554 and therefore, the actual bore of each size of tube will vary according to the thickness.
- The ends are cleanly finished by normal deburring process. Galvanized tubes shall be capable of being bent cold, without cracking of the steel, through 90° .
- When approximate lengths are required, either for screwed and socketed tubes or for plain end tubes, each tube shall be within  $\pm 150$  mm of the specified length.
- Nominal internal bore size of the steel pipe or tube is 25mm and maximum and minimum outside diameter should be 33.8 to 33.2 respectively.
- Nominal internal bore size of the steel pipe or tube is 40 mm and maximum and minimum outside diameter should be 48.4 to 47.8 respectively.
- Where tubes are required to be galvanized, the zinc coating on the tubes shall be in accordance with IS 4736. 1 Tubes, which are to be screwed, shall he galvanized before screwing.
- All pipes shall be cleanly finished and reasonably free from injurious defects. The ends shall be free from sharp edges and burrs of the pipe. The tubes shall be reasonably straight.
- The different c lasses of tubes shall be distinguished by colour bands, which shall be applied as follows before the tubes leave the manufacturer's works: a) Light tubes - Yellow b) Medium tubes - Blue c) Heavy tubes – Red in nature.

- Tubes having length more than 7 shall have two 75 mm bands, one near each end. All other lengths shall have one 75 mm band.
- The use of the Standard Mark is governed by the provisions of the Bureau of Indian Standards Act, 1986 and the Rules and Regulations made there under. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.
- Maximum Permissible Pressure and Temperature for Tubes with Steel Couplings or Screwed and Socketed Joints FOR 25mm pipe should be 1.20 Mpa and 260°c. Maximum Permissible Pressure and Temperature for Tubes with Steel Couplings or Screwed and Socketed Joints FOR 40mm pipe should be 0.86 Mpa and 260°c .
- High strength , corrosion resistance , High toughness and deformability Thickness of each pipe should be 0.8mm to 1.5 mm which ever is available .

### 1) Circular Arch:- Semi circle Truss ( DRAWING -1)



DIMENSION:-

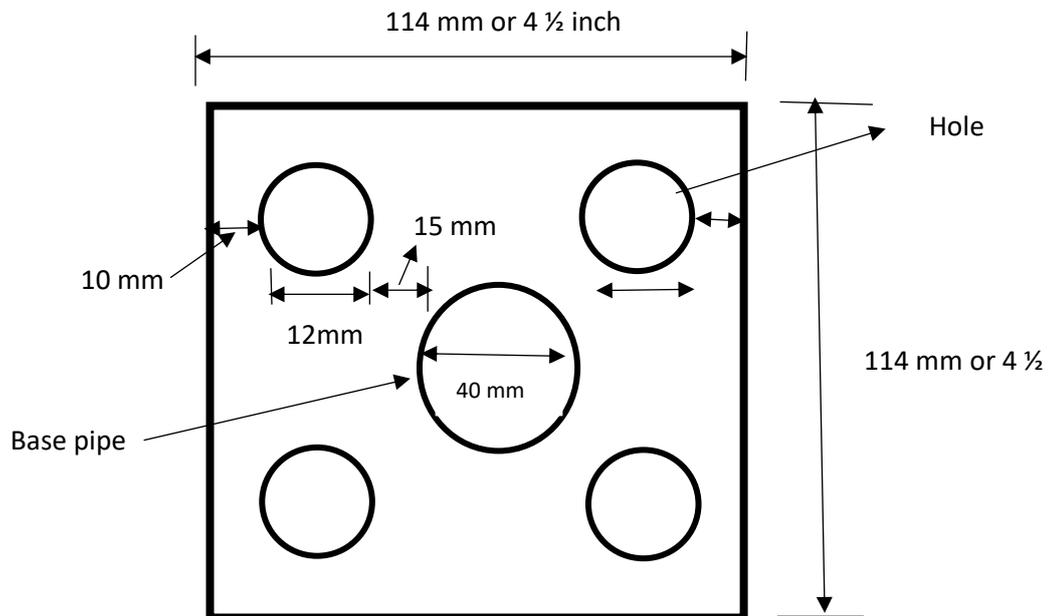


(Figure-1.1)

**Specification :-**

- 25 mm ( 1" ) rust free galvanized iron should be used for fabrication of truss .
- Component of the truss as per the diagram above i.e Top chord rafter , bottom chord , Apex , Purlin and web runner diameter should be 25mm as per the desired length as shown in the diagram.
- Web runner or Apex length up to the bottom chord should be 0.90 m.
- Length of the truss should be 6.09m or 20 ' .
- All the joint should be tightly weld with welding material including nail plates.
- Total 9 nos of trusses need to be fabricated with welded flat plate in the bottom for Nut & bolt connection.
- 10 mm Nut and bolt should be used for tightening of the base plate and bottom pipe.
- 3 nos of flat plate need to be installed in the bottom chord for fixing of nut bolt in the bottom pipe.
- The chord or semi circle length should be 9.53 m as mentioned in the figure .

## 2) Flat Plate ( DRAWING -2)

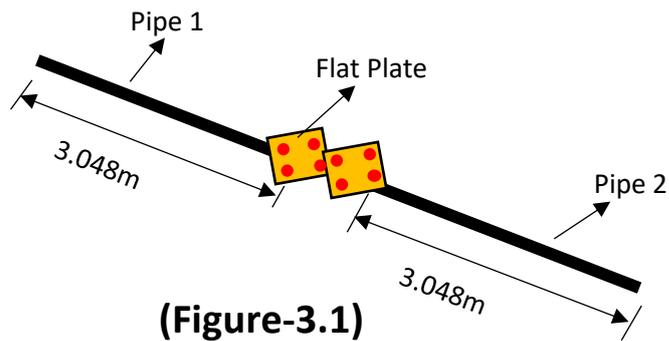


(Figure-2.1)

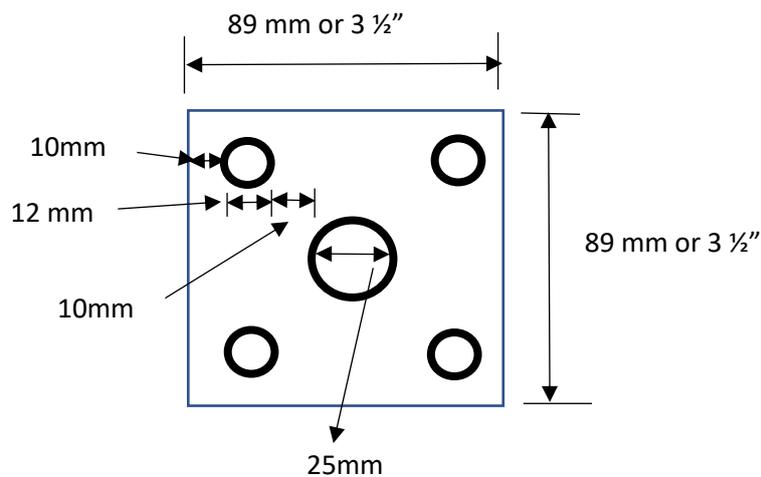
### Specification:-

- GI Plate with 4 no's of hole should be provided in the flat plate as per the drawing mentioned above for inserting bolt and fixing nuts in the plate to transfer load from the truss to the base pipe.
- Minimum clear cover should be provided between base pipe and hole to avoid any damage to the base plate and crack in the plate over a longer period .
- GI Nut and bolt should be used for tying of base plate and Truss.
- Total 27 nos of base plate need to be fabricated in the base pipe and 27 nos in the truss to laying both one above another. Please refer figure 1.1.

### 3) Purlin Pipe joint ( Drawing ):-



(Figure-3.1)



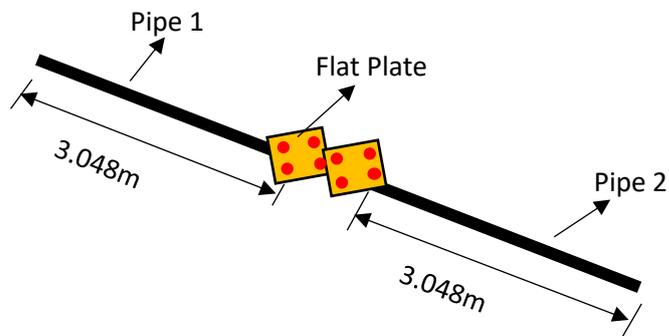
(Figure-3.2)

#### Specification :-

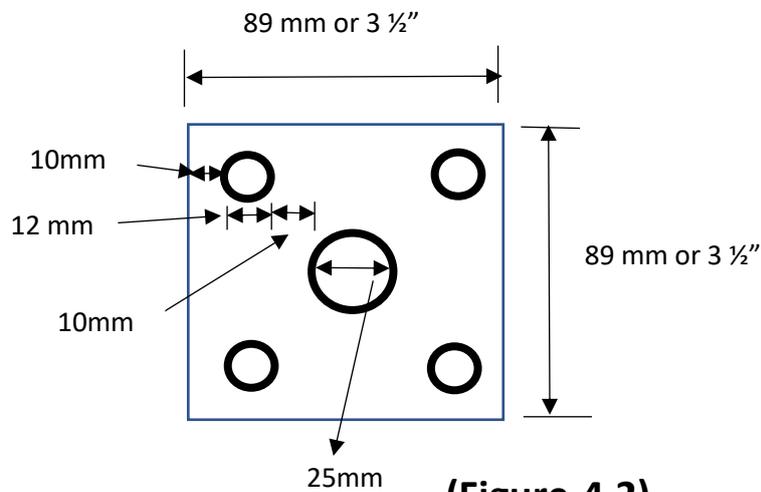
- Total 12 nos of 25mm GI pipe should be installed over the semi circular arch to support and interconnect the arches to a fixed position .
- Each purlin has connected with 4 nos of GI pipe as the length of the structure is about 80ft . In each GI pipe two flat plates need to be fabricated to joint one with other expect two pipes which are installed on both the end .

- Or else pipe should be joint together by cutting and welding.
- Total 3 set of purlin should be installed in the structure. one in the middle of the arch and other two will be installed in between the middle point and end point of the arch as shown in the figure 1.1 .
- Flat plate should be fabricated in each pipe as per the figure 3.2 . Each pipe length should be 6m or 20' .

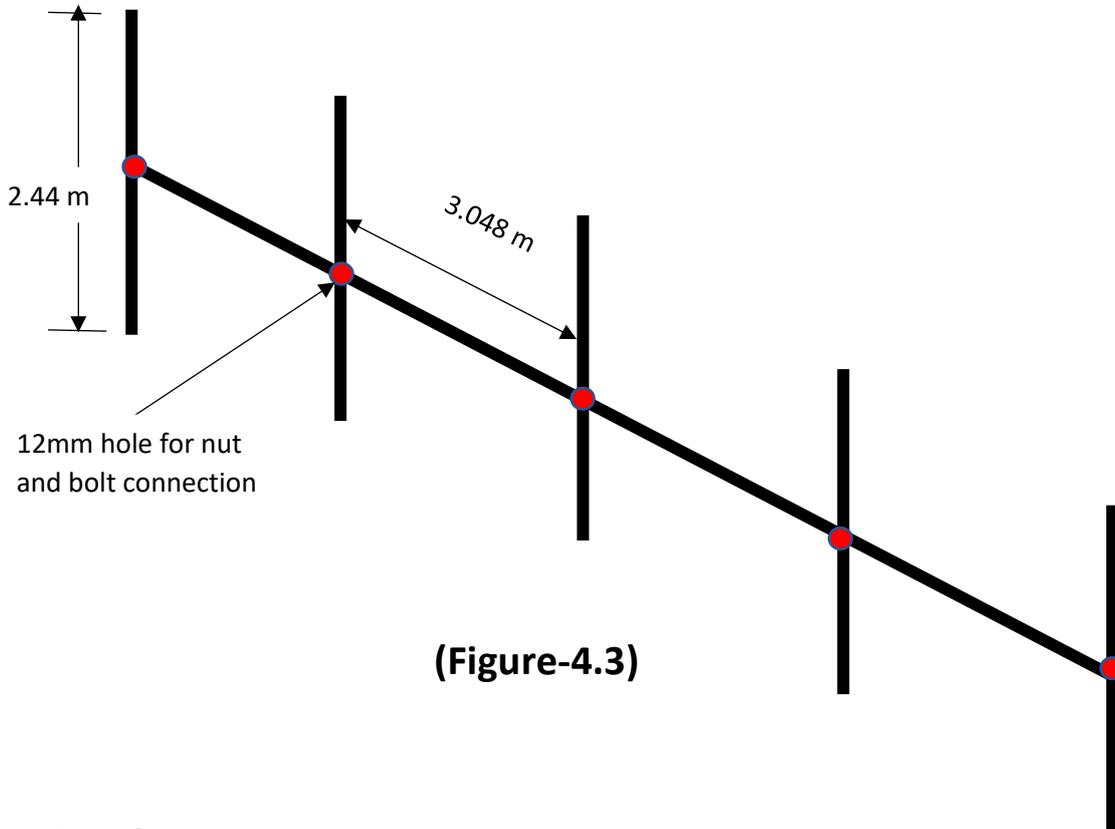
4) Side bar joint ( Drawing ):-



(Figure-4.1)



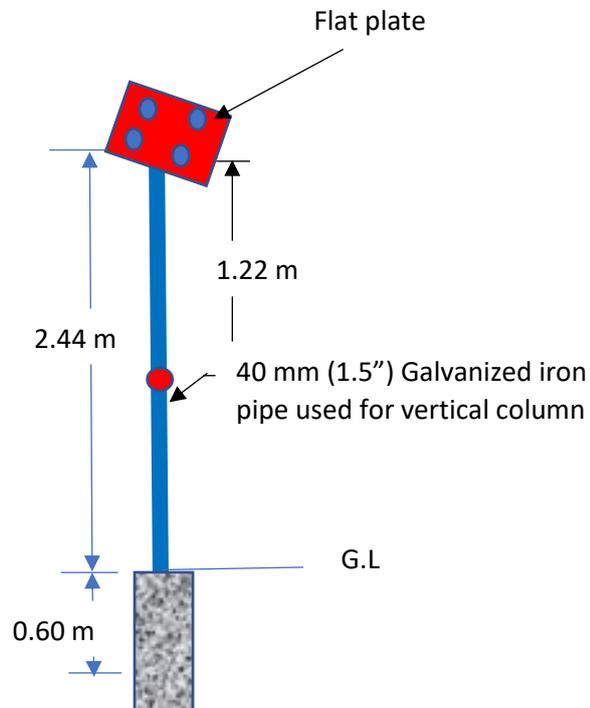
(Figure-4.2)



**Specification :-**

- Total 10 nos of 25mm GI pipe should be installed on the side of the structure as per the diagram 1.1.
- Two Side should be connected with 4 nos of GI pipe as mentioned in the figure 1.1 So total 8 nos of pipe required for long section and 2 nos of pipe required for short section as shown in the figure . In each GI pipe two flat plates need to be fabricated to joint one with other except two pipes which are installed on both the end .
- Or else pipe should be joint together by cutting and welding.
- Flat plate should be fabricated in each pipe as per the figure 3.2 . Each pipe length should be 6m or 20' .
- 12 mm hole should be marked in each pipe as shown in the above figure to joint the side pipe with the column pipe to fix in a position.

## 5) Vertical Column :- ( 40mm GI Pipe)



(Figure-5.1)

### Specification:-

- Each pipe length should be 3.048 m so one full length pipe is cut into two equal pieces with flat plates fabricate in both the ends as shown in the above diagram.
- The flat plates fabricate in top of the pipe should be same as the bottom plate of truss so that both can tie by nut and bolt.
- 40 mm(1.5") galvanized iron pipe should be used to prepare vertical column or stand.
- In each pipe a bore hole should be marked 1.22 m from the top so that side bar should be tie with the column with nut and bolt .
- Total **27** nos of pipe need to be fabricated for this purpose .