



JAMIA MILLIA ISLAMIA
Jamia Nagar, New Delhi-110 025
Ph: 011-26982759
Notice Tender Enquiry

NIT-48/Lab Furniture/MCARS/PICO/RO/JMI/2017

Date: 28.12.2017

Online bids are invited from reputed Companies/Authorized Distributors/Dealers for supply, fabrication and installation of Modular Lab Furniture for the main Lab 108 of Multidisciplinary Centre for Advance Research & Studies, Jamia Millia Islamia. **Manual bids shall not be accepted.** Bid Document with other Terms & Conditions can be downloaded from JMI Website: www.jmi.ac.in (for reference only) and CPP website: <https://eprocure.gov.in/eprocure/app> as per the schedule as given in CRITICAL DATE SHEET as under and be submitted with notified EMD as per following:

CRITICAL DATE SHEET:

Publish Date	28.12.2017 at 13:00 Hrs
Bid Document Download/Sale Start Date	28.12.2017 at 13:30 Hrs
Bid Submission Start Date	29.12.2017 at 09:00 Hrs
Bid Submission End Date	15.01.2018 at 13:00 Hrs
Bid Opening Date	16.01.2018 at 15:00 Hrs

EMD (Refundable)	Last date for Submission of Bids/Time	Venue and Time of opening of Bids
INR 60,000/-	As per critical date-sheet	Purchase & Inventory Control Office As per Critical date-sheet

Eligibility Criteria:

1. The Bidder should be a reputed and an authorized firm/supplier having after sales service agreement with the OEM (Proof for the same to be enclosed along with address, phone nos. & E-mail etc. of the Service Centre).
2. If ISO certified Company, enclose documentary proof.
3. The bidder should have experience of more than five years in execution and maintenance of equipments quoted (A certificate of establishment to be provided).
4. The Original Copy of EMD, Registration Certificate, GST No. complete in all respect should reach the Purchase & Inventory Control Office, Jamia Millia Islamia, Jamia Nagar, New Delhi-110 025 as per critical date-sheet. No bids after the last date shall be entertained.

Sequence of documents to be provided/enclosed in each copy of the bid documents:

1. Balance sheet with auditor's report for the last three years.
2. Latest Income Tax Clearance Certificates.
3. GST no.
4. Proof of the authorized agent/distributors/supplier.
5. Sole Proprietary/sole manufacturer certificate for proprietary item.
6. List of Similar equipments supplied by the firm with addresses and phone numbers of customers with satisfactory completion certificate/satisfactory working certificates.
7. Name and address of registered office, Head Office and Regional office of the company with name and phone numbers of key persons.
8. Format of Schedule of Requirements at Annexure-I
9. Self-declaration at Annexure-II
10. Format for Supplier/Distributor information at Annexure-III
11. Contract Form at Annexure-IV
12. Technical Bid at Annexure-V
13. Financial Bid at Annexure VI
14. Acceptance of all clauses of bids specification duly signed page-wise.
15. Tender Acceptance Letter duly filled by the bidder at Annexure-VII

Registrar, JMI

Conditions of Contract

Terms & Conditions:

1. The bidder shall be required to deposit Rs. 60,000/- **Earnest Money** of estimated value of Works to be procured through Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee drawn in favour of **'The Registrar, Jamia Millia Islamia**. No bid shall be accepted without the Earnest Money.
2. The successful supplier will submit a Bank Guarantee equivalent to 10% of the total value of purchase order at the time of installation which would remain valid for a period of 60 days beyond the date of completion of all obligations of the supplier including warranty obligation. EMD will be released to successful bidder after submission of Bank Guarantee. JMI shall forfeit Bank Guarantee in the event of a breach of contract by the successful supplier.
3. Bids would be rejected for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the contract in question.
4. The JMI may, at its discretion, extend the deadline for submission of bids by amending the bid documents in accordance with clause relating to Amendment of Bidding documents in which case all rights and obligations of the JMI and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.
5. The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by the bidder or a person or persons duly authorized to bind the bidder to the Contract. All pages of the bid, except for un-amended printed literature, shall be authorize by the person or persons signing the bid. Further, over-writings on documents, if any should be supported by signatures.
6. The bidders may submit their bid online not later than the time and date specified therein.
7. Issuance of bid documents should not automatically be construed that the bidder is considered qualified. The JMI Authority has the right to reject any bids on technical grounds without assigning any reason.
8. Jamia Millia Islamia shall not be responsible for any delay, loss or non-receipt of original mentioned documents.
9. Prices shall be quoted in Indian Rupees for offers received for supply within India and in US dollars as per the Financial Bid format in case of offers received for supply from foreign countries. The prices quoted should be CIF or FOR, JMI destination.
10. The JMI may decide to open a letter of Credit or Wire Transfer in cases where it so decides. Any variation in price from the importer and manufacturer be indicated well in advance.
11. The imported equipments should be quoted by the authorized supplier/dealer. In this case, commitment of after sales service with the period applicable should be clearly mentioned.
12. Payment shall be made after delivery, successful installation, commissioning & submission of Bank Guarantee. Bank Guarantee period will commence from the date of successful installation and commissioning of equipments.
13. All taxes, if applicable, should be quoted separately, otherwise it would be presumed that the quoted prices are inclusive of taxes (please see Financial Bid format).
14. Prices quoted should be CIF/FOR, JMI, New Delhi inclusive of all charges required to make the equipment functional to the satisfaction of JMI, otherwise it would be presumed that the quoted prices are inclusive of all charges, if applicable.
15. In case price for imported goods are quoted in FOR, the JMI will provided customs duty exemption certificate, if the import is made in the name of JMI and the supplier should submit original Bill of Entry in the name of the Registrar, JMI.
16. Delivery should be within specified days mentioned in Purchase Order. If the equipment/instruments are not delivered within the stipulated time, the supplier shall be liable to pay a penalty of 1% of the total order value for each delay of 10 days or part thereof subject to a maximum of 10% of Purchase Order value and the amount will be deducted from the payment on account of purchase.
17. The suppliers will undertake warranty of equipment/instruments/modular furniture from the date of installation and shall have to mention clearly the period of warranty in financial bid.
18. The quotations must be valid for 180 days (six months) from the date of opening of the technical bids. No change in prices and change in terms and conditions will be permitted.
19. All quoted items may carry brochure/catalogue/Pamphlets/Technical Literature and related documents.
20. The supplier further warrants that the goods shall be free from defects arising from any act or omission of the supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in India.
21. Installation, testing, commissioning of the equipments should have to be carried out by Technical experts of the company/supplier up to the satisfaction of user department of JMI.
22. Free training shall be imparted to faculty/technical staff for operation, maintenance and troubleshooting at the user department of JMI.
23. The bidder may submit the proprietary certificate for the item(s), if applicable.

24. In a bid, either the Indian agent on behalf of the Principal/OEM or Principal/OEM itself can bid but both cannot bid simultaneously for the same item/product in the same bid.
25. If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same bid for the same product.
26. Jamia Millia Islamia reserves the right to purchase varying quantity of material, less or more.
27. In the process of evaluation, comparison of bids, Jamia Millia Islamia reserves the right to reject any or all bids.
28. In case replacement of a part becomes necessary during warranty period, the parts of the same make and same or better configurations as were originally there in the equipments shall be used. The supplier/vendor shall maintain details of the replacements and repairs carried out, if any, in any equipment/instrument in a separate document and produce the details as and when required by the user department of JMI. The cost of the parts will be borne by the supplier.
29. In case of complaint regarding repairing/replacement of equipment/instrument within the warranty period, the supplier will provide repair/replacement immediately. In case of non-compliance or delayed compliance, supplier will be penalized with an amount mutually agreed upon and it would be deducted from the Bank Guarantee.
30. The technical specification wherever given in the items' specification format is basic. The equipments/instruments may also be evaluated as per additional provisions and facilities.
31. All corrigenda will only be notified on the JMI website and CPPP website.
32. The Vice-Chancellor, JMI shall be the final Authority for settlement of any dispute and his interpretation of any Clause/term/condition(s) of this document shall be final and binding and the jurisdiction for Court of Law shall be Delhi/New Delhi.

Authorize Signature of the firm:

Name:

Designation:

Bid Submission:

1. Bidders are advised to visit this website regularly to keep themselves updated as any change/ modification in the tender will be intimated through this website only.
2. Bids shall be submitted online only at CPPP website: <https://eprocure.gov.in/eprocure/app>.
3. Tenderer/Contractor are advised to follow the instructions "Instructions To Bidder for Online Bid Submission" provided for online submission of bids -
4. Tenderer who has Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
5. Downloaded the tender from the JMI website and Central Public Procurement Portal (CPPP) website <https://eprocure.gov.in/eprocure/app>, <https://eprocure.gov.in/epublish/app> **shall not tamper/modify the tender form including downloaded price bid template in any manner**. In case if the same is found to be tempered/modified in any manner, tender will be completely rejected and EMD would be forfeited and tenderer is liable to be banned from doing business with JMI.
6. Intending tenderers are **advised to visit again** JMI Website: www.jmi.ac.in (Reference only) and **CPPP website** <https://eprocure.gov.in/eprocure/app> **regularly till closing date of submission** of tender for any corrigendum/addendum/ amendment.
7. Applicant contractor must provide demand draft as EMD for Rs. 60,000/- (Rupees Sixty Thousand Only) in favour of The Registrar, JMI and payable at New Delhi. From any Nationalized/ scheduled Bank valid for three months with their application/downloaded tenders. The all applicable bank charges shall be born by the applicant and he shall not have any claim what so ever on this account on Government. In case of re-tendering, the firms which have submitted the DD in earlier calls will require to submit DD along with their tender/application in subsequent calls also.
8. Bids will be opened as per date/time as mentioned in the **Tender Critical Date Sheet**. After online opening of Technical-Bid the results of their qualification as well Price-Bid opening will be intimated latter.

Submission of Tender

The tender shall be submitted online in Two part, viz., technical bid and price bid.

All the pages of bid being submitted must be signed and sequentially numbered by the bidder irrespective of nature of content of the documents before uploading.

The offers submitted by Telegram/Fax/email shall not be considered. No correspondence will be entertained in this matter.

Technical Bid

The following documents are to be furnished by the Contractor along with **Technical Bid** as per the tender document:

- i) Signed and Scanned copy of **Earnest Money Deposit**
- ii) Signed and Scanned copy Certificates like Registration certificate, PAN No, TIN No, Service Tax registration, Sales Tax, Trade Tax Regn, GST No.
- iii) Signed and scanned copy of Proof of Balance Sheet with Auditor's Report for the last three.
- iv) Signed and Scanned Copy of **Tender Acceptance Letter & Letter of authorization to submit bid.**
- v) An undertaking (self-certificate) that the **agency hasn't been blacklisted** by a Central / State/UT Government institution and there has been no litigation with any government department on account of IT services.
- vi) Signed and Scanned Copy of **Technical data sheet** as per Annexure V.
- vii) Signed & scanned copy of the authorized agent/distributors/supplier
- viii) Signed & scanned copy of Sole Proprietary/sole manufacturer certificate for proprietary item.
- ix) Signed & scanned copy of List of Similar equipments supplied by the firm with addresses and phone numbers of customers with satisfactory completion certificate/satisfactory working certificates.
- x) Signed & scanned copy of Name and address of registered office, Head Office and Regional office of the company with name and phone numbers of key persons.
- xi) Signed & Scanned copy of Annexure, I, II, III, IV, V & VII.

PRICE BID

Schedule of price bid at Annexure VI dully filled by the bidder in figure as well as in words.

Instructions for Online Bid Submission:

The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal. More information useful for submitting online bids on the CPP Portal may be obtained at: <https://eprocure.gov.in/eprocure/app>.

REGISTRATION

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link “**Online bidder Enrollment**” on the CPP Portal which is free of charge.
- 2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify /nCode/eMudhra etc.) with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- 6) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC/e-Token.

SEARCHING FOR TENDER DOCUMENTS

- 1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents/tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification/help from the Helpdesk.

PREPARATION OF BIDS

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Space” or “Other Important Documents” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

Note: My Documents space is only a repository given to the Bidders to ease the uploading process. If Bidder has uploaded hid Documents in My Documents space, this does not automatically ensure these Documents being part of Technical Bid.

SUBMISSION OF BIDS

- 1) Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Bidder has to select the payment option as “offline” to pay the tender fee / EMD as applicable and enter details of the instrument.
- 4) Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.
- 5) Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.
- 6) The server time (which is displayed on the bidders’ dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- 7) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 8) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 9) Upon the successful and timely submission of bids (ie after Clicking “Freeze Bid Submission” in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 10) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

ASSISTANCE TO BIDDERS

- 1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.

Number: 0120-4200462, 0120-4001002,

Mobile Number: 91 8826246593, `

In Office Hour only: **8804377070**

E-Mail: support-eproc[at]nic[dot]in

- 3) For Tender related Query may please contact:
Tel: 26982759(Dir), 26981717#1240, 1242

FORMAT OF SCHEDULE OF REQUIREMENTS
(All Columns to be filled by the supplier)

Sl. No.	Name Equipment/Instrument	Unit	Qty.	Delivery Schedule	EMD in Rupees
				Delivery in _____ weeks at the user department, JMI	

Authorized Signatory:

Name:

Designation:

Name of the firm:

Seal:

Self-Declaration to be given by the bidder

Bid's Reference No. & Date:

Bidder's Name & Address

Person to be contacted:

Designation:

Telephone No.:

Fax No.:

Email:

The Registrar,
Jamia Millia Islamia,
Jamia Nagar, New Delhi-110025.

We, the undersigned Bidder, having carefully read and examined in detail the Terms and Conditions, specifications and all bidding document in regard to the supply of equipments/instruments at Jamia Millia Islamia and accept the same.

We also do hereby declare

1. that we have not been blacklisted/debarred by any Government/Undertaking.
2. that the rates quoted are not higher than the rates quoted for same item to any Government/Undertaking.
3. that the original mentioned documents submitted by us and prepared so as to prevent any subsequent alteration and replacement.

For and on behalf of the firm
(Firms Name & Address)

(Signature of Authorized Signatory)

Name:

Designation

Phone No.:

Seal:

Date:

Place:.....

FORMAT FOR OTHER INFORMATION
(To be filled in by the bidder)

1. Name of the firm:
2. Address:-
3. Telephone/Mobile No.
4. Fax Number:-
5. Email:-
6. GST No.:
7. Firm Registration No.:
(if any)
8. PAN:
(Attach photocopy)
9. **Earnest Money (Bids Security).....**
@ Rs.60,000/-

- a) Bank Draft/Pay Order No.
- b) Date.
- c) For Rs.
- d) Drawn On.

(Signature of the authorized person)

Name of contact person

Name of Firm

Contact No.

Seal

Place

Date.....

CONTRACT FORM
(to be filled by the successful bidder)

THIS AGREEMENT made the day of....., 20.... between the Registrar, Jamia Millia Islamia, New Delhi (hereinafter called "the Purchaser") of the one part and (Name of Supplier) of (City and Country of Supplier) (hereinafter called "the Supplier") of the other part:

WHEREAS the Purchaser is desirous that certain equipment/instrument and after sales services viz., (Brief Description of equipment/instrument and after sales services) and has accepted a bid by the Supplier for the supply of those equipment/instrument and after sales services for the sum of (Contract Price in Words and Figures) (hereinafter called "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

06 In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.

2. In consideration of the payments to be made by the JMI to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the JMI to provide the equipment/ instrument and after sales services and to remedy defects therein in conformity with the provisions of the Contract in all respects.

3. The JMI hereby covenants to pay the Supplier in consideration of the supply of the equipment/instrument and after sales services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

Brief particulars of the equipment/instrument and after sales services which shall be supplied/provided by the Supplier are as under:

SL. NO.	BRIEF DESCRIPTION OF EQUIPMENT/ INSTRUMENT AND AFTER SALES SERVICES	QUANTITY TO BE SUPPLIED	UNIT PRICE	TOTAL PRICE	DELIVERY TERMS

TOTAL VALUE:

DELIVERY SCHEDULE:

SIGNATURE OF
AUTHORISED SIGNATORY

Name:

Designation:

Name of the firm:

Seal:

REGISTAR, JMI

NAME

PLACE

SEAL

Technical Specifications

S. No.	Items/Descriptions	Compliance (Yes/No)
1.	Technical specification as per attached additional document in NIT48	

(Signature of the authorized person)

Name of Contact Person

Name of Firm

Contact No.

Seal

Financial Bid

SL NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
1	6/16A SOCKET WITH SWITCH	Nos.	80		
2	6/16A SOCKET WITH SWITCH,UPS SOCKET	Nos.	16		
3	APRON UNIT 1 DRAWER - 04Hx22Dx24L, WITH LOCK	Nos.	40		
4	APRON RAIL - 04Hx02Dx30L	Nos.	8		
5	KNEE SPACE PANEL - 30Hx00Dx24L	Nos.	40		
6	KNEE SPACE PANEL - 30Hx00Dx30L	Nos.	4		
7	PEDESTAL ASSY LEFT - 36Hx22Dx02L	Nos.	12		
8	PEDESTAL ASSY RIGHT - 36Hx22Dx02L	Nos.	20		
9	END SCRIBE - 36Hx00Dx04L	Nos.	2		
10	END SCRIBE - 36Hx00Dx06L	Nos.	1		
11	END SCRIBE - 36Hx00Dx07L	Nos.	1		
12	END SCRIBE - 36Hx00Dx10L	Nos.	8		
13	REAR SCRIBE - 36Hx00Dx04L	Nos.	1		
14	REAR SCRIBE - 36Hx00Dx07L	Nos.	1		
15	BENCH MOUNTED TRIPLE-WAY WATER FITTING WITH RIGID/SWING GOOSENECK FOR RAW WATER	Nos.	2		
16	BENCH MOUNTED 1-WAY WATER FITTING WITH 8" RIGID/SWING GOOSENECK WITH AERATOR FOR RAW WATER	Nos.	2		
17	BASE UNIT 1 DOOR - 36Hx22Dx18L, WITH LOCK	Nos.	1		
18	BASE UNIT 3 DRAWER - 36Hx22Dx24L , WITH TOE SPACE ON LEFT END, 2 NOS. SMALL DRAWER AND 1 NO. BIG DRAWER & LOCK	Nos.	2		
19	BASE UNIT 3 DRAWER - 36Hx22Dx24L , WITH TOE SPACE ON RIGHT END, 2 NOS. SMALL DRAWER AND 1 NO. BIG DRAWER & LOCK	Nos.	2		
20	BASE UNIT 3 DRAWER - 36Hx22Dx24L, WITH 2 NOS. SMALL DRAWER AND 1 NO. BIG DRAWER & LOCK	Nos.	16		
21	BASE UNIT 2 DOOR 1 DRAWER - 36Hx22Dx30L, WITH LOCKS	Nos.	6		
22	DOUBLE SIDE SOCKET BOX 12x8x4	Nos.	20		
23	SINGLE SIDE SOCKET BOX 12x4x4	Nos.	8		
24	BASE MOLDING 4 FT.	Nos.	97		
25	CORNER CLIP	Nos.	105		
26	ADJUSTABLE OPEN FRONT SHELF,SIZE-01Hx12Dx36L	Nos.	80		
27	ISLAND MODULE, SIZE- 54Hx06Dx36L, BENCH MOUNTED	Nos.	20		
28	BASE UNIT SINK 2 DOOR - 36Hx22Dx36L	Nos.	2		
29	BASE UNIT 2 DOOR - 36Hx22Dx52L	Nos.	2		
30	DECK MOUNTED DOUBLE HEAD EYE WASH/DRENCH	Nos.	3		
31	FLOOR STANDING WORKTOP SUPPORT OF SIZE: 36Hx08L	Nos.	4		
32	LIGHT WITH SWITCH MOUNTED ON SHELF	Nos.	40		
33	ACRYLIC PEG BOARD WITH 33 PEGS WITH SS TRAY, 610Lx610mm(H)	Nos.	4		
34	PP BIG SINK, SIZE: 711Lx468Dx245Hmm AND BOWL SIZE: 651Lx406Dx245Hmm	Nos.	4		
35	WASTE, 1 1/2" BSP X 76mm.	Nos.	4		
36	ANTI SIPHON PP BOTTLE TRAP.	Nos.	4		
37	REDUCING COUPLER IN PP 51 X 31MM + PP PIPE LENGTHS - ONE FEET	Nos.	4		
38	SERVICE DROPPER OF SIZE: 4x4x112	Nos.	1		
39	SERVICE ENCLOSURE FOR CENTRE BENCH 12x6x112	Nos.	4		
40	SERVICE ENCLOSURE FOR WALL BENCH 12x6x112	Nos.	2		
41	WALL UNIT SLIDING GLAZED - 24Hx13Dx36L, WITH 1 SHELF, CABINET MOUNTED ON UPRIGHT & LOCK.	Nos.	40		
42	WALL UNIT SWINGING GLAZED - 24Hx16Dx30L, WITH LOCKS	Nos.	7		
43	WALL UNIT SWINGING PANEL - 36Hx16Dx30L, WITH LOCKS	Nos.	7		
44	18/19mm THK. GRANITE WORKTOP IN SFT	Sft	406		
45	GRANITE SKIRTING. 4x1	Rft	82		
	GST				
GRAND TOTAL					

- Note:**
- 1 The thickness of Granite worktop is 18/19mm.
 - 2 The cabling & tie in to Electrical sockets will be done by JMIU
 - 3 The tie in of water and drain for sinks will be done by JMIU
 - 4 All power cablings, Earthing & their terminations will be done by JMIU
 - 5 True ceiling height -NA
 - 6 False ceiling height -NA
 - 7 Beam Drop-NA
 - 8 Considered Labs are in Ground floor, above First floor is Terrace.

(Signature of the authorized person)

Name of Contact Person

Name of Firm

Contact No.

Seal

TENDER ACCEPTANCE LETTER
(To be given on Company Letter Head)

Date:

To,

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: _____

Name of Tender / Work: -

Dear Sir,

1. I / We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely: _____

as per your advertisement, given in the above mentioned website(s).

2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like annexure(s), schedule(s), etc .,), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.

3. The corrigendum(s) issued from time to time by your department/organization too have also been taken into consideration, while submitting this acceptance letter.

4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.

5. I / We do hereby declare that our Firm has not been blacklisted/ debarred by any Govt. Department/Public sector undertaking.

6. I / We certify that all information furnished by the our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organization shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)

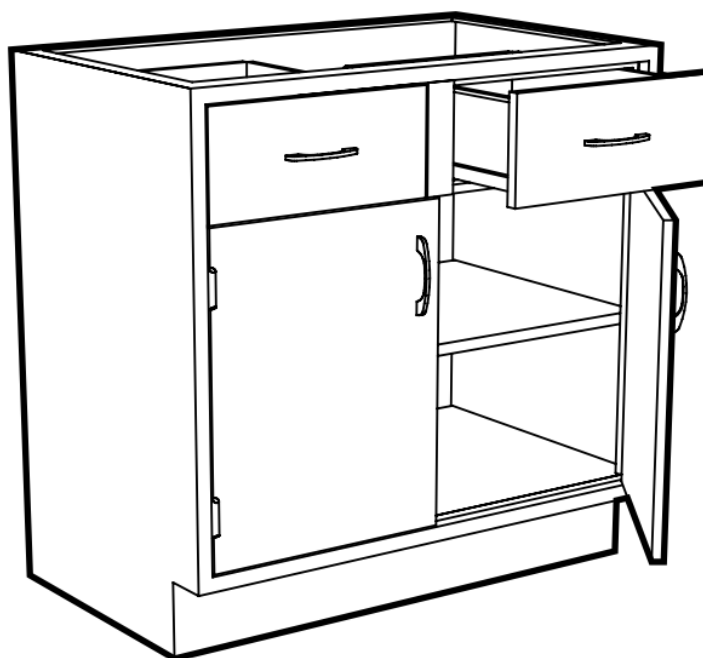
TECHNICAL SPECIFICATION FOR LABORATORY FURNITURE

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CHAPTER-01

LAB FURNITURE SPECIFICATION



DESCRIPTION OF WORK

1.00 SUMMARY AND SCOPE

A. Section Includes:

1. Furnish all cabinets and casework, including tops, ledges, supporting structures. Include delivery to the building, set in place, level, and scribe to walls and floors as required. Furnish and install all filler panels, knee space panels and scribes as shown on drawings.
2. Furnish and deliver all utility service outlet accessory fittings, electrical receptacles and switches identified on drawings as mounted on the laboratory furniture. All plumbing and electrical fittings, not preinstalled in equipment, will be packaged separately and properly marked for delivery to the appropriate contractor.
3. Furnish and deliver, for installation by the mechanical contractor, all laboratory sinks, cup sinks or drains, drain troughs, overflows and sink outlets with integral tailpieces, which occur above the floor, and where these items are part of the equipment. All tailpieces shall be furnished less the couplings required to connect them to the drain piping system.
4. Furnish service strip supports where specified, and setting in place service tunnels, service turrets, supporting structures and reagent racks of the type shown on the drawings.
5. Removal of all debris, dirt and rubbish accumulated as a result of the installation of the laboratory furniture to an onsite container provided by others, leaving the premises broom clean and orderly.

1.01 BASIS OF WORK

Laboratory Furniture as the standard of construction for steel laboratory furniture. The construction standards of this product line shall provide the basis for quality and functional installation.

2.00 CABINET STYLE:

Steel:

Cabinet bodies, drawer bodies, shelves, drawer heads and door assemblies shall be fabricated from Cold Rolled Steel.

2.01 DRAWER AND DOOR STYLE:

The outer drawer and door head shall have a channel formation on all four sides to eliminate sharp raw edges of steel and the top front corners shall be welded and ground smooth. Drawer and door, when closed, shall be recessed to create an overall flush face, and with optional pull.

2.02 MATERIALS

A. General Requirements:

It is the intent of this specification to provide a high quality steel cabinet specifically designed for the laboratory environment.

B. Steel:

Cold Rolled Steel:

Cold rolled sheet steel shall be prime grade 12, 14, 16, 18 and 20 gauge U.S. Standard; roller leveled, and shall be treated at the mill to be free of scale, ragged edges, deep scratches or other injurious effects.

C. Glass:

Glass used for framed sliding and swinging doors shall be 1/8" float glass. Glass used for unframed sliding doors, shall be 1/4" float glass. Glass used in fume hoods or other hazardous locations shall be 7/32" laminated safety float glass, except the glass shielding fluorescent lights in fume hoods shall be tempered glass to provide greater resistance to heat and impact.

D. Drawer and Door Pulls:

Pull shall be of modern design, offering a comfortable handgrip, and be securely fastened to doors and drawers with screws. All pulls shall be satin finish aluminum, with a clear, lacquer finish. Two pulls shall be required on all drawers over 24" long. Use of plastic pulls (molded or extruded), or a design not compatible for usage by the handicapped will not be acceptable.

E. Hinges:

Hinges shall be made of Type 304 stainless steel .089 thick, 2-1/2" high, with brushed satin finish, and shall be the institutional type with a five-knuckle bullet-type barrel. Hinges shall be attached to both door and case with two screws through each leaf. Welding of hinges to door or case will not be accepted. Doors under 36" in height shall be hung on one pair of hinges, and doors over 36" high shall be hung on 3 hinges.

F. Positive Catch:

A two-piece heavy-duty cam action positive catch shall be provided on all base cupboard doors and shall be positioned near the pivoting edge of door to provide a clean unobstructed opening. Main body of the catch shall be confined within an integral cabinet divider rail, while latching post shall be mounted on the hinge side of door. Nylon roller type catches are not acceptable.

G. Locks:

Locks when shown or called for shall be a 5-disc tumbler with heavy duty interchangeable cylinder. Exposed lock noses shall be dull nickel (satin) plated and stamped with identifying numbers.

H. Elbow Catches:

Elbow catches and strike plates shall be used on left hand doors of double door cases where locks are used, and are to be burnished cast aluminum, with bright brass finish.

I. Shelf Adjustment Clips:

Shelf adjustment clips shall be nickel-plated steel.

J. Base Molding:

Base Molding shall be provided on all table legs, unless otherwise specified, to conceal leveling device. Shoes shall be a pliable, black vinyl material. Corner clip should be provided to hold the base molding firmly. Use of a leg shoe, which does not conceal leveling device, will not be acceptable

K. Sink Supports:

Sink supports shall be the hanger type, suspended from top front and top rear horizontal rails of sink cabinet by four 1/4" dia. rods, threaded at bottom end and offset at top to hang from two full length reinforcements welded to the front and rear top rails. Two 3/4" x 1-2/2" x 12 gauge channels shall be hung on the threaded rods to provide an adjustable sink cradle for supporting sinks. When sink capacity exceeds 3,750 cu. in., the sink supports shall be suspended from full-length reinforcements welded to the two end rails. Two 1" x 2" x 10 gauge full-length channels shall be hung from the four 1/4" dia. rods to provide an alternate sink cradle.

2.03 CONSTRUCTION

A. Steel Base Cabinet Construction:

1. General:

- a. The steel furniture shall be of modern design and shall be constructed in accordance with the best practices of the Scientific Laboratory Equipment Industry. First class quality casework shall be insured by the use of proper machinery, tools, dies, fixtures and skilled workmanship to meet the intended quality and quantity for the project.
- b. All cabinet bodies shall be flush front construction with intersection of vertical and horizontal case members, such as end panels, top rails, bottoms and vertical posts in same plane without overlap. Exterior corners shall be spot welded with heavy back up reinforcement at exterior corners. All face joints shall be welded and ground smooth to provide a continuous flat plane.
- c. Each cabinet shall be complete so that units can be relocated at any subsequent time without requiring field application of finished ends or other such parts.
- d. Case openings shall be rabbetted on all four sides for both hinged and sliding doors to provide a dust resistant case.
- e. All cabinets shall have a cleanable smooth interior. Bottom edges shall be formed down on sides and back to create easily cleanable corners with no burrs or sharp edges, and front edge shall be offset to create a seamless drawer and door recess rabbet for dust stop.

2. Steel Gauges:

Gauges of steel used in construction of cases shall be 18 gauge, except as follows:

- a. Corner gussets for leveling bolts and apron corner braces, 12 gauge.
- b. Case and drawer suspension channels, 14 gauge.
- c. Top and intermediate front horizontal rails, table aprons, hinge reinforcements, and reinforcement gussets, 16 gauge.
- d. Drawer assemblies, door assemblies, bottom, bottom back rail, toe space rail, and adjustable shelves, 20 gauge.

3. Base Cabinets:

- a. End uprights shall be formed into not less than a channel formation at top, bottom, back and front. The front edge shall further offset to form a strike for doors and drawers, and shall be perforated for the support of drawer

channels, intermediate rails and hinge screws. An upright filler shall be screwed in place in all cupboard units to close the back of the channel at front of the upright and to provide a smooth interior for the cupboard to facilitate cleaning. The upright filler shall be perforated with shelf adjustment holes at not more than 2" centers painted prior to assembly. The inside front of the upright shall be further reinforced with a full height 16 gauge hinge reinforcement angle.

- b. Top horizontal rail on base cabinets shall interlock within the flange at top of end panels for strength, but shall be flush as face of unit. Top rail shall have a full width rabbet for swinging doors and drawers. Reinforcements shall be provided at all front corners for additional welded strength between vertical and horizontal case members.
- c. Intermediate rails shall be provided between doors and drawers, but shall not be provided between drawers unless made necessary by locks in drawers. When required, intermediate rails shall be recessed behind doors and drawer fronts, and designed so that security panels may be added as required.
- d. Intermediate vertical uprights shall be furnished to enclose cupboards when used in a unit in combination with a half width bank of drawers. However, to allow storage of large or bulky objects, no upright of any type shall be used at the center of double door cupboard units.
- e. Cabinet bottom, and bottom rail shall be formed of one piece of steel except in corner units and shall be formed down on sides and back to create a square edge transition welded to cabinet end panels, and front edge shall be offset to create a seamless drawer and door recess rabbet for dust stop.
- f. Toe space rail shall extend up and forward to engage bottom rail to form a smooth surfaced fully enclosed toe space, 3" deep x 5" high. Whenever toe space base is omitted for units to set on building bases on separate steel bases, then the toe space rail shall extend back 4-1/2".
- g. Back construction shall consist of a top and bottom rail, channel formed for maximum strength and welded to back and top flange of end uprights, open for access to plumbing lines.
Cupboard units only shall be provided with removable back panels.

- h. Die formed gussets, with multiple ends for strength, shall be furnished in each bottom corner of base units to insure rigidity, and a 3/8"-16 leveling bolt, 3" long, and shall engage a clinch nut in each gusset. Access to the leveling bolts shall be through plug buttons in the bottom pan. Each leveling bolt and gusset shall be capable of supporting 500 lbs. Access to leveling bolts through toe space or leveling bolts requiring special tools to adjust are not acceptable.
- i. Adjustable shelves shall be formed down 3/4", returned back 7/8" and up 1/4" into a channel formation front and rear; formed down 3/4" at each end, shelves over 42" long shall be further reinforced with a channel formation welded to underside of shelf.
- j. Drawer bodies shall be made in one-piece construction including the bottom, two sides, back and front. They shall be fully coved at interior bottom on all four sides for easy cleaning. The top front of the inner drawer body shall be offset to interlock with the channel formation in drawer head providing a 3/4" thick drawer head.
- k. Drawer suspension assembly shall consist of 2 sections providing a quiet, smooth operation on ball bearing nylon rollers. All drawers shall be self-closing from a point 5" open. Cabinet channels shall maintain alignment of drawer and provide an integral drawer stop, but the drawer shall be removable without the use of tools. Drawers shall provide 13-5/8" front to back clearance when fully extended. Drawers shall rise when opened thus avoiding friction with lower drawers and/or doors. Drawer suspension system shall incorporate a double stop, lock open feature. Case suspension channels shall be Galvanized Steel, drawer suspension channels shall be Cold Rolled Steel. Drawer suspension channels on Stainless Steel Cabinets shall be zinc plated after they are formed.
- l. Steel Door assembly (two-piece) for solid pan swinging doors shall consist of an inner and outer door pan. Outer door pan shall be formed at all four sides. The corners on the pull side of the outer door pan shall be welded and ground smooth to prevent exposure of sharp edges of steel at these critical points. Inner door pan shall be flanged at all four sides with hinge reinforcements welded in place. The door assembly shall be 3/4" thick and contains sound deadening material.
- m. Steel Drawer/door assemblies shall be painted prior to assembly. Both shall be punched for attaching drawer pulls. Likewise, inner pan formation of door and drawer body shall be indented for in-field installation of locks when required.

- n. Doors shall be readily removable and hinges easily replaceable. Hinges shall be applied to the cabinet and door with screws. Welding of hinges to either cabinet or door will not be acceptable.
- o. Knee space panels, where shown or specified, shall be 20 gauge, finished same as casework cabinets, and easily removable for access to mechanical service areas.

2.04 PERFORMANCE REQUIREMENTS

A. Steel Casework Construction Performance:

1. Base cabinets shall be constructed to support at least a uniformly distributed load 200 lbs. per square foot of cabinet top area, including working surface without objectionable distortion or interference with door and drawer operation.
2. Base cabinet corner gussets with leveling bolts shall support 500 lbs. per corner, at 1-1/2" projection of the leveling bolt below the gusset.
3. Each adjustable and fixed shelf 4 ft. or shorter in length shall support an evenly distributed load of 40 lbs. per square ft. up to a maximum of 200 lbs., with nominal temporary deflection, but without permanent set.
4. Drawer construction and performance shall allow 13-5/8" clear when in an extended position and suspension system shall prevent friction contact with any other drawer or door during opening or closing. All drawers shall operate smoothly, a minimum of 10,000 cycles with an evenly distributed load of 150 lbs.
5. Swinging doors on floor-mounted casework shall support 200 lbs. suspended at a point 12" from hinged side, with door swung through an arc of 160 degrees. Weight load test shall allow only a temporary deflection, without permanent distortion or twist. Door shall operate freely after test and assume a flat plane in a closed position.

B. Steel Paint System Finish and Performance Specification:

Steel Paint System Finish:

After Cold Rolled Steel and Textured Steel component parts have been completely welded together and before finishing, they shall be given a pre-paint treatment to provide excellent adhesion of the finish system to the steel and to aid in the prevention of corrosion. Physical and chemical cleaning of the steel shall be accomplished by washing with an alkaline cleaner, followed by a spray

treatment with a complex metallic phosphate solution to provide a uniform fine grained crystalline phosphate surface that shall provide both an excellent bond for the finish and enhance the protection provided by the finish against humidity and corrosive chemicals.

After the phosphate treatment, the steel shall be dried and all steel surfaces shall be coated with a chemical and corrosion-resistant, environmentally friendly, electro statically applied powder coat finish. All components shall be individually painted, insuring that no area be vulnerable to corrosion due to lack of paint coverage. The coating shall then be cured by baking at elevated temperatures to provide maximum properties of corrosion and wear resistance.

The completed finish system in standard colors shall meet the performance test requirements specified under PERFORMANCE TEST RESULTS.

1. Performance Test Results (Chemical Spot Tests):

a. Testing Procedure:

Chemical spot tests for non-volatile chemicals shall be made by applying 5 drops of each reagent to the surface to be tested and covering with a 1-1/4" dia. watch glass, convex side down to confine the reagent. Spot tests of volatile chemicals shall be tested by placing a cotton ball saturated with reagent on the surface to be tested and covering with an inverted 2-ounce wide mouth bottle to retard evaporation. All spot tests shall be conducted in such a manner that the test surface is kept wet throughout the entire test period, and at a temperature of $77^{\circ} \pm 3^{\circ}$ F. For both methods, leave the reagents on the panel for a period of one hour. At the end of the test period, the reagents shall be flushed from the surface with water, and the surface scrubbed with a soft bristle brush under running water, rinsed and dried. Volatile solvent test areas shall be cleaned with a cotton swab soaked in the solvent used on the test area. Immediately prior to evaluation, 16 to 24 hours after the reagents are removed, the test surface shall be scrubbed with a damp paper towel and dried with paper towels.

b. Test Evaluation:

Evaluation shall be based on the following rating system.

Level 0 – No detectable change.

Level 1 – Slight change in color or gloss.

Level 2 – Slight surface etching or severe staining.

Level 3 – Pitting, cratering, swelling, or erosion of coating. Obvious and significant deterioration.

After testing, panel shall show no more than three (3) Level 3 conditions.

c. Test Reagents

Test No.	Chemical Reagent	Test Method
1.	Acetate, Amyl	Cotton ball & bottle
2.	Acetate, Ethyl	Cotton ball & bottle
3.	Acetic Acid, 98%	Watch glass
4.	Acetone	Cotton ball & bottle
5.	Acid Dichromate, 5%	Watch glass
6.	Alcohol, Butyl	Cotton ball & bottle
7.	Alcohol, Ethyl	Cotton ball & bottle
8.	Alcohol, Methyl	Cotton ball & bottle
9.	Ammonium Hydroxide, 28%	Watch glass
10.	Benzene	Cotton ball & bottle
11.	Carbon Tetrachloride	Cotton ball & bottle
12.	Chloroform	Cotton ball & bottle
13.	Chromic Acid, 60%	Watch glass
14.	Cresol	Cotton ball & bottle
15.	Dichlor Acetic Acid	Cotton ball & bottle
16.	Dimethylformamide	Cotton ball & bottle
17.	Dioxane	Cotton ball & bottle
18.	Ethyl Ether	Cotton ball & bottle
19.	Formaldehyde, 37%	Cotton ball & bottle
20.	Formic Acid, 90%	Watch glass
21.	Furfural	Cotton ball & bottle
22.	Gasoline	Cotton ball & bottle
23.	Hydrochloric Acid, 37%	Watch glass
24.	Hydrofluoric Acid, 48%	Watch glass
25.	Hydrogen Peroxide, 3%	Watch glass
26.	Iodine, Tincture of	Watch glass
27.	Methyl Ethyl Ketone	Cotton ball & bottle
28.	Methylene Chloride	Cotton ball & bottle
29.	Mono Chlorobenzene	Cotton ball & bottle
30.	Naphthalene	Cotton ball & bottle
31.	Nitric Acid, 20%	Watch glass
32.	Nitric Acid, 30%	Watch glass
33.	Nitric Acid, 70%	Watch glass
34.	Phenol, 90%	Cotton ball & bottle
35.	Phosphoric Acid, 85%	Watch glass
36.	Silver Nitrate, Saturated	Watch glass
37.	Sodium Hydroxide, 10%	Watch glass
38.	Sodium Hydroxide, 20%	Watch glass
39.	Sodium Hydroxide, 40%	Watch glass

40.	Sodium Hydroxide, Flake	Watch glass
41.	Sodium Sulfide, Saturated	Watch glass
42.	Sulfuric Acid, 33%	Watch glass
43.	Sulfuric Acid, 77%	Watch glass
44.	Sulfuric Acid, 96%	Watch glass
45.	Sulfuric Acid, 77% and Nitric Acid, 70%, equal parts	Watch glass
46.	Toluene	Cotton ball & bottle
47.	Trichloroethylene	Cotton ball & bottle
48.	Xylene	Cotton ball & bottle
49.	Zinc Chloride, Saturated	Watch glass

* Where concentrations are indicated, percentages are by weight.

2. Performance Test Results (Heat Resistance):

Hot water (190° F - 205° F) shall be allowed to trickle (with a steady stream at a rate not less than 6 ounces per minute) on the finished surface, which shall be set at an angle of 45° from horizontal, for a period of five minutes. After cooling and wiping dry, the finish shall show no visible effect from the hot water treatment.

3. Performance Test Results (Impact Resistance):

A one-pound ball (approximately 2" diameter) shall be dropped from a distance of 12 inches onto the finished surface of steel panel supported underneath by a solid surface. There shall be no evidence of cracks or checks in the finish due to impact upon close eye-ball examination.

4. Performance Test Results (Bending Test):

An 18 gauge steel strip, finished as specified, when bent 180° over a 1/2" diameter mandrel, shall show no peeling or flaking off of the finish.

5. Performance Test Results (Adhesion):

Ninety or more squares of the test sample shall remain coated after the scratch adhesion test. Two sets of eleven parallel lines 1/16" apart shall be cut with a razor blade to intersect at right angle thus forming a grid of 100 squares. The cuts shall be made just deep enough to go through the coating, but not into the substrate. They shall then be brushed lightly with a soft brush. Examine under 100 foot-candles of illumination. Note: This test is based on ASTM D2197-68, "Standard Method of Test for Adhesion of Organic Coatings".

6. Performance Test Results (Hardness):

The test sample shall have a hardness of 4-H using the pencil hardness test. Pencils, regardless of their brand are valued in this way: 8-H is the hardest, and next in order of diminishing hardness are 7-H, 6-H, 5-H, 4-H, 3-H, 2-H, F, HB, B (soft), 2-B, 3-B, 4-B, 5-B (which is the softest).

The pencils shall be sharpened on emery paper to a wide sharp edge. Pencils of increasing hardness shall be pushed across the paint film in a chisel-like manner until one is found that will cut or scratch the film. The pencil used before that one-that is, the hardest pencil that will not rupture the film-is then used to express or designate the hardness.

4. Worktop:

The worktops shall be of 18/19mm Jet black Granite of a even surface and the level Tolerance less than 1 mm. The front edge of the granite shall be chamfered at an angle of 28 deg and smoothened. The back splash for the wall bench shall be granite 18/19mm thick material for an height of 4" from the finished table top level.

5. Polypropylene Molded Sinks:

The sinks should be injection molded from Poly propylene co-polymer resin. Polypropylene to have very high resistance to attack from a wide range of chemicals and the ability to withstand temperatures up to 100 deg C. The impact resistance should be high which will minimize damage during and after installation. The sinks should be with self draining base and should be suitable for mounting on top or underside of the work benches. The sinks should be compatible to a vast number of acids, alkalis and reagents. The size of the sink is 711Lx468Dx245Hmm AND BOWL SIZE: 651Lx406Dx245Hmm. This sinks shall have bottle trap with reducing coupler of size 51x31mm and with 38mm polypropylene pipe of one foot length. All gaskets and O-rings are made from Nitrile.

6. Island Structural Modules with Shelves:

44" High & 6" Deep of Bench Mounted Island Modules with Adjustable Module shelves. Adjustable Module Shelf Assemblies consist of a pair of 11 gauge steel Shelf Brackets and a Shelf. The Shelf Bracket engages the inner slot of the double slotted Structural Module Upright and is adjustable on 1" centers. Shelves are in Painted Steel.

6. Laboratory Service fixtures:

I. General

A. All laboratory service fixtures shall have the construction and shall meet the performance requirements set forth in this specification. Fixture types shall be as indicated in the fixture schedule or fixture details included in either the project drawings or these specifications.

D. All service fixtures shall be factory assembled (including the assembly of valves and shanks to turrets, flanges and other mounting accessories), and each fixture shall be individually factory tested. Fixtures shall be tested in the manner and at the pressures set forth below.

E. Except as otherwise indicated, faucet and valve handles shall be forged brass Nylon type and shall have a color coded screw-on index disc. Color code requirements for indexing service fixtures shall follow DIN Standard 12920:1995.

II. Finish

1. General

1. Laboratory service fixtures and safety equipment shall be furnished with a powder coated finish to enhance the appearance of the fitting and to protect against corrosion. Coating material shall be a blend of epoxy and polyurethane. The hybrid blend shall ensure a finish coating with an optimum combination of chemical resistance, mar and abrasion resistance and resistance to fading under ultraviolet (UV) light.

2. Fittings inside fume hoods shall have an epoxy finish color-coded to match the fixture service index color. Coating material shall be free flowing epoxy powder with a particle size of 35-70 microns.

2. Mar and Abrasion Resistance

Finishes shall have a pencil hardness of 2H-4H with adhesion substantial enough to withstand both direct and reverse impacts of 160 inch pounds. Finish shall have excellent mar resistance and be capable of withstanding scuffing, marring and other ordinary wear.

3. Reparability

Finish shall be capable of surface repair in the event that a fixture is scratched or a surface rupture occurs. The service fixture manufacturer shall have available an air-drying aerosol coating, specially formulated to match the existing epoxy coating color, which may be applied in the field to repair coated surfaces.

III. Water Faucets and Valves

A. All faucets and valves for water service shall have a renewable unit containing all working components subject to wear, including a stainless steel replaceable seat and an integral adjustable volume control (designated by the suffix "AC"). The renewable unit shall

be interchangeable among all faucets and valves for water service. The renewable unit shall be broached for position locking in the valve body. The unit shall have a high durometer thermoplastic valve disc and a molded TFE stem packing. The unit shall be capable of being readily converted from compression to self-closing, and vice versa, without disturbing the faucet body.

B. Goosenecks shall have a separate outlet coupling with a 3/8" IPS female thread securely brazed to the gooseneck for attachment of serrated hose ends, aspirators and other outlet fittings. Rigid goosenecks shall have a 3/8" IPS male inlet thread and be threaded directly into the faucet body so as to be absolutely rigid. Swing goosenecks shall utilize a TFE packing with an externally adjustable packing nut.

C. Water faucets and valves shall be fully assembled and individually tested at 80 pounds per square inch (PSI) water pressure.

IV. Dual Purpose Eye Wash Unit:

Deck mounted eye wash units shall be capable of use as a fixed eye wash with hands-free operation or as a drench hose. Units shall have two Gentle Spray outlet heads mounted parallel and angled forward, each with a self-regulating volume control, reticulated polyurethane filter and removable spray cover. Dust covers shall be hinged swing-away style and shall be permanently attached to the spray head with a stainless steel pin. The valve shall be self-closing type with a stainless steel squeeze handle and a locking clip to hold the valve open once activated. Units shall be furnished with a deck flange with locator guide to hold the unit facing forward and an 8 ft. reinforced PVC hose.

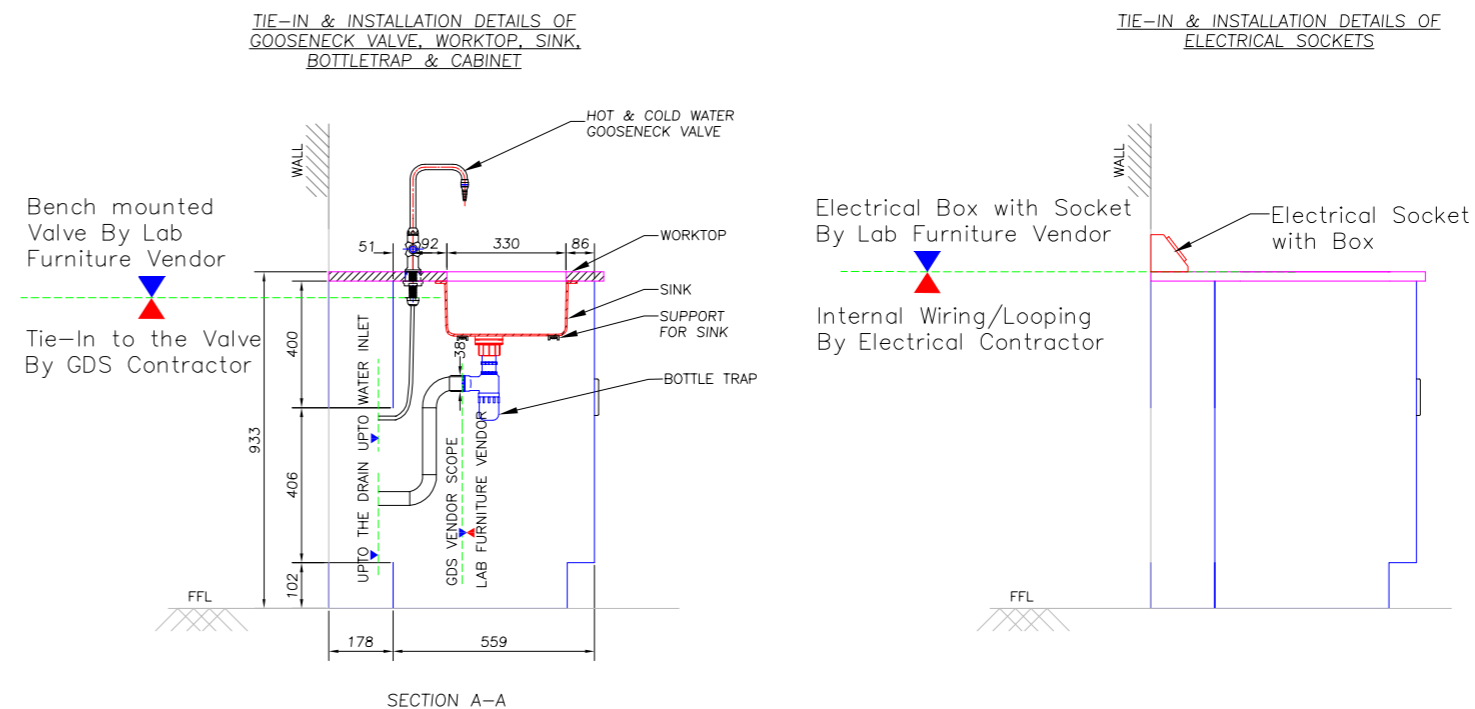
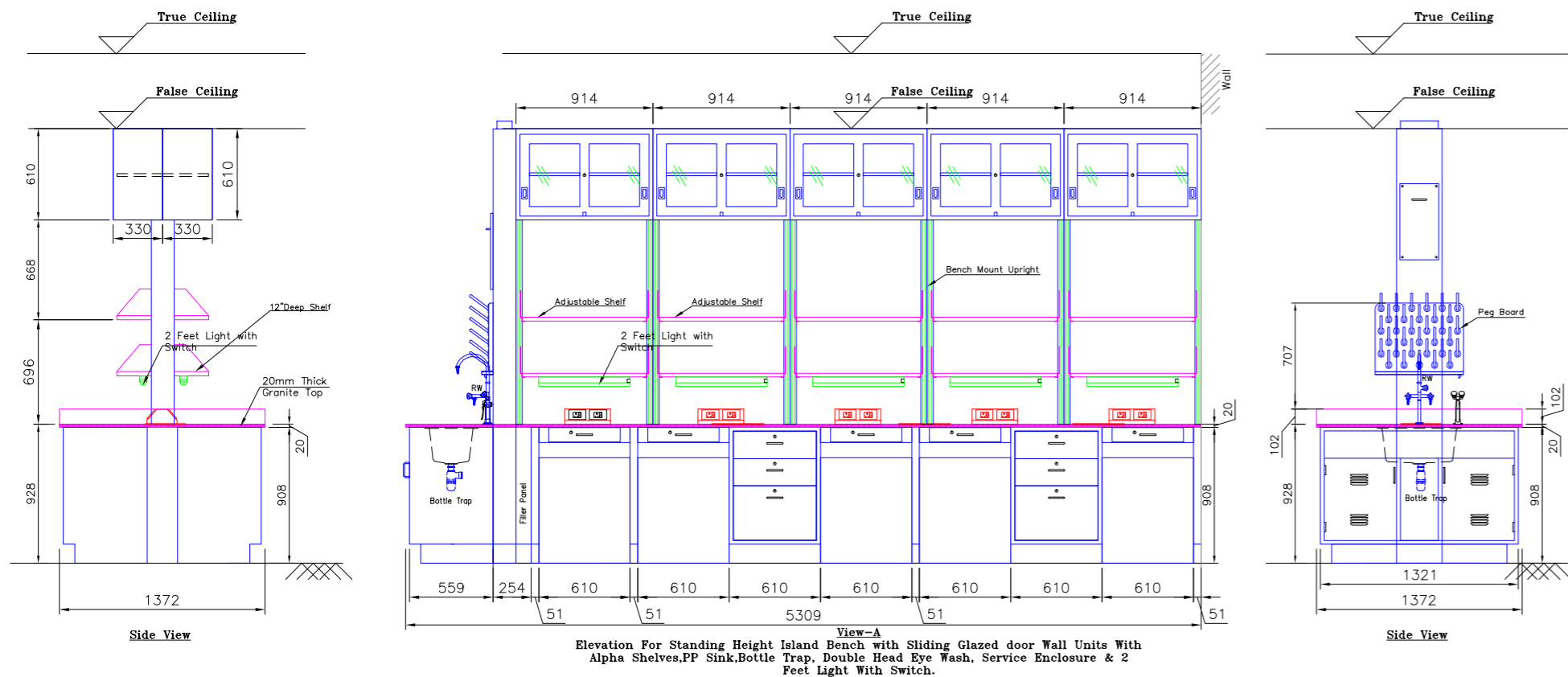
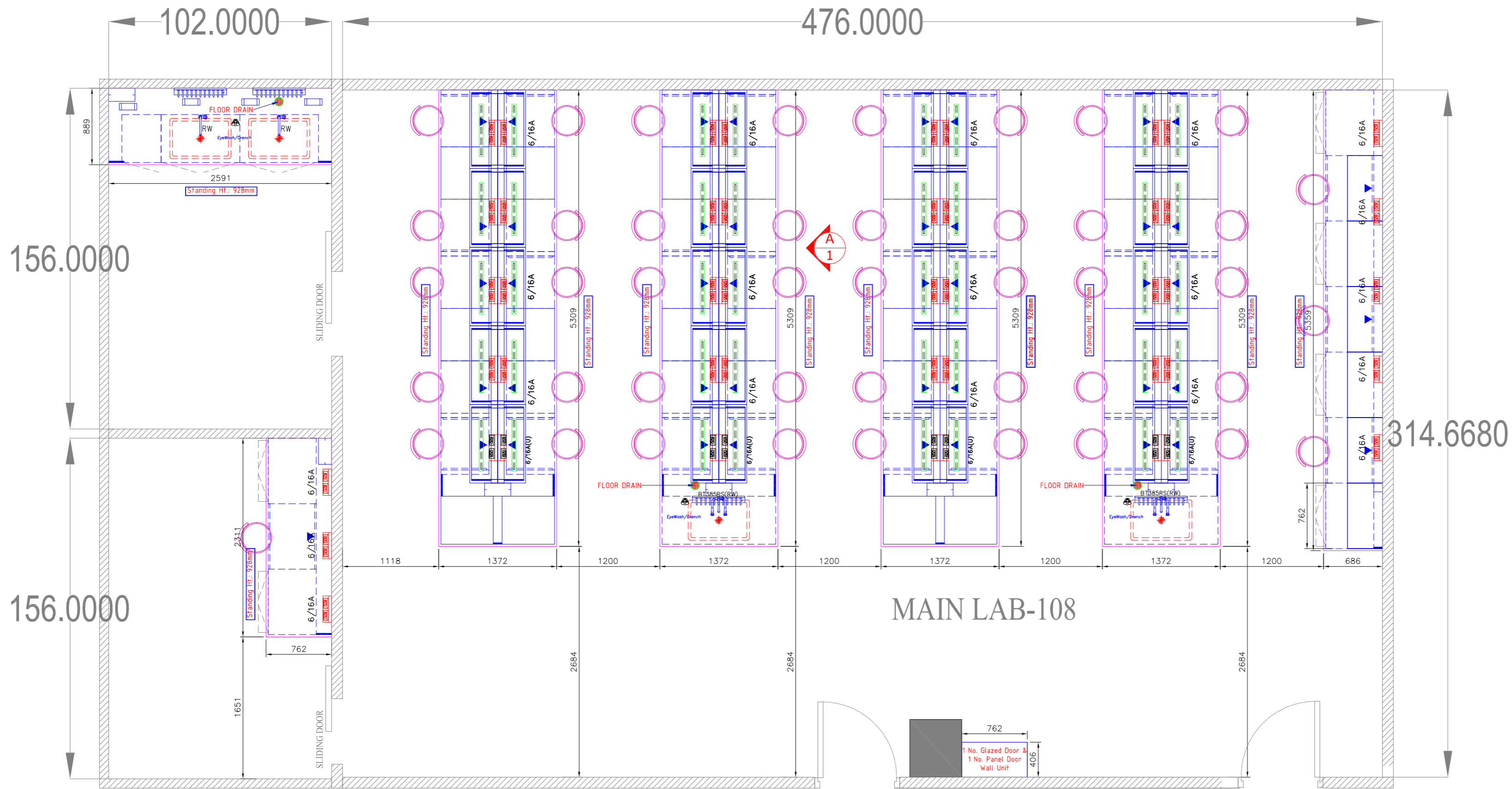
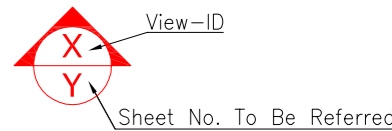
APPLICABLE CODES & STANDARDS

- a. SEFA 3 – Scientific Equipment and Furniture Association
- b. SEFA 8 - Scientific Equipment and Furniture Association
- c. NFPA 30 - National Fire Protection Association
- d. NFPA-45 - National Fire Protection Association
- e. UL - Underwriters Laboratories
- f. ASTM D552 – Bending Test

- NOTE:**
- All dimensions in mm
 - All wall to wall dimensions are to be verified at site.
 - All Floor mounted case work should be with 100mm height toe space.

TENDER

Legend For View Indicator



Project Title:

Client:



M/s. Jamia Milia Islamia
University, New Delhi.

Drawing Title:

Laboratory Furniture Layout
Ground Floor
Plan & Elevation View

Issue Date:

14.09.2017

Drawing No:

JAMIA-TEND-1001-17

Revision:

00