

Ujjain Smart City Limited



Request for Proposal

for

“Development of Shani-Navagraha Lok at Ujjain”

NIT No. USCL/419

Tender ID: 2026_UAD_492279_1 Ujjain

Date: 18/03/2026

**Ujjain Smart City Limited
Mela Office, Kothi Road,
Ujjain, Madhya Pradesh – 456010**



Ujjain Smart City Limited

Mela Office, Kothi Road,

Ujjain, Madhya Pradesh – 456010

Phone No. 0734 2525856; E-mail: ujjainsmartcity@mpurban.gov.in

Website: <https://ujjainsmartcity.com/en/about-uscl/>

NIT No. USCL/419 Tender ID: 2026_UAD_492279_1 Ujjain Date:18/03/2026

Ujjain Smart City Limited (USCL) invites online bids from eligible bidders for “*Development of Shani-Navagraha Lok at Ujjain*” as per details given below:

SNo	Particulars	Details
1	Name of Work and Site	Development of Shani-Navagraha Lok at Ujjain
2	Cost of Tender Document / Bid submission Fee	Rs 50,000/- plus GST
3	Earnest Money Deposit (EMD) / Bid Security	Rs 50,00,000/-
4	Probable Amount of Contract (PAC)	Rs. 71,76,15,844.61/- (Excluding GST)
5	Purchase of Tender Date	18/03/2026
6	Pre-bid Meeting	30/03/2026 Time 15:00 hrs. at Mela Karyalaya Office, Kothi Road, Ujjain
7	Purchase of Tender End Date	15/04/2026 up to 17:00 hrs.
8	Financial and Technical Bid Submission End Date (Online)	15/04/2026 up to 17:00 hrs.
9	Technical Bid Submission End Date (Physical Only)	Not Applicable
10	Technical Bid opening	17/04/2026 after 11:00 hrs.
11	Financial Bid opening	To be notified
12	Completion Period	Eighteen (18) Months
13	Validity period of Bids	120 Days after the Last date of Submission
14	Mode of selection of Contractor	Open Tender by e-tendering mode. Lowest Evaluated Bidder (L1) to be selected.

Note: In case of any mismatch in key dates, key dates showing on e-portal shall be final. For more details, please refer to e-procurement website: www.mptenders.gov.in. Corrigendum or amendments, if any, shall be uploaded on this website only.

UJJAIN SMART CITY LIMITED (USCL)

MADHYA PRADESH

APPENDIX 2.10

TENDER DOCUMENT

Office of the : **Ujjain Smart City Limited**

NIT Number and Date : USCL/419

Date of NIT : 18/03/2026

Agreement Number and Date :

Name of Work : **Development of Shani-Navagraha Lok at Ujjain**

Name of the Contractor :

Probable Amount of Contract : **Rs. 71,76,15,844.61/- (excluding applicable GST)**
In Fig :
In words : (Rupees Seventy-one Crores Seventy-Six Lakh Fifteen Thousand Eight Hundred Forty-Four only)

Contract Amount :
In Fig :
In words :

Stipulated Period of Completion : *18 (Eighteen) Months including intervening rainy season*

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SECTION 1
Notice Inviting e-Tenders
Ujjain Smart City Limited

Online percentage rate bids for the following works are invited from registered contractors and firms of repute fulfilling registration criteria:

S. No.	Name of Work	Probable Amount of Contract (In Rupees)	Earnest Money Deposit (EMD) (In Rupees)	Cost of Bid Document (In Rupees)	Period of completion (In Months)
1	Development of Shani-Navagraha Lok at Ujjain	Rs. 71,76,15,844.61/-	Rs 50,00,000/-	Rs. 50,000/-	18 Months (Including intervening rainy season)

1. All details relating to the Bid Document(s) can be viewed and downloaded free of cost on the website.
2. Bid Document can be purchased after making online payment of portal fees through Credit/Debit/Cash Card/ internet banking. / NEFT/RTGS/ System generated Challan
3. At the time of submission of the bid the eligible bidder shall be required to:
 - a. *Pay the cost of bid document.*
 - b. *Deposit the Earnest Money*
 - c. *Submit a check list and*
 - d. *Submit an affidavit.*

Details can be seen in the Bid Data Sheet. The above details are to be submitted online only.
4. **Eligibility for Bidders:**
 - a. At the time of submission of the Bid the bidder should have valid registration with the Government of Madhya Pradesh, PWD in appropriate class. However, such bidders who are not registered with the Government of Madhya Pradesh and are eligible for registration can also submit their bids after having applied for registration with appropriate authority.
 - b. The bidder / One of the members of Joint Venture / Sub-contractor should have valid A Class Electrical Contractor License from Madhya Pradesh Government Electrical Licensing Board (Office of Chief Electrical Inspector, MP Govt.) at the time of signing of the Contract.
 - c. The bidder would be required to have valid registration with MPPWD in appropriate class at the time of signing of the Contract.
 - d. Failure to sign the contract by the selected bidder, for whatsoever reason, shall result in forfeiture of the earnest money deposit.
5. The Bid Document can be purchased only online as per brief NIT Other key dates may be seen in bid data sheet.
6. Amendments to NIT, if any, would be published on website only, and not in newspaper.

Executive Director
Ujjain Smart City Limited

Notice Inviting e- Tenders
Ujjain Smart City Limited
Office of the Executive Director, Ujjain Smart City Limited

N.I.T.NO. USCL/419

Dated. 18/03/2026

Online percentage rate bids for the following works are invited from registered contractors and firms of repute fulfilling registration criteria:

S. No.	Name of Work	Probable Amount of Contract (In Rupees)	Earnest Money Deposit (EMD) (In Rupees)	Cost of Bid Document (In Rupees)	Period of completion (In Months)
1	Development of Shani-Navagraha Lok at Ujjain	Rs. 71,76,15,844.61/-	Rs. 50,00,000/-	Rs. 50,000/-	18 Months (Including intervening rainy season)

1. Document & other details shall be available on website <https://mptenders.gov.in>
2. The Bid Document can be purchased only online as per the schedule given in Brief NIT.
3. **Pre-Bid Meeting** is scheduled on **3:00 PM** as per the schedule given in Brief NIT **at USCL office Mela Karyalaya Ujjain.**
4. Amendments to NIT, if any, would be published on website only, and not in Newspaper.
5. The EMD shall be deposited online through portal via Electronic EMD (RTGS, NEFT).
6. Key Dates:

S.No.	Particulars	Details
1	Purchase of Tender End Date (Online)	as per the schedule given in Brief NIT
2	Pre- Bid Meeting	as per the schedule given in Brief NIT
3	Financial and Technical Bid Submission End Date (Online)	as per the schedule given in Brief NIT
4	Technical Bid opening (Online)	as per the schedule given in Brief NIT

Note: In case of any mismatch in key dates, key dates showing on e-portal shall be final. For more details, please refer to e-procurement website: www.mptenders.gov.in. Corrigendum or amendments, if any, shall be uploaded on this website only.

Executive Director
Ujjain Smart City Limited

SECTION 2 INSTRUCTIONS TO BIDDERS (ITB)

A. GENERAL

PROJECT OBJECTIVE AND KEY COMPONENTS

1. SCOPE OF BID

1.1. The detailed description of work, hereinafter 'work', is given in the **Annexure E** of this document. The main Scope of work includes **Development of Shani-Navagraha Lok at Ujjain.**

2. GENERAL QUALITY OF WORK:

2.1. The work shall have to be executed in accordance with the drawings prepared by USCL/ Consultant (except for stone artwork and artforms) and approved by the competent authority, technical specifications specified in the Bid Data Sheet/Contract Data, and shall have to meet high standards of workmanship, safety and security of workmen and works.

3. PROCEDURE FOR PARTICIPATION IN E-TENDERING

The procedure for participation in e-tendering is given in the Bid Data Sheet. as well as in Annexure F.

4. ONE BID PER BIDDER

- 4.1. The bidder can be an individual entity or a joint venture (if permitted as per Bid Data Sheet). In case the J.V. is permitted, the requirement of joint venture shall be as per the Bid Data Sheet.
- 4.2. No bidder shall be entitled to submit more than one bid whether jointly or severally. If he does so, all bids wherein the bidder has participated shall stand disqualified

5. COST OF BIDDING:

The bidder shall bear all costs associated with the preparation and submission of his bid, and no claim whatsoever for the same shall lie on the Government/ UMC/ USCL or the Authority

6. SITE VISIT AND EXAMINATION OF WORKS:

The bidder is advised to visit and inspect the site of Works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for construction of the work. All costs in this respect shall have to be borne by the bidder.

B. BID DOCUMENTS

7. CONTENT OF BID DOCUMENTS:

The Bid Document comprises of the following documents:

1. NIT with all amendments.
2. Instructions to Bidders, Bid Data Sheet with all Annexure
3. Conditions of Contract:
 - I. Part I General Conditions of contract and the Contract Data with all Annexure, and
 - II. Part II Special Condition of Contract.
4. Specifications
5. Drawings / Suggestive Graft is given in Annexure E
6. Priced bill of quantities
7. Technical and Financial bid
8. Letter of Acceptance

9. Agreement, and
10. Any other document(s), as specified

8. EXAMINE

The bidder is expected to examine carefully all instructions, conditions of contract, the Contract data, forms, terms and specifications, bill of quantities, forms and drawings in the bid document, Bidder shall be solely responsible for his failure to do so.

9. PRE-BID MEETING (WHERE APPLICABLE)

Wherever the Bid Data Sheet provides for pre-bid meeting:

- 9.1. Details of venue, date and time would be mentioned in the Bid Data Sheet. Any change in the schedule of pre-bid-meeting would be communicated on the website only, and intimation to bidders would not be given separately.
- 9.2. Any prospective bidder may raise his queries and/or seek clarifications in writing before or during the pre-bid meeting. The purpose of such meeting is to clarify issues and answer questions on any matter that may be raised at that stage. The Employer may, at his option, give such clarifications as are felt necessary.
- 9.3. Minutes of the pre-bid meeting including the gist of the questions raised and the responses given together with any response prepared after the meeting will be hosted on the website.
- 9.4. Pursuant to the pre-bid meeting, if the employer deems it necessary to amend the bid Documents, it shall be done by issuing amendment to the online NIT.

10. AMENDMENT OF BID DOCUMENTS:

- 10.1. Before the deadline for submission of bids, the Employer may amend or modify the bid document by publication of the same on the website.
- 10.2. All amendments shall form part of the Bid Document.
- 10.3. The Employer may, at its discretion, extend the last date for submission of bids by publication of the same on the website.

C. PREPARATION OF BID

11. BID PREPARATION

The bidders have to prepare their bids online, encrypt their Bid Data in the Bid Forms and submit Bid Seals (Hashes) of all the envelopes and documents related to the bid required to be uploaded as per the time schedule mentioned in the key dates of the Notice Inviting e-tenders after signing of the same by the Digital Signature of their authorized representative.as per guideline given on portal.

12. DOCUMENTS COMPRISING THE BID:

The bid submitted online by the bidder shall be in the following parts:

Part 1- This shall be known as online Envelop A and would apply for all bids. Online envelop A shall contain the following as per details given in the bid data sheet:

- i) Registration number or proof of application for registration and organizational details in the format given in the bid data sheet.
- ii) Payment of the cost of Bid Document.
- iii) PAN Number
- iv) GST Number
- v) Earnest Money: and
- vi) Duly notarised Affidavit On Non Judicial stamp of Rs. 100 as per Annexure -B.

The above details are to be submitted online only.

Part 2 – This shall be known as Online **Envelope B** and required to be submitted only in work where pre-qualification conditions and / or special eligibility conditions are stipulated in the Bid Data Sheet.

Online Envelope B shall contain a self-certified sheet duly supported by documents to demonstrate fulfilment of pre-qualification conditions.

Part 3- This shall be known as online **Envelope C** and would apply to all bids. Envelop C shall contain financial offer in the prescribed format enclosed with the Bid Data Sheet and shall only be submitted online.

13. LANGUAGE:

The bid as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Employer shall be in English or Hindi. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in English. In such case, for the purposes of interpretation of the bid, such translation shall govern.

14. TECHNICAL PROPOSAL:

- 14.1. Only, in case of bids with pre-qualification conditions defined in the Bid Data Sheet, the Technical Proposal shall comprise of formats and requirements given in the Bid Data Sheet.
- 14.2. All the documents/ information enclosed with the Technical Proposal should be self-attested and certified by the bidder. The Bidder shall be liable for forfeiture of his earnest money deposit, if any document/information is found false/fake/untrue before acceptance of bid. If it is found after acceptance of the bid, the bid sanctioning authority may at his discretion forfeit his performance security / guarantee, security deposit, enlistment deposit and take any other suitable action.

15. FINANCIAL BID:

- 15.1. The bidder shall have to quote rates in format referred in Bid Data Sheet, in overall percentage, and not item wise, if the bid is in absolute amount, overall percentage would be arrived at in relation to the probable amount of contract given in NIT. The overall percentage rate would apply for all items of work.
- 15.2. Percentage shall be quoted in figures as well as in words. If any difference in figures and words is found, lower of the two shall be taken as valid and correct.
- 15.3. The bidder shall have to quote rates inclusive of all duties, taxes, royalties and other levies except Goods & Services Tax (GST). The amount of applicable GST will be paid separately to the contractor with each bill at the time of payment; and the Employer shall not be liable for any duties, taxes (Except GST) royalties and levies.
- 15.4. The material along with the units and rates, which shall be issued, if any, by the department to the contractor, is mentioned in the Bid Data Sheet.

16. PERIOD OF VALIDITY OF BIDS:

The bids shall remain valid for a period specified in the Bid Data Sheet after the date of “close for bidding” as prescribed by the Employer. The validity of the bid can be extended by mutual consent in writing.

17. EARNEST MONEY DEPOSIT (EMD)

- 17.1. The Bidder shall furnish, as part of the Bid, Earnest Money Deposit (EMD), in the amount specified in the Bid Data Sheet.
- 17.2. EMD/ Bid Security shall be submitted only online using options available in the tender portal within the specified time limit. Bidders are advised to process it well in advance. No claim shall be entertained due to delay in online transactions via payment gateway/banking portal."
- 17.3. Bid not accompanied by EMD shall be liable for rejection as non-responsive.
- 17.4. EMD of all bidders except L1 will be returned within ten working days of the decision on the bid.
- 17.5. EMD of the successful Bidder will be discharged when the Bidder has signed the Agreement after furnishing the required Performance security.

- 17.6. Failure to sign the contract by the selected bidder, within the specified period, for whatsoever reason, shall result in forfeiture of the earnest money.

D. SUBMISSION OF BID

18. BID SUBMISSION

The Bidder is required to submit digitally signed Bid ie. Envelop A, B & C Online only. No physical submission of the Bid will be accepted except in exceptional case under clause 19.7."

E. OPENING AND EVALUATION OF BID

19. PROCEDURE:

- 19.1. Envelope "A" shall be opened first online at the time and date notified and its contents shall be checked. In cases where Envelope "A" does not contain all requisite documents, such bid shall be treated as non-responsive, and Envelope B and / or C of such bid shall not be opened.
- 19.2. Wherever Envelope 'B' (Technical Bid) is required to be submitted, the same shall be opened online at the time and date notified. The bidder shall have freedom to witness opening of the Envelope 'B' Envelope 'C' (financial bid) of bidders who are not qualified in Technical Bid (Envelop 'B') shall not be opened.
- 19.3. Envelope 'C' (Financial Bid) shall be opened online at the time and date notified. The bidder shall have freedom to witness opening of the Envelope 'C'
- 19.4. After opening Envelope 'C' all responsive bids shall be compared to determine the lowest evaluated bid.
- 19.5. The Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all the bids at any time prior to contract award, without incurring any liability. In all such cases reasons shall be recorded.
- 19.6. The employer reserves the right of accepting the bid for the whole work or for a distinct part of it.
- 19.7. "In exceptional case, if physical submission of certain documents is found essential, then expressed prior permission must be obtained in writing by the tender issuing authority from an authority, as authorized by the State Government. In such a case, such documents are required are to be submitted physically at the place and date specified in the Bid Data Sheet. In case of any mismatch in the documents submitted in the physical form and that uploaded or ie online, or if the contractor fails to submit the document physically, the bid shall be liable for rejection as non-responsive.

20. CONFIDENTIALITY:

- 20.1. Information relating to examination, evaluation, comparison and recommendation of contract award shall not be disclosed to bidders or any other person not officially concerned with such process until final decision on the bid.
- 20.2. Any Attempt by a bidder to influence the employer in the evaluation of the bids or contract award decisions may result in the rejection of his bid.

F. AWARD OF CONTRACT

21. AWARD OF CONTRACT:

The Employer shall notify the successful bidder by issuing a 'Letter of Acceptance' (LOA) that his bid has been accepted. The original copy of Affidavit will have to be submitted by the successful bidder at the time of signing of contract.

22. PERFORMANCE SECURITY

- 22.1. Prior to signing of the contract, the bidder to whom LOA has been issued shall have to furnish performance security of the amount in the form and for the duration, etc. as specified in the Bid Data Sheet.

22.2. Additional performance security, if applicable, is mentioned in the Bid data sheet and shall be in the form and for the duration, etc. similar to Performance Security.

23. SIGNING OF CONTRACT AGREEMENT:

23.1. The successful bidder shall have to furnish Performance Security and Additional Performance Security, if any, and sign the contract agreement within 15 days of issue of LOA

23.2. The signing of contract agreement shall be reckoned as intimation to commencement of work. No separate work order shall be issued by the employer to the contractor for commencement of work.

23.3. In the event of failure of the successful bidder to submit Performance Security and Additional Performance Security, if any or sign the Contract Agreement, his EMD shall stand forfeited without prejudice to the right of the employer for taking any other action against the bidder.

24. CORRUPT PRACTICES:

The Employer requires that bidders observe the highest standard of ethics during the procurement and execution of contracts. In pursuance of this policy, the employer.

- i. May reject the bid 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; and
- ii. May debar the bidder declaring ineligible, either indefinitely or for a stated period of time, to participate in bids, if it at any time determines that the bidder has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing, a contract.

For the purposes of this provision, the terms set forth above are defined as follows:

- a. '**Corrupt Practice**' means the offering, giving, receiving or soliciting directly or indirectly, anything of value to influence improperly the actions of another party.
- b. '**Fraudulent Practice**' means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a fanatical or other benefit or to avoid an obligation:
- c. '**Coercive Practice**' means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party,
- d. 'Collusive practice' means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party.

(END OF ITB)

BID DATA SHEET

GENERAL		
SR.NO.	PARTICULARS	DATA
1	Office inviting tender	<i>UJJAIN SMART CITY LIMITED</i>
2	NIT No.	<i>N.I.T.NO. USCL / 419</i>
3	Date of NIT	<i>18/03/2026</i>
4	Bid document download available from date & time	<i>18 /03/2026</i>
5	Website link	https://mptenders.gov.in
SECTION 1 – NIT		
CLAUSE REFERENCE	PARTICULARS	DATA
2	Portal fees	<i>As notified in e-tendering website</i>
3	Cost of bid document	<i>Rs 50,000/- + portal processing fees etc.</i>
	Cost of bid document payable at	<i>As notified in e-tendering website</i>
	Cost of bid document in favour of	<i>As notified in e-tendering website</i> (Bidders shall be directed to the payment gateway through the portal)
4	Affidavit format	<i>As per ANNEXURE B</i>
5	Pre-Qualifications required	<i>Yes</i> -
	If yes, details	<i>As per ANNEXURE C</i>
6	Special Eligibility	<i>Yes</i>
	If Yes, details	<i>As per ANNEXURE D</i>
7	Key dates	<i>As per ANNEXURE A</i>
SECTION 2 – IT B		
CLAUSE REFERENCE	PARTICULARS	DATA
1.	Name of ‘work’	<i>Development of Shani-Navagraha Lok at Ujjain</i>
2.	Specifications	<i>As per ANNEXURE –E</i>
3.	Procedure for participation in e-tendering	<i>As per ANNEXURE –F</i>
4.	Whether joint venture is allowed	<i>Yes</i> <i>Maximum Two (2) Nos including Lead Bidder</i>
	If yes, requirement for joint venture	<i>As per ANNEXURE – G</i>
	Pre bid meeting to be held	<i>Yes</i>
	If Yes, Date, Time & Place	<i>As per NIT</i> <i>Place: Mela Office, Kothi Road, Ujjain, Madhya Pradesh – 456010</i>

CLAUSE REFERENCE	PARTICULARS	DATA
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12	Envelop A containing: i. Registration number or proof of application for registration and organizational details as per Annexure H ii. Cost of Bid Document iii. EMD iv. An affidavit duly notarized as per Annexure – B	Online submission Only
	Envelope-B Technical Proposal	<i>ANNEXURE – I and ANNEXURE –I (Format I-1 to I-5)</i>
	Envelope-C Financial Bid	<i>Annexure – J (SHOULD BE SUBMITTED ONLINE)</i>
	Materials to be issued by the department	<i>ANNEXURE – K</i>
	Period of Validity of Bid	<i>120 Days</i>
17	Earnest Money Deposit	Rs. 50,00,000/-
	Forms of Earnest Money deposit	<i>e-EMD (RTGS / NEFT)</i>
	EMD valid for a period of	<i>120 Days beyond the final validity period of bids from the last date of submission of bids.</i>
19	Opening and evaluation of bid: Procedure	<i>Refer Annexure -00 at the end of Bid Data Sheet</i>
21	Letter of Acceptance (LoA)	<i>ANNEXURE L</i>
22	Amount of Performance Security	<i>Performance Security at the rate of three (3) percent of the contract value shall be required In case of any discrepancy in provisions on performance security, the latest guidelines issued by Finance Department/PWD/UADD of Govt. MP shall be applicable.</i>
	Additional Performance Security, if any	<i>In case the quote of the Successful Bidder is more than 10% below the PAC amount, then additional performance security shall be required to be submitted by the successful bidder. the latest circular issued by PWD of MP Govt. shall be applicable. (MPPWD Order No. F-53/02/2011/YO/19/525, DATED- 14/02/2025) (as attached) The Additional Performance Security shall not be treated as part of Performance Security and shall be released on completion of project. In case of any discrepancy in provisions on performance security or additional performance security, the latest guidelines issued by Finance Department/PWD/UADD of Govt. MP shall be applicable.</i>

Performance security in the format	<i>ANNEXURE M</i>
Performance security in favour of	<i>Executive Director, USCL</i>
Performance security valid up to	<i>Valid till issue of Physical Completion Certificate plus Defect Liability Period plus, three months</i>
Additional Performance security valid up to	<i>Valid till issue of Physical Completion Certificate plus, three months</i>

Annexure – A
(See clause 1, 7 of Section 1-NIT)

KEY DATES

Please Refer Brief NIT

Annexure – B
(See clause 3 of Section 1-NIT)

|| AFFIDAVIT ||
(To be contained in Envelope A)
(On Non Judicial stamp of Rs. 100)¹

I/We _____ who is / are _____ (status in the firm / company) and competent for submission of the affidavit on behalf of M/S _____ (contractor) do solemnly affirm an oath and state that :

I/We am / are fully satisfied for the correctness of the certificates/ records submitted in support of the following information in bid documents which are being submitted in response to notice inviting e-tender No. _____ for _____ (name of work) dated _____ issued by the _____ (name of the Department).

I/We am/ are fully responsible for the correctness of following self- certified information / digitally signed documents and certificates.

1. That the self – certified information given in the bid document is fully true and authentic.
2. That :
 - ~~1. Term deposit receipt deposited as earnest money, demand draft for cost of bid document and other relevant documents provided by the Bank are authentic.²~~
 1. Information regarding financial qualification and annual turnover submitted online is correct.
 2. Information regarding various technical qualifications submitted online is correct.
3. No. close relative of the undersigned and our firm/company is working in the department.

Or

Following close relatives are working in the department:

Name _____ - Post _____ present Posting _____

Signature with seal of the Deponent (bidder)

I/We, _____ above deponent do hereby certify that the facts mentioned in above paras 1 to 4 are correct to the best of my knowledge and belief. . In the event of any information is to be found to be incorrect / untrue or found violated, then without giving any prior notice, our bid shall be liable for rejection or termination of contract, with prejudice to any other rights of Remedy including the forfeiture of the bid security / Performance security.

Verified today _____ (dated) at _____ (place).

Signature with seal of the Deponent (bidder)

The original copy of **Affidavit** will have to be submitted by the successful **bidder** at the time of **signing** of contract

¹ Deleted Order issued by Chief Engineer MP PWD vide order No क्रमांक401/सा/विविध/002/2014 /2012भोपाल,दिनांक 08-01-2015

² Deleted as EMD is paid online.

PRE- QUALIFICATIONS CRITERIA

The bidder should have:

A. Financial & Physical

i. Experience of having successfully executed as prime contractor:

- a) three similar works each costing not less than the amount equal to 20% of the probable amount of contract during the last 5 years; or
- b) two similar works each costing not less than the amount equal to 30% of the probable amount of contract during the last 5 Years; or
- c) one similar work of aggregate cost not less than the amount equal to 50% of the probable amount of contract during the last 5 years.

(For Joint Ventures)

For the meeting the minimum qualification criteria of experience of similar nature work,

- a) Out of 3 (three) similar works of value more than 20% of PAC, at least 2 (two) works must be done by lead partner and 1 (one) work to be done by other partner.

Or

- b) Out of 2 (two) similar works of value more than 30% of PAC, at least 1(one) work must be done by lead partner and 1 (one) work to be done by other partner.

Or

- c) In case of one similar work of value more than 50% of PAC the lead partner must satisfy the criteria. However, the other partner must satisfy the criteria of least one work of 20% of PAC.

ii. **Average Annual Turnover** on the similar works/services **shall not be less than 50%** of the probable amount of contract during **the last 3 financial years ending on 31.03.2025.**

~~iii. Executed similar items of work in any one financial year during the last 3 financial years, which should not be less than the minimum, physical requirement, if any, fixed for the work.~~

iv. **Bid Capacity** — Bidder shall be allotted work up to his available Bid Capacity, which shall be worked out as given in **Format 1-2 of Annexure I. Bid Capacity shall be equal to or higher than the bid amount.**

Note:

1. **The similar work shall mean**

Temple / Heritage Building / Public Campus / Institutional Campus Development, including RCC + Architectural Stone + MEP and Landscaping works.

Projects may be executed for Government / PSU / Autonomous Bodies / Cultural institutions.

Annexure —D
(See clause 6 of Section 1-NIT)

SPECIAL ELIGIBILITY CRITERIA

The Bidder or its JV Partner shall demonstrate proven capability for at least one (1) completed project involving Architecture Stonework of 10% of PAC.

This experience may be part of a project or a standalone architecture stonework contract.

SCOPE OF WORKS & SPECIFICATIONS

Development of Shani-Navagraha Lok at Ujjain

[A] SCOPE OF WORK

1. Project Background

Ujjain, one of the seven sacred cities (*Sapta Puri*) of India, is an important pilgrimage destination and hosts millions of devotees every year due to the presence of revered temples such as the Navgrah Shani Mandir located on the banks of the holy Kshipra River. The temple holds significant religious importance for devotees who visit to perform rituals related to planetary worship (*Navgrah Shanti*) and particularly offerings to Lord Shani. With increasing pilgrim footfall and the growing prominence of Ujjain as a major spiritual tourism destination, the existing infrastructure within and around the temple campus has become inadequate to safely and efficiently manage large numbers of visitors.

The Government of Madhya Pradesh, through Ujjain Smart City Limited (USCL), proposes the comprehensive development and redevelopment of the Navgrah Shani Mandir Campus and its surrounding areas to improve pilgrim facilities, enhance the spiritual ambience, and ensure safe and organized movement of devotees. The proposed development includes construction of temple-related structures, queue management areas, public amenities, site development works, landscaping, utilities, electrical and safety systems, and architectural stone works in harmony with the religious character of the site.

The project assumes particular importance in view of the forthcoming **Simhastha 2028**, one of the largest religious congregations in the world held in Ujjain once every twelve years. During Simhastha, the city witnesses an extraordinary influx of pilgrims, saints, and visitors from across India and abroad. The upgraded temple campus and supporting infrastructure will play a critical role in accommodating the increased pilgrim flow, improving safety and crowd management, and providing essential facilities to devotees during the Simhastha festival as well as in the long term.

Accordingly, this project aims to create a well-planned, resilient, and aesthetically appropriate temple campus that enhances the religious experience for devotees while ensuring durability, safety, and efficient operation, particularly during high footfall events such as Simhastha 2028.

2. Scope Overview

The project is a composite EPC-type campus redevelopment involving:

- Major RCC & Stone Temple Construction
- Plaza & Landscape Development
- River-edge protection & retaining structures
- Public amenities & support buildings
- Complete MEPF (Electrical, HVAC, Fire, CCTV, PA etc.)
- STP/ETP & underground utilities

- Coordination with USCL (including Heritage, Archaeological and Cultural Committee), Temple Management Committee, and other Stakeholders.

3. DETAILED SCOPE OF WORK for Development of Shani-Navgrah Lok, Ujjain

3.1 General Scope

The Contractor shall execute the complete development works of Shani-Navgrah Lok including:

- Dismantling & site clearance
- Civil & Structural works
- Stone & Architectural works
- Site development & landscaping
- Electrical, Fire, CCTV, PA & allied systems
- STP/ETP & Water supply works
- Testing, commissioning & handing over

The work shall be executed strictly as per:

- Approved Master Plan
- Detailed Estimates & BOQs
- MPPWD (Latest)/ MPUADD SOR (latest applicable)
- Approved architectural, structural drawings & GFC drawings
- Relevant IS Codes

PART A – DESIGN AND DETAILING OF STONE ARTWORK AND ARCHITECTURAL ART FORMS

Based on the concept drawings, architectural intent, and visual references issued by Ujjain Smart City Limited (USCL), the **detailed design, shop drawings, working drawings, structural anchoring details, and execution methodology for all stone artwork, carvings, relief works, ornamental stone elements, sculptures, motifs, mouldings, and other architectural art forms** included in the project shall be **entirely within the scope of the Contractor**.

The Contractor shall engage qualified **stone-artwork experts, sculptors, designers, and technical specialists**, as required, for preparation of the detailed designs, profiles, carving details, templates, mock-ups, and execution methodology for all such works in accordance with the approved architectural concept.

All such drawings, samples, mock-ups, and methodologies shall be **submitted to USCL / Project Development and Management Consultant (PDMC) for review and recommendations**, and shall also be placed before the **designated Review Committee constituted by the Client** for guidance and approval wherever required. The Contractor shall incorporate all observations, revisions, and directions issued by USCL, PDMC, or the designated Committee during the course of review.

The Contractor shall ensure that the final executed stone artwork and architectural features fully comply with the approved concept drawings, aesthetic requirements, technical specifications, and instructions issued during the review process. Preparation of mock-ups, full-scale samples, trial carvings, templates, and other demonstration panels required for review and approval shall also be carried out by the Contractor.

All costs associated with preparation of designs, shop drawings, detailing, mock-ups, samples, expert consultations, revisions, approvals, and execution methodology for the above works shall be deemed to be included in the Contractor's quoted tender premium. No additional payment shall be admissible on this account.

PART B – PRE-CONSTRUCTION & SITE PREPARATION

1. Dismantling Works

As per estimate summary

- Dismantling of existing RCC, brickwork, stonework
- Removal of paver blocks, bituminous and CC road
- Removal of existing sheds/shops/ramps and other structures
- Disposal of debris to approved dumping site
- Protection of existing operational temple structure

Contractor Responsibility:

- Barricading & segregation
- Traffic & devotee movement management
- Safe dismantling near active temple

PART C – MAIN TEMPLE DEVELOPMENT

1. Civil & Structural Works

- Deep excavation (including subsoil/under-water conditions)
- PCC & Raft foundations, Pile foundations (wherever required)
- RCC pedestals, columns, beams, slabs
- Retaining walls & RCC protection walls
- Waterproofing (horizontal & vertical)
- Plinth filling & compaction
- Backfilling & disposal

Includes:

- RMC supply (M20 & above)
- TMT reinforcement
- Formwork & staging
- Structural curing & testing

Contractor shall:

- Submit mix design
- Provide cube testing
- Conduct third-party quality checks

2. Stonework & Architectural Works

Includes:

- Temple superstructure stone monolithic
- Carved stone columns & beams
- Shikhara stone works
- Ornamental stone elements
- Kota / granite flooring
- Temple façade detailing

Contractor must:

- Source approved stone quarries
- Provide mock-up panels
- Ensure carving quality & detailing approval

PART D – BUILDING BLOCKS

As per building summary

3. Temple Plaza Development

- RCC paving
- Paver blocks
- Granite/stone/cobblestone finishes
- Drainage slopes
- Sitting platforms

4. Ornamental Shed

- Structural steel/RCC structure
- Roofing system
- Architectural finishing

5. Queue Hall

- Structural work
- Flooring & railing systems
- Devotee circulation planning

6. Multipurpose Hall

- RCC framed structure
- Finishing works
- Electrical & HVAC provision

7. Admin Building

- Complete civil works
- Interior finishing

- Service connections

8. Florist Shops

- Shop modules
- Electrical provisions
- Drainage & water points

9. Public Amenities

- Shoe stands (2 locations)
- Drinking water facility with RO plant
- Toilet block with plumbing & septic/connection

PART E – SITE DEVELOPMENT WORKS

10. Parking Development

- Earthwork & filling
- Hard muram compaction
- PCC base
- M35 Paver blocks
- Granite planter edging
- Surface drainage

11. Landscaping Works

- Soil trenching
- Water body excavation
- Plantation works
- Grass & green areas
- Irrigation lines

12. Boundary Wall

- Civil wall construction
- Stone facing work
- Coping & finishing

13. Welcome Entry Gates (2 Nos.)

- RCC structural works
- Stone cladding and monolithic work
- Architectural elements

14. RCC Road

- Sub-base preparation
- RCC pavement

- Expansion joints
- Dowels & tie rods

15. RCC Retaining Walls

- Nallah side retaining wall
- Road side retaining wall
- Backfilling & drainage

16. Underground Water Tank

- Excavation & raft
- RCC tank construction
- Waterproofing
- Pump room

17. Drainage & Water Supply

- Underground pipelines
- Manholes
- Inspection chambers
- Surface drains

18. ETP/STP Plant

- Oil filtration plant for temple oil collection
- Civil tank construction
- Mechanical & electrical installation
- Commissioning & 3-month trial run

PART F – ELECTRICAL & ALLIED WORKS

19. Internal Electrical Work

- Point wiring
- Circuit wiring
- DB panels
- MCCB/MCB installation
- Earthing system

20. External Electrical Work

- Cabling
- Feeder pillars
- Street lighting
- Outdoor poles

21. Façade Lighting

- Temple architectural lighting
- LED programmable systems
- DMX control

22. HVAC

- AC systems for halls and temple
- Ducting & insulation

23. CCTV System

- IP based cameras
- NVR & control room
- Integration with security

24. Access Control System

- Entry management with smart features

25. Fire Fighting System

- Hydrant system
- Pump room
- Fire extinguishers

26. Fire Alarm System

- Addressable panels
- Smoke detectors

27. PA System

- Public announcement system
- Amplifiers & control panels

PART G – TESTING, COMMISSIONING & HANDING OVER

Contractor shall:

- Conduct all electrical safety tests
- Water tightness testing
- Structural cube testing
- Third-party inspection
- Provide As-built drawings
- O&M manuals
- 36 months Defect Liability Period

PART H – SPECIAL CONDITIONS

1. Temple Operational Continuity

- Contractor must ensure uninterrupted darshan

- Phased construction plan mandatory
- 2. River Proximity Safety**
- Flood protection measures
 - Temporary dewatering system
- 3. Quality Control**
- On-site lab
 - Material approval before procurement
 - Stone sample approval mandatory
- 4. Safety & Crowd Management**
- Barricading
 - Dust control
 - Traffic diversion plan
 - and site/architectural works

the project involves **extensive Basalt and Sandstone usage** for:

- Temple superstructure & shikhara
- Stone cladding & façade
- Carved architectural members
- Flooring & steps
- Boundary wall stone facing
- Retaining wall coping & ornamental elements

4. DETAILED TECHNICAL SPECIFICATIONS

Detailed Technical Specification along with **Applicable IS Codes & Standards** specifically for **Basalt & Sandstone works**.

PART A: TECHNICAL SPECIFICATIONS – BASALT & SANDSTONE WORKS

1. MATERIAL SPECIFICATION

1.1 Basalt Stone (Black / Dark Grey Basalt)

1.1.1 Source

- From approved quarry
- Single quarry source for uniformity
- Quarry license & test certificates mandatory

1.1.2 Physical & Mechanical Requirements

Property	Requirement
Compressive Strength	≥ 100 MPa
Water Absorption	$\leq 1.0\%$
Specific Gravity	≥ 2.80

Abrasion Resistance	As per IS
Impact Value	As per IS

Basalt shall be:

- Dense
- Fine-grained
- Free from cracks, veins, clay pockets
- Free from weathered surfaces

1.1.3 Permissible Tolerances

- Thickness tolerance: ± 2 mm
- Length/Width tolerance: ± 3 mm
- Squareness deviation: ≤ 1 mm per 300 mm

1.2 Sandstone (Red / Buff / Pink as approved)

1.2.1 Source

- Approved Rajasthan/MP quarry
- Uniform colour & texture

1.2.2 Physical Requirements

Property	Requirement
Compressive Strength	≥ 55 MPa
Water Absorption	$\leq 6\%$
Specific Gravity	≥ 2.2
Efflorescence	Nil

Sandstone shall be:

- Fine to medium grained
- Homogeneous colour
- Free from laminations and cracks

PART B: WORKMANSHIP SPECIFICATIONS

2. STONE MASONRY WORK (Temple Structural Stone)

2.1 Type

- Ashlar masonry
- Rock-faced or machine-finished as per drawings
- Hand-carved elements where specified

2.2 Mortar

- Cement Mortar 1:4 (for non-heritage)
- Lime mortar (if specified architecturally)
- Admixtures only if approved

2.3 Joints

- Joint thickness: 6–10 mm
- Filled flush or recessed as per design
- Pointing in matching colour mortar

2.4 Anchorage

- Stainless steel (SS 304/316) dowels
- Minimum 10–12 mm dia
- Epoxy anchoring (Hilti/Fischer approved make)
- Minimum embedment depth: 75 mm

3. MONOLITHIC BASALT STONE CONSTRUCTION OF MAIN TEMPLE

The **Main Temple structure shall be constructed predominantly using monolithic Basalt stone elements**, in accordance with the approved architectural concept, drawings, and detailed specifications. The construction shall involve the use of **large, solid basalt stone blocks for structural and architectural components**, including but not limited to plinth elements, columns, beams, wall members, cornices, mouldings, and other temple architectural features, as indicated in the drawings. The Contractor shall be responsible for quarry sourcing, selection of suitable basalt blocks, cutting, dressing, carving, transport, handling, and precise placement of these monolithic stone elements using appropriate lifting equipment and installation techniques.

The Contractor shall ensure that the basalt stone used for the monolithic construction is of uniform quality, free from cracks, laminations, weathered surfaces, or other defects, and conforms to the applicable specifications and test requirements. The detailed methodology for quarrying, carving, lifting, erection, joining, anchoring, and finishing of monolithic basalt elements shall be prepared by the Contractor and submitted for review to **USCL / PDMC and the designated review committee** prior to execution. All associated activities including testing of stone, preparation of samples and mock-ups, specialized craftsmanship, and installation techniques shall be **deemed to be included in the Contractor's scope and quoted tender premium, and no separate payment shall be admissible** for the same.

4. STONE CLADDING WORK

4.1 Thickness

- Basalt cladding: 40–75 mm
- Sandstone cladding: 40–75 mm

4.2 Fixing Method

Dry mechanical fixing preferred:

- SS cramps
- SS dowels
- GI/SS framework
- Back support angles
- Minimum two anchors per slab

For wet fixing:

- 1:3 mortar bed
- Back buttering
- Polymer modified mortar

4.3 Back Surface Treatment

- Roughened surface
- Key grooves for bonding

4.4 Expansion Joints

- Every 6 m horizontally
- At structural joints
- Filled with PU sealant

5. CARVED STONE WORK

- Hand-carved elements
- CNC pre-shaping allowed
- Final detailing manual
- Mock-up approval mandatory
- Full-size sample carving approval

Tolerance:

- Profile variation ± 3 mm
- Ornament symmetry deviation ≤ 2 mm

6. STONE FLOORING & STEPS

5.1 Base Preparation

- PCC base M10/M15
- 20 mm thick CM 1:4 bed
- Fully compacted base

5.2 Laying

- Joints ≤ 3 mm for polished stone
- Joints ≤ 6 mm for rough stone
- Slurry bonding mandatory

5.3 Steps

- Nosing rounded or chamfered
- Anti-skid finish mandatory
- Rise & tread tolerance ± 3 mm

7. STONE COPING & PARAPET

- Slope 1:30 outward

- Drip groove 10x10 mm
- SS cramps for long members

8. RETAINING WALL STONE FACING

- Minimum 75 mm thick stone
- Mechanical anchorage required
- Weep holes not blocked

PART C: QUALITY CONTROL & TESTING

9. Mandatory Tests (Pre-Approval)

For each quarry source:

- Compressive strength test
- Water absorption test
- Density test
- Petrographic analysis (if required)

Minimum:

- 3 samples per lot (500 sqm)
- Third-party lab testing mandatory

PART D: APPLICABLE IS CODES & STANDARDS

1. General Stone & Masonry

- **IS 1121 (Part 1–3)** – Methods of test for determination of strength properties of natural building stones
- **IS 1122** – Method of test for determination of true specific gravity
- **IS 1123** – Water absorption of natural building stone
- **IS 1124** – Determination of durability
- **IS 1125** – Determination of weathering
- **IS 1126** – Resistance to abrasion
- **IS 1597 (Part 1 & 2)** – Construction of stone masonry
- **IS 2212** – Code of practice for brickwork & stone masonry
- **IS 3495** – Tests on burnt clay building bricks (for reference in masonry compatibility)

2. Sandstone Specific

- **IS 3622** – Sandstone (Slabs & Tiles) Specification
- **IS 3316** – Structural stone masonry

3. Basalt / Hard Stone Related

Applicable:

- **IS 1121 series**
- **IS 1597**

- IS 3316

4. Cladding & Fixing

- IS 16231 (Part 3) – Structural use of stone masonry
- IS 800 – General construction in steel (for clamps & supports)
- IS 2062 – Structural steel
- IS 456 – Plain & reinforced concrete
- IS 383 – Aggregates
- IS 1542 – Sand for plaster
- IS 2645 – Waterproofing compounds

5. Anchors & Fasteners

- IS 1367 – Technical supply conditions for threaded fasteners
- ASTM A240 (for SS 304/316) – Recommended reference
- ETAG 001 (for anchor systems – recommended)

PART E: MOCK-UP & APPROVAL REQUIREMENTS

Contractor shall:

- Provide 1:1 mock-up panel (minimum 2m x 2m)
- Provide carved sample block
- Provide joint finish sample
- Obtain written approval before bulk execution

PART F: MEASUREMENT & PAYMENT

Measurement:

- In sqm for cladding
- In cum for masonry
- In RM for mouldings
- No extra payment for:
 - Wastage $\leq 5\%$
 - Minor dressing
 - Surface leveling

PART G: ADDITIONAL REQUIREMENTS

1. Quarry source cannot be changed without approval.
2. Minimum 10-year durability guarantee.
3. Colour variation within approved range only.
4. No synthetic fillers permitted.
5. Replacement of cracked stone at contractor cost.

5. Project Implementation Milestones & Timelines

Below is an indicative milestone-based implementation schedule for the Shani-Navagrah Lok Development Project, considering:

- Total execution period: **18 months**
- Parallel construction activities
- Operational temple environment
- Target: Simhastha 2028 readiness

The sequence prioritizes critical infrastructure, temple works, and pilgrim movement areas first, while landscape and finishing works follow later.

Accordingly, the Contractor shall submit detailed Gantt chart within 15 days of LOA at the time of signing of agreement.

Project Implementation Milestones & Timelines (Total Duration – 18 Months)

Milestone No.	Project Activity / Milestone	Duration	Timeline (From Start)	Remarks
M1	Contract Award & Mobilization	1 Month	Month 0–1	Signing of agreement, mobilization of staff, site offices
M2	Detailed Surveys, Soil Investigation & GFC Drawings	1.5 Months	Month 0–1.5	Can overlap with mobilization
M3	Statutory Approvals & Construction Planning	1 Month	Month 1–2	Method statements, work program approval
M4	Site Clearance & Dismantling of Existing Structures	2 Months	Month 1–3	Controlled dismantling ensuring temple access
M5	Excavation & Foundation Works (Temple & Major Buildings)	3 Months	Month 2–5	Includes raft foundations and retaining structures
M6	RCC Structural Works – Temple Structure	4 Months	Month 4–8	Superstructure, columns, beams, slabs
M7	Stone Masonry & Architectural Temple Works	6 Months	Month 6–12	Includes carving, cladding, temple façade
M8	Construction of Queue Hall, Multipurpose Hall & Admin Building	5 Months	Month 5–10	Parallel construction
M9	Public Amenities (Toilets, Shoe Stands, RO Facilities, Shops)	4 Months	Month 7–11	Pilgrim convenience facilities
M10	Site Development Works (Parking, Roads, Boundary Wall, Gates)	5 Months	Month 8–13	Major circulation infrastructure

M11	Underground Infrastructure (Drainage, Water Supply, UGT, STP/ETP)	4 Months	Month 6–10	Utility works in parallel
M12	Electrical, Fire Fighting, CCTV & PA System Installation	5 Months	Month 10–15	Internal and external systems
M13	Architectural Lighting & Façade Lighting	2 Months	Month 13–15	Temple illumination
M14	Landscaping & Water Body Development	3 Months	Month 13–16	Plantation and green development
M15	Finishing Works (Flooring, Paving, Painting, Fixtures)	3 Months	Month 14–17	Final finishes
M16	Testing, Commissioning & Integrated System Trials	1 Month	Month 16–17	All MEP systems
M17	Snag Rectification & Final Completion	1 Month	Month 17–18	Punch list closure
M18	Project Handover & Simhashta Readiness Certification	—	Month 18	Final inspection and handover

Key Parallel Activity Streams

To achieve completion within **18 months**, the following activities must run concurrently:

Parallel Stream	Activities
Stream 1	Temple RCC structure + stone carving fabrication
Stream 2	Building blocks (queue hall, admin building)
Stream 3	Underground utilities
Stream 4	Boundary wall + entry gates + RCC roads
Stream 5	Electrical infrastructure
Stream 6	Landscape development

Critical Path Activities

The following activities form the **project critical path**:

1. Foundation works
2. Temple RCC structure
3. Temple stone works
4. Plaza and queue hall development
5. Electrical and lighting systems
6. Testing & commissioning

Delay in these activities may affect **Simhashta readiness**.

6. Other Instructions:

6.1 Stakeholder Consultation & Master Planning

Based on the Concept Plan issued by USCL, the contractor after conducting topographical surveys and geotechnical investigation, shall prepare a comprehensive Master Plan covering all components of the scope and services.

The Master Plan shall be presented to stakeholders including Heritage, Archaeological and Cultural Committee of USCL, Temple Management Committee, and other Stakeholders/other agencies as facilitated by Ujjain Smart City Limited (USCL) and/or PDMC.

The Contractor shall:

- Record all comments and observations
- Incorporate approved suggestions into the revised Master Plan
- Submit the final Master Plan for approval of USCL

No execution work shall commence without written approval of the Master Plan.

No additional cost or time claim shall be admissible on account of stakeholder consultations or incorporation of approved suggestions.

20.1 Structural Stability of Monolithic Temple Structure

The Contractor shall be fully responsible for ensuring the structural stability, safety, and integrity of the Main Temple structure proposed to be constructed using monolithic basalt stone elements. The Contractor shall prepare all necessary structural designs, calculations, erection methodologies, connection/anchoring details, and stability analyses required for such construction. The Contractor shall also conduct all required tests, structural validations, and independent technical checks through a reputed third-party agency approved by USCL, to verify the adequacy and safety of the proposed system. All costs associated with structural design, analysis, testing, third-party review, and compliance shall be borne by the Contractor and deemed to be included in the quoted tender premium, and no additional payment shall be admissible on this account.

No additional payment or extension of time shall be admissible on account of such studies, vetting, or design revisions.

20.2 Manufacturer's Test Reports, QAPs & Compliance Documentation

The Contractor shall submit, for review and approval of USCL/PDMC, all relevant manufacturer's test reports, factory test certificates, compliance certificates, and Quality Assurance Plans (QAPs) for materials, equipment, systems, and other products proposed to be used in the Project. The QAPs shall clearly define quality control procedures, inspection stages, testing methods, acceptance criteria, and hold points for USCL/PDMC review. No procurement, or installation activity shall commence without written approval of the applicable QAPs and test reports. Approval of such documents shall not absolve the Contractor of responsibility for performance, quality, safety, or compliance with the Contract, and no additional cost or time claim shall be entertained on this account.

20.3 Third-Party Inspection (TPI) of Materials & Equipment

The Contractor shall, at his own cost and arrangement, provide for third-party inspection (TPI) of all major materials, equipment, systems, and components proposed to be supplied and installed under the Project. Such inspections shall be carried out through an independent inspection agency of repute, approved by Ujjain Smart City Limited (USCL). The scope of TPI shall include review of material specifications, workmanship, factory acceptance tests, performance parameters, and compliance with approved standards and drawings. Dispatch, installation, or deployment of any such material or

equipment shall be permitted only after submission and acceptance of the TPI reports and certificates by USCL/PDMC. No additional payment or time claim shall be admissible on account of third-party inspection

20.3.1 Pre-Dispatch Inspection of Major Equipment

The Contractor shall arrange pre-dispatch inspection of major equipment and specialized lighting fixtures.

Inspection shall be conducted by an independent agency approved by USCL, in presence of USCL / PDMC representatives.

Dispatch shall be permitted only after acceptance of inspection reports.

20.4 Miniature Models & Prototypes for Sculptural / Artistic Elements

The Contractor shall prepare and submit scale models / mock-ups / prototypes (physical and/or digital) of all major components, artistic elements, and signature components for approval of USCL and its designated Heritage, Archaeological & Cultural Committee.

For major sculptural or artistic elements, the following approvals shall be mandatory:

1. Concept-stage model – form, proportions, theme
2. Final detailed model – material, surface finish, texture, lighting integration

The executed full-scale work shall strictly conform to the final approved model. No fabrication or installation shall commence without such approval.

All costs for preparation, revisions, and compliance shall be deemed included in the Contract Price/Tender Premium.

20.5 Handling, Conservation and Re-installation of Existing Sculptures

The Contractor shall, at his own cost and arrangement, be responsible for the safe identification, documentation, lifting, handling, packing, internal transportation, conservation treatment, and re-installation of all existing sculptures, fragments, and heritage objects presently lying in temple premises or as identified by USCL. All handling and movement shall be carried out using suitable, non-invasive, and conservation-safe methods, including appropriate lifting equipment, protective supports, cushioning, and trained personnel, strictly in accordance with approved conservation protocols. After completion of conservation treatment and upon approval of the PDMC/USCL, the Contractor shall install and position such components at their designated display locations on approved pedestals, mounts, or display systems, ensuring proper alignment, stability and safety. Any damage, loss, or deterioration arising due to improper handling, transportation, conservation, or installation shall be the sole responsibility of the Contractor, and no additional cost or time claim shall be admissible on this account.

20.6 Testing, Commissioning & Handover

20.6.1 Testing & Commissioning

The Contractor shall conduct testing and commissioning of HVAC, MEP, internal/external lighting, façade lighting, etc

20.6.2 Training & Documentation

The Contractor shall provide:

- Training to O&M staff

- O&M manuals, as-built drawings, asset registers
- Periodic cleaning maintenance protocols

20.6.3 Soft Launch & Handover

- Trial operation / soft launch for minimum 30 days
- Rectification of issues observed during trial
- Final handover after compliance certification by PDMC / USCL

20.7 Defect Liability & Post-Installation Support

The Contractor shall provide a Defect Liability Period (DLP) of **36 months** covering all civil, architectural, HVAC, MEP and other infrastructure/services created under the contract.

During DLP, the Contractor shall attend defects, malfunctions, or failures at no additional cost.

Performance benchmarks during DLP:

- All MEP fixtures/service uptime $\geq 99\%$
- AV system uptime $\geq 98\%$
- Lighting Fixtures uptime $\geq 99\%$

20.8 General No-Claim & Responsibility Clause

Approval of designs, models, content, or methodologies by USCL / PDMC shall not relieve the Contractor of responsibility for safety, performance, accuracy, or compliance with standards.

No claim for extra cost or time shall be entertained on account of approvals, revisions, stakeholder inputs, or coordination requirements.

Annexure —F
(See clause 3 of section 2-ITB)

PROCEDURE FOR PARTICIPATION IN E-TENDERING

1. Bidder should do Online Enrolment in this Portal using the option Click Here to Enroll available in the Home Page. Then the Digital Signature enrolment has to be done with the e-token, after logging into the portal. The e-token may be obtained from one of the authorized Certifying Authorities such as MudhraCA/ GNFC/IDRBT/ Mtnl Trust line / SafeScript/TCS.
2. Bidder then logs into the portal giving user id / password chosen during enrolment.
3. The e-token that is registered should be used by the bidder and should not be misused by others.
4. DSC once mapped to an account cannot be remapped to any other account. It can only be Inactivated.
5. The Bidders can update well in advance, the documents such as certificates, purchase order details etc., under My Documents option and these can be selected as per tender requirements and then attached along with bid documents during bid submission. This will ensure lesser upload of bid documents.
6. After downloading / getting the tender schedules, the Bidder should go through them carefully and then submit the documents as per the tender document, otherwise, the bid will be rejected.
7. The BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for that tender. Bidders are allowed to enter the Bidder Name and Values only.
8. If there are any clarifications, this may be obtained online through the eProcurement Portal, or through the contact details given in the tender document. Bidder should take into account of the corrigendum published before submitting the bids online.
9. Bidder, in advance, should prepare the bid documents to be submitted as indicated in the tender schedule and they should be in PDF/XLS/RAR/DWF formats. If there is more than one document, they can be clubbed together.
10. Bidder should arrange for the EMD as specified in the tender. The original should be posted/couriered/given in person to the Tender Inviting Authority, within the bid submission date and time for the tender.
11. The bidder reads the terms and conditions and accepts the same to proceed further to submit the bids
12. The bidder has to submit the tender document(s) online well in advance before the prescribed time to avoid any delay or problem during the bid submission process.
13. There is no limit on the size of the file uploaded at the server end. However, the upload is decided on the Memory available at the Client System as well as the Network bandwidth available at the client side at that point of time. In order to reduce the file size, bidders are suggested to scan the documents in 75-100 DPI so that the clarity is maintained and also the size of file also gets reduced. This will help in quick uploading even at very low bandwidth speeds.

14. It is important to note that, the bidder has to Click on the Freeze Bid Button, to ensure that he/she completes the Bid Submission Process. Bids Which are not Frozen are considered as Incomplete/Invalid bids and are not considered for evaluation purposes.
15. ~~In case of Offline payments, the details of the Earnest Money Deposit (EMD) document submitted physically to the Department and the scanned copies furnished at the time of bid submission online should be the same otherwise the Tender will be summarily rejected~~
16. The Tender Inviting Authority (TIA) will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders due to local issues.
17. The bidder may submit the bid documents online mode only, through this portal. Offline documents will not be handled through this system.
18. At the time of freezing the bid, the eProcurement system will give a successful bid up- dation message after uploading all the bid documents submitted and then a bid summary will be shown with the bid no, date & time of submission of the bid with all other relevant details. The documents submitted by the bidders will be digitally signed using the e-token of the bidder and then submitted.
19. After the bid submission, the bid summary has to be printed and kept as an acknowledgement as a token of the submission of the bid. The bid summary will act as a proof of bid submission for a tender floated and will also act as an entry point to participate in the bid opening event.
20. Successful bid submission from the system means, the bids as uploaded by the bidder is received and stored in the system. System does not certify for its correctness.
21. The bidder should see that the bid documents submitted should be free from virus and if the documents could not be opened, due to virus, during tender opening, the bid is liable to be rejected
22. The time that is displayed from the server clock at the top of the tender Portal, will be valid for all actions of requesting bid submission, bid opening etc., in the e- Procurement portal. The Time followed in this portal is as per Indian Standard Time (IST) which is GMT+5:30. The bidders should adhere to this time during bid submission.
23. All the data being entered by the bidders would be encrypted at the client end, and the software uses PKI encryption techniques to ensure the secrecy of the data. The data entered will not be viewable by unauthorized persons during bid submission and not viewable by any one until the time of bid opening. Overall, the submitted bid documents become readable only after the tender opening by the authorized individual.
24. During transmission of bid document, the confidentiality of the bids is maintained since the data is transferred over secured Socket Layer (SSL) with 256 bit encryption technology. Data encryption of sensitive fields is also done.
25. The bidders are requested to submit the bids through online eProcurements system to the TIA well before the bid submission end date and time (as per Server System Clock).

Annexure — G
(See clause 4 of Section 2 -ITB)

JOINT VENTURE (J.V.)

If J.V. is allowed following conditions and requirements must be fulfilled -

1. Number of partners in a Joint Venture shall not exceed 3 (three). The partners shall comply with the following requirements:
 - a. One of the partners shall be nominated as being Lead Partner, and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners.
 - b. The bid and, in case of successful bid, the Agreement, shall be signed so as to be legally binding on all partners.
 - c. The partner in charge shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture and the entire execution of the contract, including payment, shall be done exclusively with the partner in charge.
 - d. All the partners of the joint venture shall be liable jointly and severally for the execution of the contract in accordance with the contract terms, and a statement to this effect shall be included in the authorization mentioned under [c] above, as well as in the bid and in the Agreement [in case of successful bid.
 - e. Bidder shall submit the joint venture agreement indicating precisely the role and responsibilities of all the members of JV in respect of planning, design, construction equipment, key personnel, work execution, and financing of the project. All members of JV should have active participation in execution during the currency of the contract. This should not be varied/modified subsequently without prior approval of the employer.
 - f. a copy of the Joint Venture Agreement entered into by the partners shall be submitted with the bid.
 - g. The joint venture agreement shall be registered at the time of agreement, so as to be legally valid and binding on all partners.
2. All the partners should meet out the minimum qualifying criteria required for the bid and collectively must meet the criteria specified in full. Failure to comply with this requirement will result in rejection of the joint venture's bid.
3. The performance security of joint venture shall be in the name of the partner Lead partner/joint venture.
4. Attach the power of attorney of the partners authorizing the Bid signatory(ies) on behalf of the joint venture
5. An individual Bidder cannot at the same time be member of a Joint Venture applying for this Bid. Further, a member of a particular Bidder Joint Venture cannot be member of any other Bidder Joint Venture applying for this bid
6. A copy of the Joint Venture agreement entered into by the partners made on Rs 500/- Non-judicial stamp duly notarized shall be submitted with the bid. However at the time of

agreement bidder shall get the joint venture agreement registered, so as to be legally valid and binding on all partners.

7. Furnish details of participation proposed in the joint venture as below:

PARTICIPATION DETAILS	FIRM 'A' (Lead Partner)	FIRM 'B'	FIRM 'C'
Financial			
Name of the Banker(s)			
Planning			
Construction Equipment			
Key personnel			
Execution of Work (Give details on contribution of each)			

8. The partners of J.V. should satisfy the qualification criteria as below,

- a. The Lead Partner must have the share of 51% in the J.V.
- b. The other partner(s) must have a share of minimum 25% in the J.V.
- c. The lead partner and the other partners must also meet 51% and 26% of the all qualification criteria respectively except for the requirement of work experience described in Annexure 'C'. However both the partners must satisfy the full 100% qualification criteria jointly. For this purpose the qualification of individual partners shall be added (for Average annual turnover, Net worth).

9. For the meeting the minimum qualification criteria of experience of similar nature work,

- (i) Out of 3 (three) similar works of value more than 20% of PAC, at least 2 (two) works must be done by lead partner and 1 (one) work to be done by other partner.

Or

- (ii) Out of 2 (two) similar works of value more than 30% of PAC, at least 1(one) work must be done by lead partner and 1 (one) work to be done by other partner.

Or

- (iii) In case of 1 (one) similar work of value more than 50% of PAC the lead partner must satisfy the criteria. However, the other partner must satisfy the criteria of least one work of 20% of PAC.

Annexure-H

(See clause 12 of Section 2 —ITB & clause 4 of GCC)

**ORGANIZATIONAL DETAILS
(To be contained in Envelope- A)**

S.No.	Particulars	Details
1	Registration number issued by Centralized Registration System of Govt. of M.P. or Proof of application for registration.	‘(If applicable, scanned copy of proof of application for registration to be uploaded)
1a	MSME Registration	No. _____ Date_____ (Scanned copy of Registration to be uploaded)
2	Valid Registration of bidder in appropriate class through Centralized Registration of Govt. of MP	Registration No. _____ Date_____ (Scanned copy of Registration to be uploaded)
3	Name of Organization/ Individual/ Proprietary Firm/Partnership Firm	
4	Entity of Organization Individual/ Proprietary Firm/ Partnership Firm (Registered under Partnership Act)/Limited Company (Registered under the Companies Act— 1956/2013)/ Corporation / Joint Venture	
5	Address of Communication	
6	Telephone Number with STD Code	
7	Fax Number with STD Code	
8	Mobile Number	
9	E-mail Address for all communications	
	Details of Authorized Representative	
10	Name	
11	Designation	
12	Postal Address	
13	Telephone Number with STD Code	
14	Fax Number with STD Code	
15	Mobile Number	
16	E-mail Address	
17	PAN Number	
18	GST Number	

Note: In case of partnership firm and limited company certified copy of partnership deed/ Articles of Association and Memorandum of Association along with registration certificate of the company shall have to be enclosed.

Signature of Bidder with Seal

Date: _____

Annexure —I
See clause 14 of Section 2 -ITB)

Envelope — B, Technical Proposal
Technical Proposal shall comprise the following documents:

S. No.	Particulars	Details to be submitted
1	Experience — Financial & Physical	Annexure - I (Format: I-1)
2	Annual Turnover	Annexure - I (Format: I-2)
3	List of technical personnel for the key positions	Annexure - I (Format: I-3)
4	List of Key equipment/ machines for quality control labs	Annexure - I (Format: I-4)
5	List of Key equipment/ machines for construction work	Annexure - I (Format: I-5)

Note:

1. *Technical Proposal should be uploaded duly page numbered and indexed.*
2. *Technical Proposal uploaded otherwise will not be considered.*

Annexure - I (Format: I-1)
 (See clause 14 of Section 2 -ITB)

The bidder should have:

A. Financial & Physical

i. Experience of having successfully executed as prime contractor:

- a) three similar works each costing not less than the amount equal to 20% of the probable amount of contract during the last 5 years; or
- b) two similar works each costing not less than the amount equal to 30% of the probable amount of contract during the last 5 Years; or
- c) one similar work of aggregate cost not less than the amount equal to 50% of the probable amount of contract during the last 5 years.

(For Joint Ventures)

For the meeting the minimum qualification criteria of experience of similar nature work,

Out of 3 similar works of value more than 20% of PAC, at least 2 works must be done by lead partner and one work to be done by other partner.

Or

Out of 2 similar works of value more than 30% of PAC, at least 1(one) work must be done by lead partner and 1 (one) work to be done by other partner.

Or

In case of one similar work of value more than 50% of PAC the lead partner must satisfy the criteria. However the other partner must satisfy the criteria of least one work of 20% of PAC.

iii) The lead partner and the other partner must also meet 51% and 26% of the all qualification criteria respectively except for the requirement of work experience described in Annexure-I-1(A) . However, both the partners must satisfy the full {100%} qualification criteria jointly. For this purpose the qualification of individual partners shall be added { For Annual Average Turn Over and for Bid Capacity Only }.

To be filled in by the contractor:

- I. Details of successfully completed similar works shall be furnished in the following format
- ii. Certificate duly signed by the employer shall also be enclosed for each completed similar work.

Agreement Number & Year	Name of Work	Date of Work Order	Date of Completion	Amount of Contract	Employer's Name and Address

Existing commitments— (Value of 'C' for Bid Capacity formula)

Agreement Number & Year	Name of Work	Date of Work Order	Date of Completion	Amount of Contract	Amount of balance work	Employer's Name and Address

B. — Physical Requirement:

Execution of similar items of work in any one financial year during the last 3 financial years should not be less than the minimum physical Requirement fixed for the work.

S.No.	Particulars	Actual Quantity Executed (To be filled in by the contractor)		
		Year 1	Year 2	Year 3
	Physical qualification required	Yes		
1				

Note:

1. Certificate duly signed by the employer shall be enclosed for the actual quantity executed in any one year during the last 5 financial years,

Annexure-I(Format: I-2)
(See douse 14 of Section 2 -ITB)

ANNUAL TURN OVER

Requirement:

Average annual construction turnover on the construction works not less than 50% of the probable amount of contract during the last 3 financial years.

To be filled in by the contractor:

Financial Year Payments received for contracts in progress or completed

Financial Year	Payments received for contracts in progress or completed
1. 2020-2021	
2. 2021-2022	
3. 2022-2023	
4. 2023-2024	
5. 2024-2025	

Note:

- i Annual turnover from construction should be certified by the Chartered Accountant.
- ii. Audited Balance sheet including all related notes, and income statements for the above financial years as well as Income Tax Returns for the relevant years to be enclosed.

Bid Capacity

Applicants who meet the minimum qualifying criteria in the evaluation as stated above are to be evaluated further for bid capacity as under:

Bid Capacity = $(1.5A \times B) - C$ and its should be more than PAC.

Where

A. = Maximum value of civil engineering works executed in any one year during the last five year (10% weightage per year shall be given to bring the value of work executed at present price level)

B = Proposed contract period in number of years prescribed for completion of the works (period up to 1 year shall be taken as one year),

C = Value at current price level of existing commitments and ongoing works to be completed in the next 'B' years.

FY	2024-25	2023-24	2022-23	2021-22	2020-21
MF	1.00	1.10	1.21	1.33	1.46

Bids shall be opened in order of their listing in one NIT. In case of bidder's participation in multiple tenders listed in ine NIT, his bid capacity shall be exhausted, if found L1, in order of tenders opened. Soon after bid capacity of a bidder has exhausted, his next bid shall not be opened

Annexure - I (Format : I-3)
(See clause 14 of Section 2-ITB & Clause 6 of GCC)

List of Technical Personnel for the Key Positions³(to be referred for civil works)

The Contractor will have to appoint the following key personnel during the execution and entire contract period, apart from other key personnel and support staff as necessary.

The qualification and experience requirements are as under.

S.No.	Details	Qualification	Experience
1.	Project Director (1 No)	B.E./B.Tech Civil / Construction Management	20 years
2.	Project Manager (Site In-Charge) (1 No)	B.E./B.Tech Civil	15 years
3.	Structural Engineer (1 No)	M.Tech / B.E. Structural Engineering	10 years
4.	Stone Architecture / Stone Artwork Expert (2 Nos)	Degree/Diploma in Architecture / Sculpture / Traditional Stone Craft	15 years
5.	Architectural Engineer (1 No)	B.Arch / B.E. Civil	10 years
6.	MEP Engineer (Electrical & ELV Systems) (1 No)	B.E./B.Tech Electrical	10 years
7.	Mechanical Engineer (Fire Fighting / HVAC) (1 No)	B.E./B.Tech Mechanical	10 years
8.	Site Planning Engineer (1 No)	B.E./B.Tech Civil	8 years
9.	QA/QC Engineer (1 No)	B.E./B.Tech Civil	8 years
10.	EHS Officer (1 No)	Diploma / Degree in Safety Engineering	7 years
11.	Survey Engineer (1 No)	Diploma / B.E. Civil / Surveying	7 years
12.	Landscape Architect / Horticulture Expert (1 No)	Degree in Landscape Architecture / Horticulture	8 years
13.	Utility Engineer (Water Supply & Drainage) (1 No)	B.E./B.Tech Civil / Environmental	8 years

Development of Shani-Navagraha Lok at Ujjain.

14.	Electrical Site Engineer (2 Nos)	B.E./B.Tech Electrical	6 years
15.	Civil Site Engineers (10 Nos)	B.E./Diploma Civil	5 years

NOTE: At the time of signing of the agreement the contractor must submit the biodata of experts for above positions for the approval from USCL and shall be mobilized after the approval only.

Development of Shani-Navagraha Lok at Ujjain.

Penalty for non-deployment of above staff are as follows:

S. No.	Details	Penalty to be computed on Per Month basis
1	Project Manager	Rs. 100,000/- p.m.
2	Other Experts	Rs. 75,000/- p.m.
3	Field Staff	Rs. 50,000/- p.m.

Note:

1. Aforesaid personnel shall be deployed within the period starting from the date of award of contract as stipulated in the contract.
2. Approval of the superintending engineer about suitability of personnel shall be obtained before deployment.
3. The Bidder shall submit CVs of proposed personnel confirming eligibility, experience and suitability of the personnel for the project.

The Contractor shall fill the following format:

S. No	Key Positions	Qualifications	Age	Similar Work Experience	Total Work Experience	Name of Personnel	Key Position	Qualification	Similar Work Experience	Total Work Experience
1.										
2.										
3.										
4.										
5.										
6.										
7.										
Total										

Note:

1. Aforesaid personnel shall be deployed within the period starting from the date of award of contract as stipulated in the contract.
2. Approval of the superintending engineer about suitability of personnel shall be obtained before deployment.

Annexure - I (Format : I-5)
 (See clause 14 of Section 2-ITB)

LIST OF EQUIPMENTS / MACHINES FOR CONSTRUCTION WORK

			Available with the bidder	
S. No.	Name of Equipment/ Machinery	Quantity	Name of Equipment/ Machinery	Quantity
1	Set of I. S. sieves			
2	Atterberg Limit Apparatus			
3	Sand replacement Apparatus			
4	Crushing Strength Testing Machine			
5	Flexural Strength Testing Machine			
6	Compression Testing Machine, Capacity 50 tones.			
7	Aggregate Crushing value Apparatus			
8	Los Angeles Abrasion Machine			
9	Aggregate Impact Test Machine			
10	Concrete Batching Plant			
11	Length and Thickness Gauges			
12	Vicat apparatus for testing setting times			
13	Slump testing apparatus			
14	Needle & Plate Vibrator			
15	500gm, 10 Kg balances			
16	Length and Thickness Gauges.			
17	Electrical Oven			

Annexure — J
(See clause 14 of Section 2 -ITB)

FINANCIAL BID
(To Be Contained in Envelope-C)

NAME OF WORK _____

I/We hereby bid for the execution of the above work within the time specified at the **lumpsum item rate (in figures)** _____ **(in words)** _____ based on the Bill of Quantities and item wise rates given therein in all respects and in accordance with the specifications, designs, drawings and instructions in writing in all respects in accordance with such conditions so far as applicable. I/We have visited the site of work and am/are fully aware of all the difficulties and conditions likely to affect carrying out the work. I/We have fully acquainted myself/ourselves about the conditions in regard to accessibility of site and quarries/kilns, nature and the extent of ground, working conditions including stacking of materials, installation of tools and plant conditions effecting accommodation and movement of labour etc. required for the satisfactory execution of contract.

Should this bid be accepted, I/We hereby agree to abide by and fulfill all the terms and provisions of the said conditions of contract annexed- hereto so far as applicable, or in default thereof to forfeit and pay to the Ujjain Smart City Limited or his successors in office the sums of money mentioned in the said conditions.

Note:

- i. Only one rate of percentage above or below or at par based on the Bill of Quantities and item wise rates .given therein shall be quoted.
- ii. Percentage shall be quoted in figures as well as in words. If any difference in figures and words is found lower of the two shall be taken as valid and correct rate. If the bidder is not ready to accept such valid and correct rate and declines to furnish performance -security and sign the agreement his earnest money deposit shall be forfeited.
- iii. In case the percentage “above” or “below” is not given by a bidder, his bid shall be treated as non-responsive.
- iv. All duties, taxes, and other levies except Goods and services tax (GST) are included in the rates (in case of Percentage Rate Bids)/ Lump sum offer (in case of Lump-sum Bids quoted by the bidder.

Signature of Bidder
Name of Bidder

The above bid is hereby accepted by me on behalf of the Ujjain Smart City Limited dated the _____ day of _____ 20_____

Signature of Officer
by whom accepted

Annexure — K

(See clause 15 of Section 2 -ITB)

MATERIALS TO BE ISSUED BY THE DEPARTMENT

Not Applicable for this contract

Annexure—L
(See clause 21 of Section 2 -ITB)

LETTER OF ACCEPTANCE (LOA)

No. _____

Dated: _____

To,
M/s. _____
(Name and address of the contractor)

Subject: _____
(Name of the work as appearing in the bid for the. work)

Dear Sir(s),

Your bid for the work mentioned above has been accepted on behalf of the Ujjain Smart City Limited at your bided amount _____ for the Bill of Quantities and item wise rates given therein.

You are requested to submit within 15 (Fifteen) days from the date of issue of this letter:

- a. The performance security/ performance guarantee of Rs. _____ (in-figures) (Rupees _____ in words only). The performance security shall be in the shape of term deposit receipt / bank guarantee of any nationalized / schedule commercial bank valid up to three months after the expiry of defects liability period.
- b. Sign the contract agreement.

Please note that the time allowed for carrying-out the work as entered in the bid is _____ months including/ excluding rainy season, shall be reckoned from the date of signing the contract agreement.

Signing the contract agreement shall be reckoned as intimation to commencement of work and no separate letter for commencement of work is required. Therefore, after signing of the agreement, you are directed to contact the Engineer-in-charge for taking the possession of site and necessary instructions to start the work.

Yours Faithfully

Executive Director
Ujjain Smart City Limited

FORM OF BANK GUARANTEE

Performance Security/Additional Performance Security

The Executive Director,

Ujjain Smart City Limited

Ujjain

WHEREAS:

- A. _____ [name and address of contractor] (hereinafter called the "Contractor") and Ujjain Smart City Limited, _____, (hereinafter called the "Employer") have entered into an agreement (hereinafter called the "Agreement") for the Construction of **<Project name>** in the state of Madhya Pradesh on online percentage rate (the "percentage rate") basis, subject to and in accordance with the provisions of the Agreement.
- B. The Agreement requires the Contractor to furnish a Performance Security for due and faithful performance of its obligations, under and in accordance with the Agreement, during the {Construction Period/ Defects Liability Period and Maintenance Period} (as defined in the Agreement) in a sum of Rs..... cr. (Rupees crore) (the "Guarantee Amount").
- C. We, through our branch at (the "Bank") have agreed to furnish this bank guarantee (hereinafter called the "Guarantee") by way of Performance Security.

NOW, THEREFORE, the Bank hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The Bank hereby unconditionally and irrevocably guarantees the due and faithful performance of the Contractor's obligations during the {Construction Period/ Defects Liability Period and Maintenance Period} under and in accordance with the Agreement, and agrees and undertakes to pay to the Employer, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Contractor, such sum or sums up to an aggregate sum of the Guarantee Amount as the Employer shall claim, without the Employer being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.
2. A letter from the Employer, under the hand of an officer not below the rank of Engineer in Charge in the Ujjain Smart City Limited, that the Contractor has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the Agreement shall be conclusive, final and binding on the Bank. The Bank further agrees that the Employer shall be the sole judge as to whether the Contractor is in default in due and faithful performance of its obligations during and under the Agreement and its decision that the Contractor is in default shall be final and binding on the Bank, notwithstanding any differences between the Employer and the Contractor, or any dispute between them pending before any court, tribunal, arbitrators or any other employer or body, or by the discharge of the Contractor for any reason whatsoever.
3. In order to give effect to this Guarantee, the Employer shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Contractor and/or the Bank,

- whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Bank under this Guarantee.
4. It shall not be necessary, and the Bank hereby waives any necessity, for the Employer to proceed against the Contractor before presenting to the Bank its demand under this Guarantee.
 5. The Employer shall have the liberty, without affecting in any manner the liability of the Bank under this Guarantee, to vary at any time, the terms and conditions of the Agreement or to extend the time or period for the compliance with, fulfillment and/ or three of all or any of the obligations of the Contractor contained in the Agreement or to postpone for any time, and from time to time, any of the rights and powers exercisable by the Employer against the Contractor, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to the Employer, and the Bank shall not be released from its liability and obligation under these presents by any exercise by the Employer of the liberty with reference to the matters aforesaid or by reason of time being given to the Contractor or any other forbearance, indulgence, act or omission on the part of the Employer or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Bank from its liability and obligation under this Guarantee and the Bank hereby waives all of its rights under any such law.
 6. This Guarantee is in addition to and not in substitution of any other guarantee or security now or which may hereafter be held by the Employer in respect of or relating to the Agreement or for the fulfillment, compliance and/or performance of all or any of the obligations of the Contractor under the Agreement.
 7. Notwithstanding anything contained hereinbefore, the liability of the Bank under this Guarantee is restricted to the Guarantee Amount and this Guarantee will remain in force for the period specified in paragraph 8 below and unless a demand or claim in writing is made by the Employer on the Bank under this Guarantee all rights of the Employer under this Guarantee shall be forfeited and the Bank shall be relieved from its liabilities hereunder.
 8. The Guarantee shall cease to be in force and effect on ****\$. Unless a demand or claim under this Guarantee is made in writing before expiry of the Guarantee, the Bank shall be discharged from its liabilities hereunder.
 9. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of the Employer in writing and declares and warrants that it has the power to issue this Guarantee and the undersigned has full powers to do so on behalf of the Bank.
 10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Bank at its above referred branch, which shall be deemed to have been duly authorised to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the Employer that the envelope was so posted shall be conclusive.
 11. This Guarantee shall come into force with immediate effect and shall remain in force and effect for up to the date specified in paragraph 8 above or until it is released earlier by the Employer pursuant to the provisions of the Agreement.
 12. This guarantee shall also be operatable at our..... Branch at <.....> , from whom, confirmation regarding the issue of this guarantee or extension / renewal thereof shall be made available on demand. In the contingency of this guarantee being invoked and payment thereunder claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.

Signed and sealed this day of, 20..... at

SIGNED, SEALED AND DELIVERED

For and on behalf of the Bank by:

(Signature)

(Name)

(Designation)

(Code Number)

(Address)

NOTES:

- (i) The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.
- (ii) The address, telephone number and other details of the head office of the Bank as well as of issuing branch should be mentioned on the covering letter of issuing branch.

SECTION 3

Conditions of Contract
Part - I General Conditions of Contract [GCC]
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A. General

1. DEFINITIONS

- 1.1. **Bill of Quantities:** means the priced and completed Bill of Quantities forming part of the Bid.
- 1.1 A **Chief Executive officer (C.E.O)** means Chief Executive officer , Ujjain Municipal Corporation, Ujjain
- 1.1 B **Commissioner** :means Commissioner, Ujjain Municipal Corporation, Ujjain
- ~~1.2. **Chief Engineer:** means Chief Engineer of the zone/ basin concerned:~~
- 1.3. **Completion:** means completion of the work as certified by the Engineer-in-Charge, in accordance with provisions of agreement.
- 1.4. **Contract:** means the Contract between the Employer and the Contractor to execute, complete and/or maintain the work. Agreement is synonym of Contract and carries the same meaning wherever used.
- 1.5. **Contract Data:** means the documents and other information, which comprise of the Contract.
- 1.6. **Contractor:** means a person or legal entity whose bid to carry out the work has been accepted by the Employer.
- 1.7. **Contractor's bid:** means the completed bid document submitted by the Contractor to the Employer.
- 1.8. **Contract amount:** means the amount of contract worked out on the basis of accepted bid.
- 1.9. **Completion of work:** means completion of the entire contracted work; Exhaustion of quantity of any particular item mentioned in the bid document shall not imply completion of work or any component thereof.
- 1.10. **Day:** means the calendar day.
- 1.11. **Defect:** means any part of the work not completed in accordance with the specifications included in the contract.
- 1.12. **Department:** means Ujjain Smart City Limited .
- 1.13. **Drawings:** means drawings including calculations and other information provided or approved by the Engineer-in-Charge.
- 1.14. **Employer:** means the party as defined in the Contract Data, who employs the Contractor to carry out the work. The Employer may delegate any or all functions to a person or body nominated by him for specified functions. The word Employer / Government / Department wherever used denote the Employer.
- 1.15. **Engineer:** means the person named in the Contract Data.
- 1.16. **Engineer in charge:** means the person named in the Contract Data.
- 1.17. **Equipment:** means the Contractor's machinery and vehicles brought temporarily to the Site for execution of work.
- 1.17B **Executive Engineer:** / EE mean Executive Engineer appointed by USCL from time to time.
- 1.17 C **Executive Director** means Executive Director of , Ujjain Smart City Limited
- 1.18. **Government:** means Government of Madhya Pradesh.
- 1.19. **In Writing:** means communicated in written form and delivered against receipt.
- 1.20. **Material:** means all supplies, including consumables, used by the Contractor for incorporation in the work.
- 1.21. **Superintending Engineer:** means Superintending Engineer-in-Charge of Ujjain Smart City
- 1.22. **Stipulated period of completion:** means the period in which the Contractor is required to complete the work. The stipulated period is specified in the Contract Data.
- 1.23. **Specification:** means the specification of the work included in the Contract and any modification or addition made or approved by the Engineer-in-Charge.
- 1.24. **Start Date:** means the date of signing of agreement for the work.
- 1.25. **Sub-Contractor:** means a person or corporate body who has a Contract with the Contractor, duly authorized to carry out a part of the construction work under the Contract.
- 1.26. **Temporary Work:** means work designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the work.
- 1.27. **Tender/Bid, Tendered/Bidder:** are the synonyms and carry the same meaning where ever used. -

1,28. **Variation:** means any change in the work which is instructed or approved as variation under this contract.

1.29. **Work:** The expression “work’ or “works” where used in these conditions shall unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the work by virtue of contract, contracted to be executed, whether temporary or permanent and whether original, altered, substituted or additional,

2. INTERPRETATIONS AND DOCUMENTS

2.1 Interpretations

In the contract, except where the context requires otherwise:

- a. words indicating one gender include all genders;
- b. Words indicating the singular also include the plural and vice versa.
- c. provisions including the word “agree”, “agreed” or “agreement’ require the agreement to be recorded in writing.
- d. written” or “in writing” means hand-written, type-written, printed or electronically made, and resulting in a permanent record.

2.2 Documents Forming Part of Contract:

1. NIT with all amendments.
2. Instructions to Bidders (ITB, Bid Data Sheet with all Annexure’s)
3. Conditions of Contract:
 - I. Part I General Conditions of Contract and the Contract Data; with all Annexures
 - II. Part II Special Conditions of Contract.
4. Specifications
5. Drawings
- 6 Bill of Quantities
7. Technical and Financial Bid
8. Agreement, and
9. Any other document(s), as specified.

3. Language and Law

The language of the Contract and the law governing the Contract are stated in the Contract Data

4. Communications

All certificates, notice or instruction to be given to the Contractor by Employer/Engineer shall be sent to the address or contact details given by the Contractor in [Annexure H of ITB]. The address and contact details for communication with the Employer/Engineer shall be as per the details given in the Contract Data. Communication between parties that are referred to in the conditions shall be in writing. The notice sent by facsimile (fax) or other electronic means

(email) shall also be effective on confirmation of the transmission. The notice sent by registered post or speed post shall be effective on delivery or at the expiry of the normal delivery period as undertaken by the postal service. In case of any change in address for communication, the same shall be immediately notified to Engineer-in- Charge.

5. Subcontracting

Subcontracting shall be permitted for contracts of value more than amount specified in the Contract Data with following conditions.

- a. The Contractor may subcontract up to 25 percent of the contract price with the approval of the Employer in writing, but will not assign the Contract. Subcontracting shall not alter the Contractors obligations.
- b. Following shall not form part of subcontracting:
 - I. Hiring of labour through a labour contractor.
 - II. The purchase of Materials to be incorporated in the works.
 - III. Hiring of plant & machinery.
- c. The sub-contractor will have to be registered in the appropriate category in the centralized registration system for contractors of the GoMP.

6. Personnel

- 6.1 The Contractor shall employ for the construction work and routine maintenance the technical personnel as provided in the Annexure I-3 of Bid Data Sheet if applicable. If the Contractor fails to deploy required number of technical staff, recovery as specified in the Contract Data will be made from the Contractor.
- 6.2 If the Engineer asks the Contractor to remove a person who is a member of the contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within three days and has no further connection with the Works in the Contract.

7. Force Majeure

7.1 The term "Force Majeure" means an exceptional event or circumstance:

- (a) Which is beyond a Party's control,
- (b) Which such Party could not reasonably have provided against before entering into the Contract
- (c) Which, having arisen, such Party could not reasonably have avoided or overcome, and
- (d) Which is not substantially attributable to the other Party.

Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:

- i. War, hostilities (whether war be declared or not), invasion, act of foreign enemies,
- ii. Rebellion, terrorism, sabotage by persons other than the contractor's Personnel, revolution, insurrection, military or usurped power, or civil war,
- iii. Riot, commotion, disorder, strike or lockout by persons other than the Contractor's Personnel,
- iv. Munitions of war, explosive materials, ionising radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity, and
- v. Natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.

- 7.2. In the event of either party being rendered unable by force majeure to perform any duty or discharge any responsibility arising out of the contract, the relative obligation of the party affected by such force majeure shall upon notification to the other party be suspended for the period during which force majeure event lasts. The cost and loss sustained by either party shall be borne by respective parties.
- 7.3 For the period of extension granted to the Contractor due to Force Majeure the price adjustment clause shall apply but the penalty clause shall not apply. It is clarified that this sub clause shall not give eligibility for price adjustment to contracts which are otherwise not subject to the benefit of price adjustment clause.
- 7.4 The time for performance of the relative obligation suspended by the force majeure shall stand extended by the period for which such cause lasts. Should the delay caused by force majeure exceed twelve months, the parties to the contract shall be at liberty to foreclose the contact after holding mutual discussions.

8. Contractor's Risks -

- 8.1 All risks of loss or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract are the responsibility of the Contractor.
- 8.2 All risks and consequences arising from the inaccuracies or falseness of the documents, drawing, designs, other documents and/or information submitted by the contractor shall be the responsibility of the Contractor alone, notwithstanding the fact that the design/ drawings or other documents have been approved by the department.

9. Liability for Accidents to Person

The contractor shall be deemed to have indemnified and saved harmless the Corporation against all action, suits, claims, demands, costs etc. arising in connection with injuries suffered by any persons employed by the contractor or his subcontractor for the works whether under the General law or under workman's compensation Act or any other statute in force at the time of dealing with the question of the liability of employees for the injuries suffered by employees and to have taken steps properly to ensure against any claim there under.

10. Contractor to Construct the Works

- 10.1 The Contractor shall construct install and maintain the Works in accordance with the Specifications and Drawings as specified in the Contract Data.
- 10.2 In the case of any class of work for which there is no such specification as is mentioned in Contract Data, such work shall be carried out in accordance with the instructions and requirement of the Engineer-in-charge.
- 10.3 The contractor shall supply and take upon himself the entire responsibility of the sufficiency of the scaffolding, timbering, machinery, tools and implements, and generally of all means used for the fulfilment of this contract whether such means may or may not be approved or recommended by the Engineer.

11. Discoveries

Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Engineer of such discoveries and carry out the Engineer's instructions for dealing with them.

12. Dispute Resolution System

- 12.1 No dispute can be raised except before the Competent Authority as defined in Contract Data in writing giving full description and grounds of dispute. It is clarified

that merely recording protest while accepting measurement and/or payment shall not be taken as raising a dispute.

- 12.2 No dispute can be raised after 45 days of its first occurrence. Any dispute raised after expiry of 45 days of its first occurrence shall not be entertained and the Employer shall not be liable for claims arising out of such dispute.
- 12.3 The Competent Authority shall decide the matter within 45 days.
- 12.4 Appeal against the order of the Competent Authority can be preferred within 30 days to the Appellate Authority as defined in the Contract Data. The Appellate Authority shall decide the dispute within 45 days.
- 12.5 Appeal against the order of the Appellate Authority can be preferred before the Madhya Pradesh Arbitration Tribunal constituted under Madhya Pradesh *Madhyastham Adhikaran Adhiniyam, 1983*.
- 12.6 The Contractor shall have to continue execution of the Works with due diligence notwithstanding pendency of a dispute before any authority or forum.

B. Time Control

13. Programme

- 13.1 Within the time stated in the Contract Data, the Contractor shall submit to the Engineer for approval a Programme showing the general methods arrangements, order and timing for all the activities for the construction of works.
- 13.2 The program shall be supported with all the details regarding key personnel, equipment and machinery proposed to be deployed on the works for its execution. The contractor shall submit the list of equipment and machinery being brought to site, the list of key personnel being deployed, the list of machinery/equipment being placed in field laboratory and the location of field laboratory along with the Programme.
- 13.3 An update of the Programme shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining Works, including any changes to the sequence of the activities.
- 13.4 The Contractor shall submit to the Engineer for approval an updated Programme at intervals no longer than the period stated in the Contract Data. If the Contractor does not submit an updated Programme within this period, the Engineer may withhold the amount stated in the Contract Data from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Programme has been submitted.
- 13.5 The Engineer's approval of the Programme shall not alter the Contractor's obligations.

14. Extension of Time

- 14.1 If the Contractor desires an extension of time for completion of the work on the ground of his having been unavoidably hindered in its execution or on any other grounds, he shall apply, in writing, to the Engineer-in-charge, on account of which he desires such extension. Engineer-in-Charge shall forward the aforesaid application to the Competent Authority as prescribed.
- 14.2 The competent authority shall grant such extension at each such occasion within a period of 30 days of receipt of application from contractor and shall not wait for finality of work. Such extensions shall be granted in accordance with provisions under clause 15 of this agreement.

14.3 In case the work is already in progress, the Contractor shall proceed with the execution of the works, including maintenance thereof, pending receipt of the decision of the competent authority as aforesaid with all due diligence.

15. Compensation for delay

15.1 The time allowed for carrying out the work, as entered in the agreement, shall be strictly observed by the Contractor.

15.2 The time allowed for execution of the contract shall commence from the date of signing of the agreement. It is clarified that the need for issue of work order is dispensed with.

15.3 In the event milestones are laid down in the Contract Data for execution of the works, the contractor shall have to ensure strict adherence to the same.

15.4 Failure of the Contractor to adhere to the timelines and/or milestones shall attract such liquidated damages as is laid down in the Contract Data.

15.5 In the event of delay in execution of the Works as per the time lines mentioned in the Contract Data the Engineer-in-charge shall retain from the bills of the Contractor amount equal to the liquidated damages leviable until the Contractor makes such delays good. However, the Engineer-in-charge shall accept bankable security in lieu of retaining such amount.

15.6 If the Contractor is given extension of time after liquidated damages have been paid, the Engineer in Charge shall correct any over payment of liquidated damages by the Contractor in the next payment certificate.

15.7 In the event the Contractor fails to make good the delay until completion of the stipulated contract period (including extension of time) the sum so retained shall be adjusted against the liquidated damages levied.

16. Contractor's quoted percentage

The Contractor's quoted percentage rate referred to in the "Bid for works" will be deducted added from/to the net amount of the bill after deducting the cost of material supplied by the department.

C. Quality Control

17. Tests

17.1 The Contractor shall be responsible for:

- a. Carrying out the tests prescribed in specifications, and
- b. For the correctness of the test results, whether performed in his laboratory or elsewhere.

17.2 The contractor shall have to establish field laboratory within the time specified and having such equipments as are specified in the Contract Data.

17.3 Failure of the Contractor to establish laboratory shall attract such penalty as is specified in the Contract Data.

17.4 Ten percent of the mandatory test prescribed under the specification shall be got carried out through laboratories accredited by national Accreditation Board of laboratories (NABL) By

the Engineer-in-charge and the cost of such testing shall be deducted from the payments due to contractor .

18. Correction of Defects noticed during the Defect Liability Period

- 18.1 The Defect Liability Period of work in the contract shall be as per the Contract Data.
- 18.2 The Contractor shall promptly rectify all defects pointed out by the Engineer well before the end of the Defect Liability Period. The Defect Liability Period shall automatically stand extended until the defect is rectified.
- 18.3 If the Contractor has not corrected a Defect pertaining to the Defect Liability Period to the satisfaction of the Engineer, within the time specified by the Engineer, the Engineer will assess the cost of having the Defect corrected, and the cost of correction of the Defect shall be recovered from the Performance Security or any amount due or that may become due to the contractor and other available securities.

D. COST CONTROL

19. Variations - Change in original Specifications, Designs, and Drawings etc.

- 19.1 The Engineer-in-charge shall have power to make any alterations, omissions or additions to or substitutions in the original specifications, drawings, designs and instructions, that may appear to him to be necessary during the progress of the work and the contractor shall carry out the work in accordance with any instructions which may be given to him in writing signed by the Engineer-in-charge, and such alterations, omission, additions or substitutions shall not invalidate the contract and any altered, additional or substituted work, which the contractor may be directed to do in the manner above specified, as part of the work, shall be carried out by the contractor on the same conditions in all respects on which he agrees to do the main work.
- 19.2 The time for the completion of the work shall be adjusted in the proportion that the altered, additional or substituted work bears to the original contract work and the certificate of the Engineer-in-charge shall be conclusive as to such proportion.

20. Extra items

- 20.1 All such items which are not included in the priced BOQ shall be treated as extra items.

21. Payments for Variations and / or Extra Quantities

- 21.1 The rates for such additional (Extra quantity), altered or substituted work / extra items under this clause shall be worked out in accordance with the following provisions in the irrespective order:
 - a. The contractor is bound to carry out the additional (Extra quantity), work at the same rates as are specified in the contract for the work.
 - b. If the item is not in the priced BOQ and is included in the SOR of the department, the rate shall be arrived at by applying the quoted tender percentage on the SOR rate.
 - c. If the rates for the altered or substituted work are not provided in applicable SOR - such rates will be derived from the rates for a similar class (type) of work as is provided in the contract (priced BOQ) for the work.
 - d. If the rates for the altered, substituted work cannot be determined in the manner specified in the sub clause (c) above - then the rates for such composite work item shall be worked out on the basis of the concerned Schedule of Rates minus/plus the percentage quoted by the contractor.

- e. If the rates for a particular part or parts of the item is not in the Schedule of Rates and the rates for the altered, or substituted work item cannot be determined in the manner specified in sub clause (b) to (d) above, the rate for such part or parts will be determined by the Competent Authority, as defined in the Contract Data on the basis of the rate analysis derived out of prevailing market rates when the work was done.
- f. But under no circumstances, the contractor shall suspend the work on the plea of non-acceptability of rates on items falling under sub clause (a) to (d). In case the contractor does not accept the rate approved by the Engineer in Charge for a particular item, the contractor shall continue to carry out the item at the rates determined by the Competent Authority. The decision on the final rates payable shall be arrived at through the dispute settlement procedure.

22. No compensation for alterations in or restriction of work to be carried out.

- 22.1. If at any time after the commencement of the work, the Engineer-in-charge for any reason whatsoever, not require the whole or any part of the work as specified in the bid to be carried out the Engineer-in-charge shall give notice in writing of the fact to the Contractor and withdraw that whole or any part of the work.
- 22.2 The Contractor shall have no claim to any payments or compensation whatsoever, on account of any profit or advantage which he might have derived from the execution of work in full or on account of any loss incurred for idle men and machinery due to any alteration or restriction of work for whatsoever reason.
- 22.3 The Engineer-in-charge may supplement the work by engaging another agency to execute such portion of the work, without prejudice to his rights.

23. 'No Interest Payable

No interest shall be payable to the Contractor on any payment due or awarded by any authority.

24. Recovery from Contractors

Whenever any claim against the Contractor for the payment arises under the contract, the Department may be entitled to recover such sum by:

- (a) Appropriating, in part or whole of the Performance Security and Additional Performance Security, if any; and/or Security Deposit and / or any sums payable under the contract to the contractor.
- (b) If the amount recovered in accordance with (a) above is not sufficient, the balance sum may be recovered from any payment due to the contractor -under any other contract of the department, including the securities which become due for release.
- (c) The department shall, further have an additional right to effect recoveries as arrears of land revenue under the M.P. Land-Revenue Code.

25. Tax -

- 25.1 The rates quoted by the Contractor shall be deemed to be inclusive of the sales and other levies, duties, cess, toll, taxes of Central and State Governments, local bodies and authorities. But the GST shall be paid extra to the contractor as per rules.
- 25.2 The liability, if any, on account of quarry fees, royalties, octroi and any other taxes and duties in respect of materials actually consumed on public work, shall be borne by the Contractor.

25.3 Any changes in the taxes due to change in legislation or for any other reason shall not be payable to the contractor.

26. Check Measurements

26.1 The department reserves to itself the right to prescribe a scale of check measurement of work in general or specific scale for specific works or by other special orders.

26.2 Checking of measurement by superior officer shall supersede measurements by subordinate officer(s), and the former will become the basis of the payment.

26.3 Any over/excess payments detected, as a result of such check measurement or otherwise at any stage up to the date of completion of the defect liability period specified in this contract, shall be recoverable from the Contractor, as per clause 24 above.

27. Termination by Engineer in charge

27.1 If the Contractor fails to carry out any obligation under the Contract, the Engineer in Charge may by notice require the Contractor to make good the failure and to remedy it within a specified reasonable time.

27.2 The Engineer in Charge, shall be entitled to terminate the Contract if the Contractor

- a) abandons the Works or otherwise plainly demonstrates the intention not to continue performance of his obligations under the Contract;
- b) the Contractor is declared as bankrupt or goes into liquidation other than for approved reconstruction or amalgamation;
- c) without reasonable excuse fails to comply with the notice to correct a particular defect within a reasonable period of time;
- d) the Contractor does not maintain a valid instrument of financial security as prescribed;
- e) the Contractor has delayed the completion of the Works by such duration for which the maximum amount of liquidated damages is recoverable;
- f) If the Contractor fails to deploy machinery and equipment or personnel or set up a field laboratory as specified in the Contract Data;
- g) If the contractor, in the judgment of the Engineer in charge has engaged in corrupt or fraudulent practices in competing for or in executing the contract;
- h) Any other fundamental breaches as specified in the Contract Data.

27.3 In any of these events or circumstances, the Engineer in Charge may, upon giving 14 days' notice to the Contractor, terminate the Contract and expel the Contractor from the Site. However, in the case of sub-paragraph (b) or (g) of clause 27.2, the Engineer in Charge may terminate the Contract immediately.

27.4 Notwithstanding the above, the Engineer-in-Charge may terminate the Contract for convenience by giving notice to the Contractor.

28. Payment upon Termination

28.1 If the contract is terminated under clause 27.3, the Engineer shall issue a certificate for value of the work accepted on final measurements, less Advance Payments and Penalty as indicated in the Contract Data. The amount so arrived at shall be determined by the Engineer-in-Charge and shall be final and binding on both the parties.

28.2 Payment on termination under clause 27.4 above -

If the Contract is terminated under clause 27.4 above, the Engineer shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment, repatriation, of the

Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the contract and less taxes due to be deducted at source as per applicable law.

28.3 If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be recovered as per clause 24 above.

29. Performance Security

The Contractor shall have to submit, performance security and additional performance security, if any, as specified in the Bid Data Sheet at the time of signing of the contract. The contractor shall have to ensure that such performance security and additional performance security, if any remains valid for the period 'as specified in the Contract Data.

30. Security Deposit-

30.1 Security Deposit shall be deducted from each running bill at the rate as specified in the Contract Data. The total amount of Security Deposit so deducted shall not exceed the percentage of Contract Price specified in the Contract Data.

30.2 The security deposit may be replaced by equivalent amount of bank guarantee or fixed deposit receipt assigned to the Employer, with validity up to completion of Defect Liability Period/ extended Delectability Period.

30.3 The Security Deposit shall be refunded on completion of Defect Liability Period plus 3(three) Months.

31. Price Adjustment (Not Applicable for this project)

~~31.1 Applicability~~

- ~~1. Price adjustment shall be applicable only if provided for in the Contract Data.~~
- ~~2. The price adjustment clause shall apply only for the works executed from the date of signing of the agreement until the end of the initial intended completion date or extensions granted for reasons attributed to the Employer by the Engineer.~~
- ~~3. The Contractor shall not be entitled to any benefit arising from the price adjustment clause for extension in the contract period for reasons attributed to the Contractor.~~
- ~~4. In the Force Majeure event the price escalation clause shall apply.~~

~~31.2 Procedure~~

- ~~1. Contract price shall be adjusted for increase or decrease in rates and price of labor, materials, fuels and lubricants in accordance with following principles and procedures and as per formula given in the contract data.~~
- ~~2. The price adjustable shall be determined during each quarter from the formula given in the contract data.~~
- ~~3. Following expression and meaning are assigned to the work done during each quarter:
 $R = \text{Total value of work during the quarter. It would include the amount of secured advance granted, if any, during the quarter, less the amount of secured advance recovered, if any during the quarter, less value of material issued by the department, if any, during the quarter.}$~~
- ~~4. Weightages of various components of the work shall be as per the Contract Data.~~

~~31.3 To the extent that full compensation for any rise or fall in costs to the contractor is not covered by the provisions of this or other clauses in the contract the unit rates and prices included in the~~

~~contract shall be deemed to include amounts to cover the contingency of such other rise or fall in costs.~~

~~31.4 The index relevant to any quarter, for which such compensation is paid, shall be the arithmetical average of the indices relevant of the calendar month.~~

~~31.5 For the purpose of clarity it is pointed out that the price adjustment may be either positive or negative, i.e. if the price adjustment is in favour of the Employer, the same shall be recovered from the sums payable to the Contractor.~~

32. Mobilization and Construction Machinery Advance (Not Applicable to this contract)

~~32.1 Payment of advances shall be applicable if provided in the Contract Data.~~

~~32.2 If applicable, the Engineer in Charge shall make interest bearing advance payment to the contractor of the amounts stated in the Contract Data, against provision by the contractor of an unconditional Bank Guarantee in a form and by a nationalized/ scheduled banks, in the name as stated in the Contract Data in amounts equal to the advance payment. The guarantee shall remain effective until the advance payment has been repaid, but the amount of the guarantee shall be progressively reduced by the amounts repaid by the contractor.~~

~~32.3 The rate of interest chargeable shall be as per Contract Data.~~

~~32.4 The construction machinery advance, if applicable, shall be limited to 80% of the cost of construction machinery and admissible only for new construction machinery.~~

~~32.5 The advance payment shall be recovered as stated in the Contract Data by deducting proportionate amounts from payment otherwise due to the Contractor. No account shall be taken of the advance payment or its recovery in assessing valuations of work done, variations, price adjustments, compensation events, or liquidated damages.~~

33. Secured Advance (Not Applicable to this contract)

~~33.1 Payment of Secured Advance shall be applicable if provided in the Contract Data.~~

~~33.2 If applicable, the Engineer shall make advance payment against materials intended for but not yet incorporated in the Works and against provision by the contractor of an unconditional Bank Guarantee in a form and by a nationalized/ scheduled bank, in the name as stated in the Contract Data, in amounts equal to the advance payment. The guarantee shall remain effective until the advance payment has been adjusted, but the amount of the guarantee shall be progressively reduced by the amounts adjusted by the contractor.~~

~~33.3 The amount of secured advance and conditions to be fulfilled shall be as stipulated in the Contract Data.~~

~~33.4 The Secured Advance paid shall be recovered as stated in the Contract Data.~~

34. Payment Certificates

The payment to the contractor will be as follows for construction work:

- (a) The Contractor shall submit to the Engineer monthly statements of the value of the work executed less the cumulative amount certified previously, supported with detailed measurement of the items of work executed.
- (b) The Engineer shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.
- (c) The value of work executed shall be determined, based on the measurements approved by the Engineer/ Engineer-in-charge.
- (d) The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed:
- (e) The value of work executed shall also include the valuation of Variations and Compensation Events.
- (f) All payments shall be adjusted for deductions for advance payment, security deposit, other recoveries in terms of contract and taxes at source as applicable under the law.

- (g) The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.
- (h) Payment of intermediate certificate shall be regarded as payments by way of advance, against the final payment and not as payments for work actually done and completed.
- (i) Intermediate payment shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be removed and taken away and reconstructed or be considered as an admission of the due performance of the contractor any part thereof, in any respect or the occurring of any claim.
- (j) The payment of final bill shall be governed by the provisions of clause 36 of GCC.

E. Finishing the Contract

35. Completion Certificate

- 35.1 A Completion Certificate in the prescribed format in Contract Data shall be issued by the Engineer-in-Charge after physical completion of the Work.
- 35.2 After final payment to the Contractor a Final Completion Certificate in the prescribed format in the Contract Data shall be issued by the Engineer-in Charge.

36. Final Account

- 36.1 The Contractor shall supply the Engineer with a detailed account of the total amount that the Contractor considers payable for works under the Contract within 21 days of issue of certificate of physical completion of works. The Engineer shall issue a Defects Liability Certificate and certify any payment that is due to the Contractor within 45 days of receiving the Contractor's account if it is correct and complete. If the account is not correct or complete, the Engineer shall issue within 45 days a schedule that states the scope of the corrections or additions that are necessary. If the Account is still unsatisfactory after it has been resubmitted, the matter shall be referred to the Competent Authority as defined in the Contract Data, who shall decide on the amount payable to the Contractor after hearing the Contractor and the Engineer in Charge.
- 36.2 In case the account is not received within 21 days of issue of Certificate of Completion as provided in clause 32.1 above, the Engineer shall proceed to finalize the account and issue a payment certificate within 28 days.

F. Other Conditions of Contract

37. Currencies

All payments will be made in Indian Rupees.

38. Labour

- 38.1 The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.
- 38.2 The Contractor shall, if required by the Engineer, deliver to the Engineer a return in detail, in such form and at such intervals as the Engineer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Engineer may require.

39. Compliance with Labor Regulations

- 39.1 During continuance of the Contract, the Contractor and his Sub Contractors shall abide at all times by all existing labor enactments and rules made there under, regulations, notifications and bye laws of the, State or Central Government or local authority and any other labor law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labor law in future either by the State or the Central Government or the local authority. Salient features of some of the major labour laws that, are applicable to construction industry are given in the Contract Data. The Contractor shall keep the Employer indemnified in

case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made their under, regulations or notifications including amendments, If the Employer is caused to pay or reimburse, such amounts as may .be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/ byelaws/ Acts/Rules / regulations including amendments, if any, on the part of the Contractor, the Engineer/Employer shall have the right to deduct from any money due to the Contractor including his amount of performance security. The Employer/Engineer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer. The employees of the Contractor and the Sub Contractor in no case shall be treated as the employees of the Employer at any point of time.

40. Audit and Technical Examination

Government shall have the right to cause an audit and technical examination of the works and the final bill of the contract including all supporting vouchers abstract etc to be made after payment of the final bill and if as a result of such audit and technical examination any sun is found to have been overpaid in respect of any work done by the contractor under the contract or any work claimed by him to have been done under the contract and found not to; have been executed, the Contractor shall be liable to refund the amount of overpayment and it shall be lawful for Government to recover the same from him in the manner prescribed in clause 24 above and if it is found that the Contractor was paid less than what was due to him, under the contract in respect of any work executed by him under it, the amount of such under payment shall be duly paid by Government to the Contractor.

41. Death or Permanent Invalidity of Contractor

If the Contractor is an individual or a proprietary concern, partnership concern, dies during the currency of the contract or becomes permanently incapacitated, where the surviving partners are only minors, the contract shall be closed without levying any damages/compensation as provided for in clause 28.2 of the contract agreement However, if the competent authority is satisfied about the competence of the survivors, then the competent authority shall enter into a fresh agreement for the remaining work strictly on the same terms and conditions under which the contract was awarded.

42. Jurisdiction

This contract has been entered in the State of Madhya Pradesh and its validity, construction, interpretation and legal effect shall be subjected to the courts at the place where this agreement is entered into. No other jurisdiction shall be applicable.

[End of GCC]

Contract Data

<i>Clause reference</i>	<i>Particulars</i>	<i>Data</i>
1.14	Employer	Executive Director on behalf of USCL, Ujjain
1.15	Engineer	Engineer Nominated by USCL
1.16	Engineer in Charge	Superintending Engineer
1.12	Stipulated period of completion	Eighteen (18) months (including Rainy season)
3	Language & Law of Contract	Indian Contract Act 1872
4	Address & contact details of the Contractor	As per Annexure H
	Address & contact details of the Employer/ Engineer- phone, Fax, email.	Executive Director, USCL
5	Subcontracting permitted for the Contract Value	Up to 25% by approval of employer
6	Technical Personnel to be provided the contractor—requirement, & Penalty, if required Technical Personnel not employed (for full time staff) . In case the part time Personnel are not deployed as per requirements the payments shall be deducted on pro Rata basis.	As per Annexure - I (Format I-3) As defined Annexure-I
10	Specifications	As per Annexure E
	Drawings / Location	As per Annexure N
12	Competent Authority for deciding dispute under Dispute Resolution System	Chief Executive officer USCL
	Appellate Authority for deciding dispute under Dispute Resolution System	Executive Director, USCL
13	Period for submission of updated construction program	Initial Work Plan shall be submitted within Seven days of Contract signing and then shall be updated. (a) Every Three Months Or (b) At end of every Milestone, Whichever is less
	Amount to be withheld for hot submitting execution program in prescribed period	As per rule (The contractor shall submit the planned as well as executed work in file compatible with Microsoft Project)
13.1	Additional supports for ensuring proper Monitoring	As per Annexure – W
14	Competent Authority for granting Time Extension.	Superintending Engineer / Chief Executive Officer USCL
15	Milestones laid down for the	YES, Refer Scope of Work

	contract	
	If Yes, details of Milestones	As per Annexure – O/ Scope of Work
	Liquidated damage	As per Annexure – P
17	List of equipment for lab	As per Annexure - Q
	Time to establish lab	30 days from the signing of Agreement.
	Penalty for not establishing field Laboratory	Not applicable
18	Defect Liability Period	<p>36 months (3 years) after physical completion of work. Note – in accordance with clause 18.3 (GCC), the Engineer in charge shall intimate the contractor about the cost assessed, for making good the defects, action for correction of defects shall be taken by the Engineer in Charge as below:</p> <p>a) Deploy departmental labour and material or b) Engage a contractor by issuing a work order at contract rate/SOR rate or c) Sanction supplementary work in a existing agreement to a contractor of similar other work or d) Invite open tender or e) Combination of above</p>
21	Competent Authority for determining the rate	Superintending Engineer, USCL
27	Any other condition for breach of contract	Yes, as below: If the contractor fails to achieve 50 % financial progress in any milestone and/or fails to achieve 75% financial progress in two consecutive milestone
28	Penalty	Penalty Shall include (a) Security deposit as per clause 30 of General Conditions of Contract and (b) Liquidated Damages imposed as per clause 15
29	Performance guarantee (Security) shall be valid up to	Till issue of physical Completion Certificate as per Clause 35.1 plus Defect Liability Period plus 3 months.
	Additional Performance guarantee (Security)	The Additional Performance guarantee shall be refunded on completion plus 3 Months.
30	Security Deposit to be deducted from each running bill	At the rate of 7%. of Gross amount of running bill
	Maximum limit of deduction of Security Deposit	Up to 7% of Final Contract Amount.
	30.3 Security deposit refund	50% of the security deposit (accumulated Retention Money) shall be released upon the successful completion of the project and the issuance of the Completion

		Certificate by USCL. The remaining 50% shall be released upon the successful completion of the Defect Liability Period and the issuance of the Final Acceptance Certificate.
31	Price Adjustment formula and procedure to calculate	Not Applicable.
31.1 (1)	Price adjustment shall be applicable	NO
32	32:1 Mobilization and Construction Machinery Advance Applicable	No Mobilization and Construction Machinery Advance shall be payable.
	32.2 If yes, Unconditional Bank Guarantee	Not Applicable
	32.3 If yes, Rate of interest chargeable on advances	Not applicable
	32.4 If yes, Type & Amount of Advance payment that can be paid	Not Applicable
	32.5 If yes, Recovery of advance payment	Not Applicable.
33	33.1 secured Advance Applicable	No Secured Advance payable.
	33.2 if yes, Unconditional Bank Guarantee	Not Applicable
	33.2 if yes, Amount of Secured Advance:	Not Applicable
	33.3 if yes, Conditions for secured advance.	Not Applicable
	33.4 if yes, Recovery of Secured advance	Not Applicable
35	Completion certificate - after physical completion of the Work	As per Annexure - U
	Final Completion Certificate — after final payment on completion of the Work	As per Annexure-V
	35.2 Final Payment	The final payment, including the release of the remaining Retention Money, shall be made only after the satisfactory conclusion of the DLP and the issuance of the Final Acceptance Certificate, confirming that the facility is functioning as per the contract specifications and CZA guidelines.
36	Competent Authority for deciding unsatisfactory Final Accounts	Executive Director, USCL
37	Salient features of some of the major labour laws that are applicable	As per Annexure – W

Drawings

The Concept Drawings are attached with the document.

Existing Site

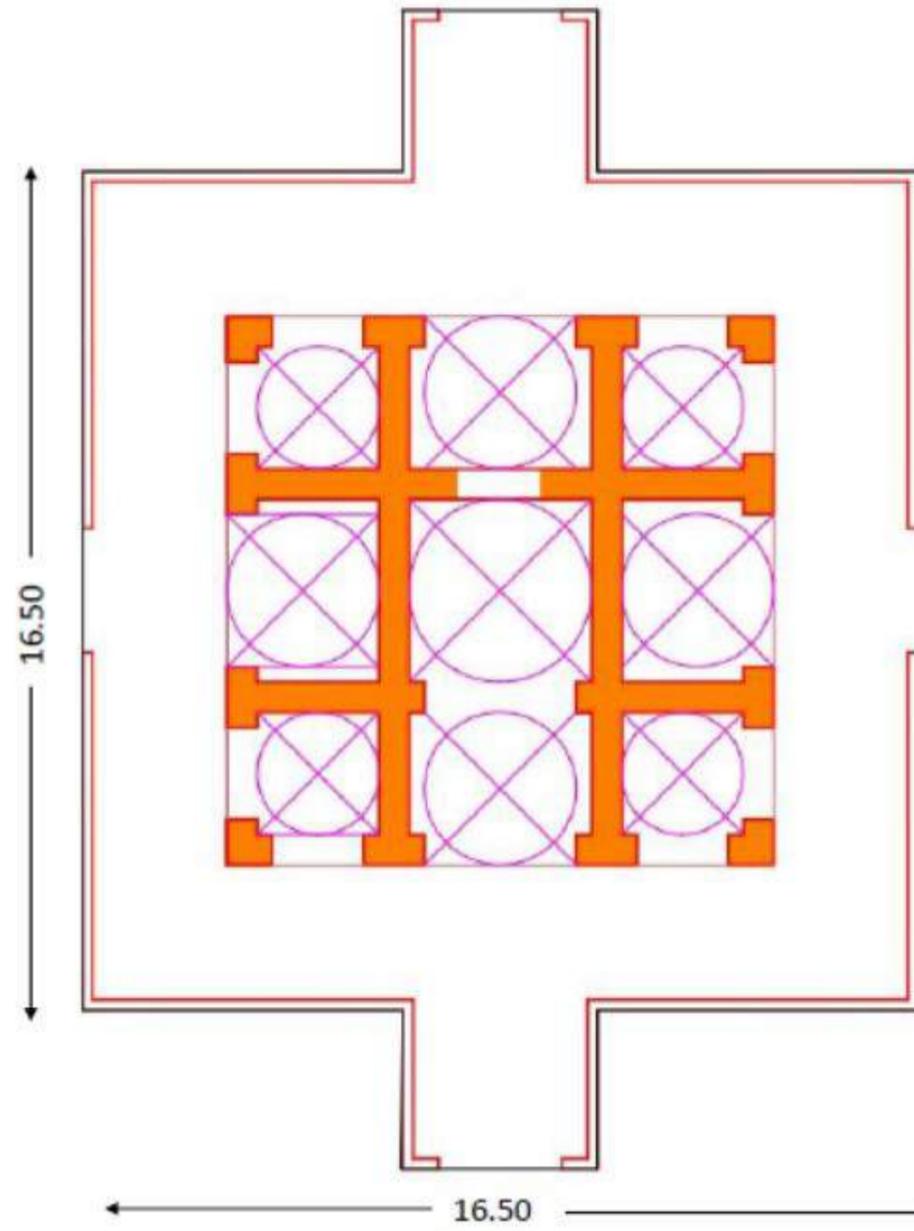




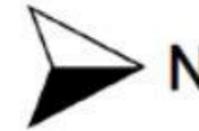
Survey Plan



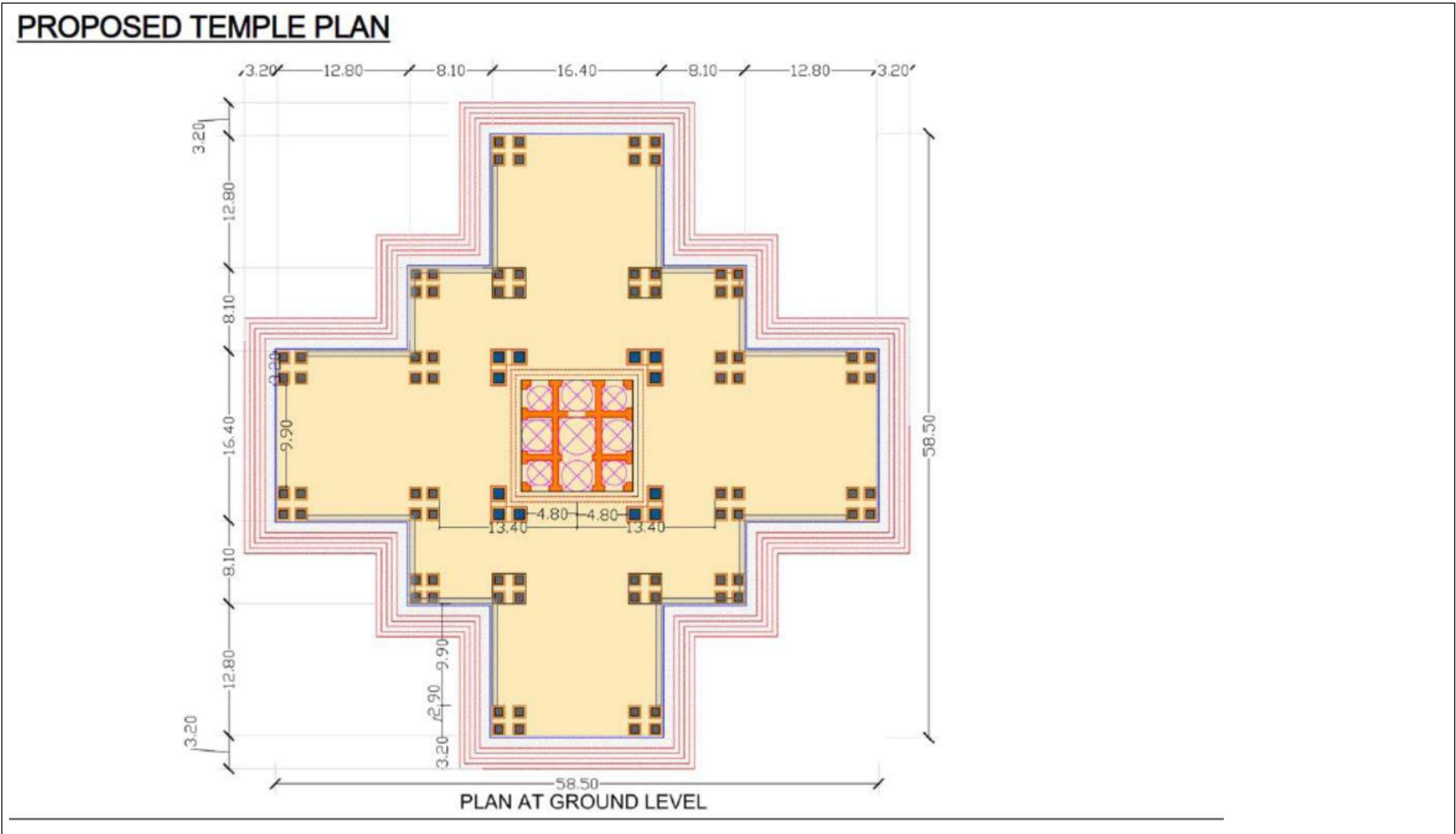
EXISTING TEMPLE



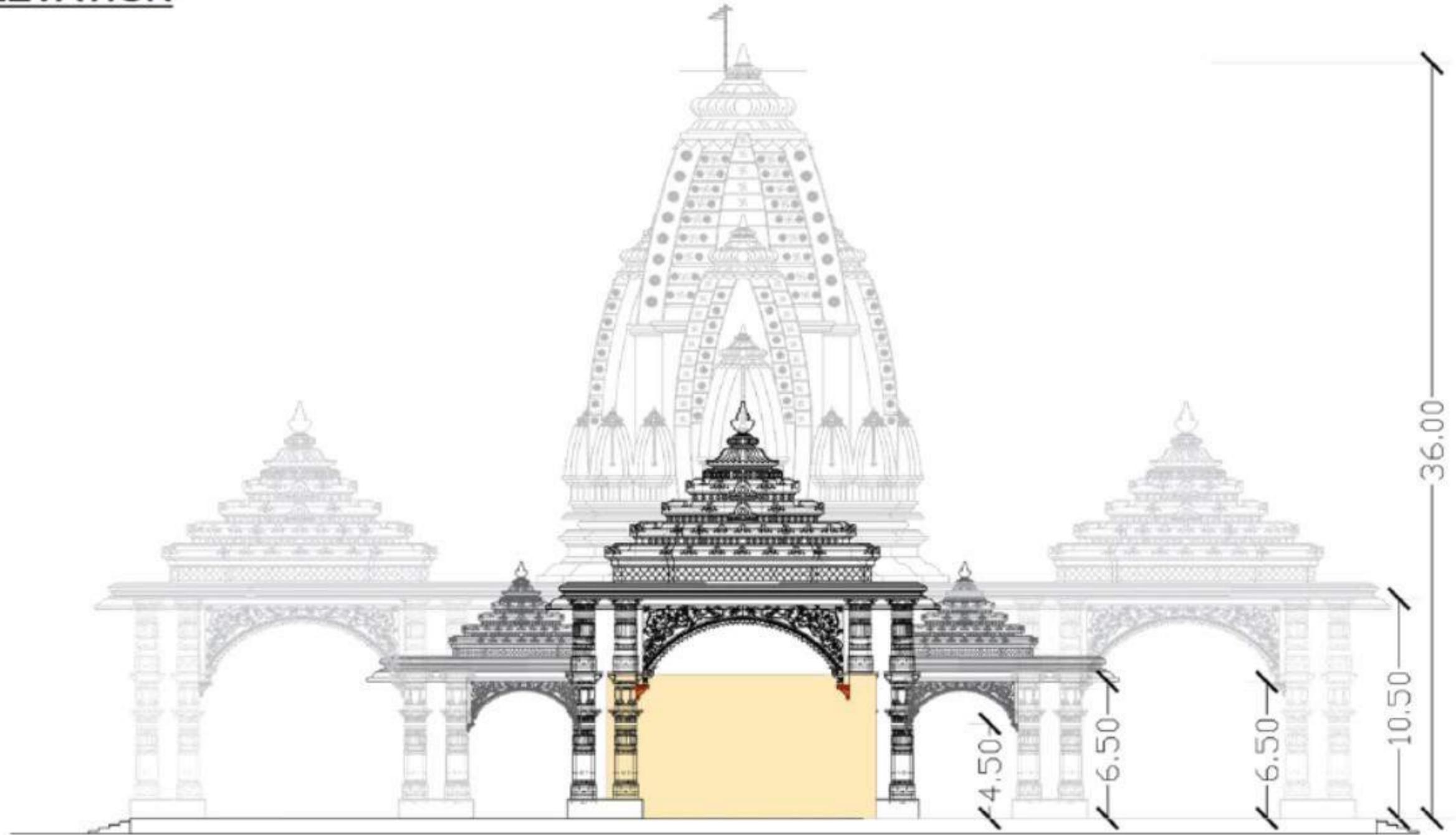
Ex. Temple Area 272 Sq.Mt.



MASTER PLAN



PROPOSED TEMPLE ELEVATION



ELEVATION









ANNEXURE—O
(See clause 15 of Section 3 -GCC)

Details of Milestones

Milestones to be followed are as under:

The time allowed for carrying out the work shall be strictly observed by the contractor and shall be deemed to be essence of the contract

The work shall throughout the stipulated period of contract be proceeded with all due diligence keeping in view that time is the essence of the contract. The contractor shall be bound in all cases to complete the following financial target:

- i. **Milestone 1:** 1/8th of the whole work before 1/4th of the whole time has elapsed
- ii. **Milestone 2:** 3/8th of the whole work before half of the whole time has elapsed
- iii. **Milestone 3:** 3/4th of the whole work before 3/4th of the whole time has elapsed
- iv. **Milestone 4:** Complete work within Stipulated time

***Note:** The commencement date of the project shall be considered from the date of actual Signing date of Contract Agreement.*

ANNEXURE—P
(See clause 15 of Section 3-GCC)

Compensation for Delay

If the contractor fails to achieve the milestones, and the delay in execution of work is attributable to the contractor, the Employer shall retain an amount from the sums payable and due to the contractor as per following scale -

- i. Slippage up to 25% in financial target during the milestone under consideration 2.5% of the work remained unexecuted in the related time span.
- ii. Slippage exceeding 25% but Up to 50% in financial target during the milestone under consideration - 5% of the work remained unexecuted in the related time span.
- iii. Slippage exceeding 50% but Up to 75% in financial target during the milestone under consideration -7.5% of the work remained unexecuted in the related time span,.
- iv. Slippage exceeding 75% in financial target during the milestone under consideration-10% of the work remained unexecuted in the related time span.

***Note:** For arriving at the dates of completion of time span related to different milestones, delays which are not attributable to the Contractor shall be considered. The slippage on any milestone is if made good in subsequent milestones or at the time of stipulated period of completion, the amount retained as above shall be refunded. In case the work is not completed within the stipulated period of completion along with all such extensions which are granted to the Contractor for either Employer's default or Force Majeure, the compensation shall be levied on the contractor at the rate of 0.05% per day of delay limited to a maximum of 10% of contract price. The decision of Superintending Engineer shall be final and binding upon both the parties.*

Annexure – Q
(See clause 17 of Section 3 GCC)

List of Equipment for Quality Control Lab

Suggestive list of equipment required in the field laboratory to be set up by Contractor at no additional cost to Authority.

S.No.	Equipment	Min. Nos. Required.
For Building Construction Projects		
1.	IS sieves with lid/pan: Size in mm: 100, 90, 80, 63, 53, 45, 37.5, 26.5, 19,13.2,11.2,9.5,4.75,2.8,5.6,3.35,2.36, 600 , 500, 425,355, 250, 212, 180, 150, 90, 75, 63,53,45,and 38 micron,	1 set
2.	Cube moulds 70 mm for mortar	6
3.	Cube moulds for CC 150 mm	6
4.	Compression testing machine 200t	1
5.	Electronic/digital balance 1 kg with least count of 0.01g	1
6.	Electronic / digital balance 5 kg	1
7.	Pan balance with weight box 5 kg.	1
8.	Enameled tray	6
9.	Oven (300oC) thermostatically controlled, sensitivity 1oC	1
10.	Slump cone	1
11.	First Aid Box	1
12.	Vicat Apparatus	1
13.	Room cooling equipment for temperature control	1 or 2
14.	Atterberg Limit Apparatus	1
For Road Construction Projects:		
1.	Additional -IS sieves with lid/pan: Size in mm: 125, 106, 75, 50, 40, 31.5, 25, 22.4, 20, 16, 12.5, 10, 8.6, 8, 6.7, 6.3, 4.75,2.8,5.6, 125, and 38 micron,	1set
2.	Balance 20 kg with 1 gm accuracy	1
3.	Proving ring 10kg, 50kg,100kg capacity	1 each
4.	Dial Gauge 25 mm, 50 mm travel (sensitivity 0.01 mm /division)	6 each
5.	Water bath (Electrically operated and thermostatically controlled) , water still (capacity 4 lit/hour)	1 each
6.	Thermometers: -Metallic type (Mercury in steel) with 300mm stem for near and distant readings. Glass type (mercury in glass) range of 110oC to 250oC	4 4
7.	Glassware: Flasks, beakers, Graduated cylinders, spatulas, wire gauges, scoops, steel scales, measuring tapes (30m, 15m, 5m), filter paper, glass marking pencils, heat resistant hand gloves, vernier calipers etc. Table lamp	
8.	Camber boards 3 m long	3
9.	Straight Edge 3 m long	1
10.	Thickness gauge	1
11.	Precision Level and staff, total station/theodolite	1 set each
12.	Rapid moisture meter.	1 set
13.	Liquid limit device	1
14.	Post hole auger (100 mm dia)	1
15.	Sampling Pipette 10 ml.	1
16.	B.S. Compaction apparatus	1
17.	Sand replacement equipment.	1
18.	Lab CBR equipment	1
19.	Core 100 mm cutter.	1
20.	Flakiness and Elongation gauges	1

S.No.	Equipment	Min. Nos. Required.
21.	Aggregate Impact value apparatus.	1
22.	Digging tools pickaxe, pan, axe, shovels,	LS
30.	Sieve shaker	1
31.	Steel tapes 50 m	1
32.	Steel tapes 5m	2
34.	Computer, printer , modem and internet	1 set.
35.	Others if required:	

- The contractor shall arrange to provide fully furnished and adequately equipped field laboratory with adequate qualified technical staff. Preferably located adjacent to the Project Office and provided amenities like water supply, electric supply etc.
- The laboratory equipment shall confirm I.S. specifications and MOST/MORTH/Applicable specifications. The Contractor shall carry out the calibration of the instruments as directed by the Engineer in- Charge on expiry date of calibration. On completion of work in all respect, the equipment will be the sole property of the contractor.
- It shall be considered as incidental to the work, and no extra payment will be made, what so ever, will not be made for the same.

ANNEXURE - R
(See clause 31 of Section 3 -GCC)

Price Adjustment
(Not Applicable)

The formulas for adjustment of price are as follow:

R = Value of work as defined in Clause 31.2(3) of General Conditions of Contract

Weightages* of component in the work

S.No.	Component	Percentage of Component in the work
1.	Cement - P _e	
2.	Steel - P _s	
3.	Bitumen - P _b	
4.	POL - P _f	

* Weightages of various components of the work shall be as determined by the competent Technical authority.

Adjustment for cement component

(ii) Price adjustment for increase or decrease in the cost of cement procured by the contractor shall be paid in accordance with the following formula:

$$V_e = 0.85 \times P_e / 100 \times R \times (C_1 - C_0) / C_0$$

V_e = increase or decrease in the cost of cement during the month under consideration due to changes in rates for cement.

C₀ = The all India wholesale price index for Grey cement on the date of opening of Bids as published by the Ministry of Industrial Development, Government of India, New Delhi (www.eaindustry.nic.in)

C₁ = The all India average wholesale price Index for grey cement for the month under consideration as published by Ministry Government of India, New Delhi. (www.eaindustry.nic.in)

P_e = Percentage of cement component of the work

Note: For the application of this clause, index of Grey Cement has been chosen to represent Cement group.

Adjustment of steel component

(iii) Price adjustment for increase or decrease in the cost of steel procured by the Contractor shall be paid in accordance with the following formula:

$$V_s = 0.85 \times P_s \times R \times (S_1 - S_0) / S_0$$

V_s = Increase or decrease in the cost of work during the month under consideration due to changes in the rates for steel.

S₀ = The all India wholesale price index for steel (Bars and Rods) on the date of opening of Bids as published by the Ministry of Industrial Development, Government of India, New Delhi (www.eaindustry.nic.in)

S₁ = the all India average wholesale price index for steel (Bars and Rods) for the month under consideration as published by Ministry of Industrial Development, New Delhi (www.eaindustry.nic.in)

P_s = Percentage of steel component of the Work.

Note : For the application of this clause, index of Bars and Rods has been chosen to represent steel group.

Adjustment bitumen component

(iv) Price adjustment for increase or decrease in the cost of bitumen shall be paid in accordance with the following formula:

$$V_b = 0.85 \times P_b / 100 \times R \times (B_1 - B_0) / B_0$$

V_b = Increase or decrease in the cost of work during the month under consideration due to changes in rates for bitumen.

B_0 = The official retail price of bitumen of IOC depot at nearest center on the date of opening of Bids.

B_1 = The official retail price of bitumen of IOC depot at nearest center for the 15th day of the month under consideration.

P_b = Percentage of bitumen component of the work.

Adjustment of POL (fuel and lubricant) component

(v) Price adjustment for increase or decrease in cost of POL (fuel and lubricant) shall be paid in accordance with the following formula:

$$V_f = 0.85 \times P_f / 100 \times R \times (F_1 - F_0) / F_0$$

V_f = Increase or decrease in the cost of work during the month under consideration due to changes in rates for fuel and lubricant.

F_0 = the official retail price of High speed Diesel (HSD) at the existing consumer pumps of IOC at nearest center on the date of opening of Bids.

F_1 = The official retail price of HSD at the existing consumer pumps of IOC at nearest center for the 15th day of month of the under consideration.

P_f = Percentage of fuel and lubricants component of the work.

Note: For the application of this clause, the price of High Speed Diesel has been chosen to represent fuel and lubricants group.

Annexure - S
(See clause 32 of Section 3-GCC)

Bank Guarantee Form for Mobilization and Construction Machinery Advance

Not applicable for this Contract

To

_____ [name of Employer]
_____ [address of Employer]
_____ [name of Contractor]

_____ In accordance with the provisions of the General Conditions of Contract, clause 31 (“Mobilization and Construction Machinery Advance”) of the above mentioned Contract _____ [name and address of Contractor] (hereinafter called “the Contractor”) shall deposit with _____ [name of Employer] a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of _____ [amount of Guarantee]* _____ in words].

We, the _____ (bank of financial institution), as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as principal obligator and not as surety merely, the payment to _____ (name of Employer) of the full amount without whatsoever right of obligation on our part and without his first claim to the Contractor of the amount not exceeding ‘[amount of guarantee]* _____ in words’.

We further agree that no change or addition to or other modification of the terms of the Contractor or Works to be performed thereunder or of any of the Contract documents which may be made between _____ [name of Employer] and the Contractor, shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment under the contract until _____ [name of Employer] receives full repayment of the same amount from the Contractor.

Yours truly,

Signature and Seal: _____
Name of Bank/Financial Institution: _____
Address: _____
Date: _____

* _____ An amount shall be inserted by the Bank or Financial Institution representing the amount of the Advance Payment and denominated in Indian Rupees.

Annexure - T
(See clause 33 of Section 3 -GCC)

Bank Guarantee Form for Secured Advance
(Not Applicable for this Contract)

INDENTURE FOR SECURED ADVANCES

This indenture made the _____ day of _____ 20__ BETWEEN _____ (hereinafter called the contractor which expression shall where the context so admits or implies be deemed to include his executors, administrators and assigns) or the one part and the Employer of the other part.

Whereas by an agreement dated _____ (hereinafter called the said agreement) the contractor has agreed:

AND WHEREAS the contractor has applied to the Employer that he may be allowed advanced on the security of materials absolutely belonging to and brought by him to the site of the works the subject of the said agreement for use in the construction of such of the works as he has undertaken to execute at rates fixed for the finished work (i.e. net of the cost of materials and labour and other charges)

AND WHEREAS the contractor has agreed to advance to the Contractor the sum of Rupees _____ on the security of materials the quantities and other particulars of which are detailed in Account of Secured Advances attached to the Running Account Bill for the said works signed by the Contractor on _____ and the Employer has reserved to himself the option of making any further advance or advances on the authority of other materials brought by the Contractor to the site of the said works.

Now THIS INDENTURE WITNESSETH that in pursuance of the said agreement and in consideration of the sum of Rupees _____ on or before the execution of these presents paid to the Contractor by the Employer (the receipt where of the Contractor doth hereby 'acknowledge) and of such further advances (if any) as may be made to him as a for said the Contractor doth hereby covenant and agree with the President and declare as follows:

That the said sum of Rupees _____ so advanced by the Employer to

(1) the Contractor as aforesaid and all or any further sum of sums advanced as aforesaid shall be employed by the Contractor in or towards expending the execution of the said works and for no other purpose whatsoever.

(2) That the materials details in the said Account of Secured Advances which have been offered to and accepted by the Employer as security are absolutely the Contractor's own propriety and free from encumbrances of any kind and the contractor will not make any application for or receive a further advance, on the security Of materials which are not absolutely his own property and free from encumbrances of any kind and the Contractor indemnified the Employer against all claims to any materials in respect of which an advance has be made to him as aforesaid.

(3) That the materials detailed in the said account of Secured Advances and all other materials on the security of which any further advance or advances may here after be made as aforesaid (hereafter called the said materials) shall be used by the Contractor solely in the execution of the said works in accordance with the directions of the Engineer.

(4) That the Contractor shall make at his own cost all necessary and adequate arrangements for the proper watch, safe custody and protection against all risks of the said materials and that until used in construction as aforesaid the said materials shall remain at the site of the said works in the Contractor's custody and on his own responsibility and shall at all times be open to inspection by the Engineer or any officer authorized by him. In the event of the said materials or any part thereof being stolen, destroyed or damaged or becoming deteriorated in a greater degree than is due to reasonable use and wear thereof the Contractor will forthwith replace the same with other materials of like quality or repair and make good the same required by the Engineer.

(5) — That the said materials shall not be removed from the site of the said works except with the written permission of the Engineer or an officer authorized by him on that behalf.

(6) — That the advances shall be repayable in full when or before the Contract receives payment from the Employer of the price payable to him for the said works under the terms and provisions of the said agreement. Provided that if any intermediate payments are made to the Contractor on account of work done than on the occasion of each such payment the Employer will be at liberty to make a recovery from the Contractor's bill for such payment by deducting there from the value of the said materials than actually used in the construction and in respect of which recovery has not been made previously, the value for this purpose being determined in respect of each description of materials at the rates at which the amounts of the advances made under these presents were calculated.

(7) — That if the Contractor shall at any time make any default in the performance or observance in any respect of any of the terms and provisions of the said agreement or of these presents the total amount of the advance or advances that may still be owing of the Employer shall immediately on the happening of such default were payable by the Contractor to be the Employer together with interest thereon at twelve percent per annum from the date or respective dates of the advance or advances to the date of repayment and with all costs, charges, damages and expenses incurred by the Employer in or for the recovery thereof or the enforcement of this security, or otherwise by reason of the default of the Contractor and the Contractor hereby covenants and agrees with the Employer to reply and pay the same respectively to him accordingly.

(8) — That the Contractor hereby charges all the said materials with the payment to the Employer of the said sum of Rupees _____ and any further sum of sums advanced as aforesaid and all costs, charges, damages and expenses payable under these presents PROVIDED ALWAYS and it is hereby agreed and declared that notwithstanding anything in the said agreement and without prejudice to the power contained therein if and whenever the covenant for payment and repayment here in before contained shall become enforceable and the money owing shall not be paid in accordance therewith the Employer may at any time thereafter adopt all or any of the following courses as he may deem fit.

(a) — Seize and utilize the said materials or any part thereof in the completion of the said works on behalf of the contractor in accordance with the provision in that behalf contained in the said agreement debiting the contractor with the actual cost of effecting such completion and the amount due to the contractor with the value of work done as if he had carried it out in accordance with the said agreement and at the rates thereby provided. If the balance is against the contractor, he is to pay same to the Employer on demand.

(b) — Remove and sell by public auction the seized materials or any part thereof and out of the moneys arising from the sale retain all the sums aforesaid repayable or repayable to the Employer under these presents and pay over the surplus (if any) to the Contractor.

(c) — Deduct all or any part of the moneys owing out of the security deposit or any sum due to the Contractor under the said agreement.

(9) — That except in the event of such default on the part of the contractor as aforesaid interest on the said advance shall not be payable.

(10) — That in the event of any conflict between the provisions of these presents and the said agreement the provisions of these presents shall prevail and in the event of any dispute or difference arising over the construction or effect of these presents the settlement of which has not been here in before expressly provided for the same shall be referred to the Employer whose decision shall be final and the provision of the Indian Arbitration Act for the time being in force shall apply to any such reference.

Annexure - U
(See clause 35 of Section 3 -GCC)

Physical Completion Certificate

Name of Work:

.....
.....
.....

Agreement NoDate

Amount of Contract Rs

Name of Agency

UsedMB No.

Last measurement recorded

a. Page No. &MB No. _____

b. Date _____

Certified that the above mentioned work was physically completed on(date) and taken over on(date) and that I have satisfied myself to best of my ability that the work has been done properly.

Date of issue

Executive Engineer/Engineer-in-charge

.....
.....

Annexure-V
(See clause 35 of Section 3-GCC)

Final Completion Certificate

Name of Work:

.....
.....
.....

Agreement noDate

Name of Agency:

Used MB No.

Last measurement recorded

a: Page No. & MB No. _____

b. Date _____

Certified that the above mentioned work was physically completed on(date) and taken over on(date).

Agreemented amount Rs

Final Amount paid to contractor Rs.

Incumbency of officers for the work

I have satisfied myself to best of my ability that the work has been done properly.

Date of issue

Executive Engineer

.....

.....

Annexure - W
(See clause 39 of Section 3 -GCC)

Salient Features of Some Major Labour Laws Applicable

- a) **Workmen Compensation Act 1923** The Act provides for compensation in case of injury by accident arising out of and during the course of employment.
- b) **Payment of Gratuity Act 1972:-** Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed the prescribed minimum years (say, five years) of service or more or on death the rate of prescribed minimum days'(say, 15 days) wages for every completed year of service. The Act is applicable to all establishments employing the prescribed minimum number (say, 10) or more employees.
- c) **Employees P.F. and Miscellaneous Provision Act 1952:** The Act Provides for monthly contributions by the Employer plus workers at the rate prescribed (say, 10% or 8.33%), The benefits payable under the Act are:
- i. Pension or family pension on retirement or death as the case may be.
 - ii. Deposit linked insurance on the death in harness of the worker.
 - iii. Payment of P.F. accumulation on retirement/death etc.
- d) **Maternity Benefit Act 1951:** - The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.
- e) **Contract Labour (Regulation & Abolition) Act 1970:** - The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the contractor fails to provide, the same are required to be provided, by the Principal Employer by Law.. The principal Employer is required to take certificate of Registration and the Contractor is required to take license from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer if they employ prescribed minimum (say 20) or more contract labour.
- f) **'Minimum Wages Act 1948;** - The Employer is to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of buildings, roads, runways is scheduled employment.
- g) **Payment of Wages Act 1936:** - It lays down as to by what date the wages are to be paid when it will be paid and what deductions can be made from the wages of the workers.
- h) **Equal Remuneration Act 1979:** - The Act provides for payment of equal wages for work of equal nature to male and female workers and for not making discrimination against female employees in the matters of transfers, training and promotions etc.
- l) **Payment of Bonus Act 1965:** - The Act is applicable to all establishments employing prescribed minimum (say, 20) or more workmen. The Act provides for payments of annual bonus within the prescribed range of percentage of wages to employees drawing up to the prescribed amount of wages, calculated in the prescribed manner. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. States may have different number of employment size.
- j) **Industrial Disputes Act 1947:** - The Act lays down the machinery and procedure for resolution of industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.

- k) **Industrial Employment (Standing Orders) Act 1946:** - It is applicable to all establishments employing prescribed minimum (say, 100, or 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and gets these certified by the designated Authority.
- l) **Trade Unions Act 1926:** - The Act lays down the procedure for registration of trade unions of workmen and Employers. The Trade Unions registered under the Act have, 'been given certain immunities from civil and criminal liabilities.
- m) **Child Labour (Prohibition & Regulation) Act 1986:** - The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulations of employment of children in all other occupations and processes. Employment of child labour is prohibited in building and construction industry.
- n) **Inter-State Migrant Workmen's (Regulation of Employment & Conditions of Service) Act 1979:** - The Act is applicable to an establishment which employs prescribed minimum (say, five) or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as Housing, Medical-Aid, Traveling expenses from home up to the establishment and back etc.
- o) **The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996** - All the establishments who carry on any building or other construction work and employs the prescribed minimum (say, 10) or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the building or construction work and other welfare measures, such as canteens, first-aid facilities, ambulance, housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.
- p) **Factories Act 1948:** - The Act lays down the procedure for approval of plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing the prescribed minimum (say, 10) persons or more with aid of power, or another prescribed minimum (say, 20) or more persons without the aid of power engaged in manufacturing process.

SECTION 4

CONDITIONS OF CONTRACT [Part II: Special Conditions of Contract (SCC)]

1. All works shall be carried out in strict accordance to the norms, procedure and specifications issued and enforced by BIS in Relevant Indian Standard specifications and code of Practices with up-to-date amendments and revisions, latest edition of National building code and National electric code. In addition, the installation shall comply in all respects with the requirements of Indian Electricity Act 1910 and Indian Electricity Rule 1956 with up-to-date amendments and revisions and special requirements if any of the M.P. State Electricity Board or Chief Electrical Advisor to Government of Madhya Pradesh cum Chief Electrical Inspector and his subordinate office.
2. The contractor shall make his own arrangements for supply of water and electricity at his expense required for execution of work. The USCL shall neither make any such arrangements nor shall make any payments in this regard.
3. The contractor has to construct at his own cost his site office and store at site on a suitable place and location as permitted by USCL. The USCL shall not provide any place or room in the building under construction for storage of equipment's required for work. No amount shall be paid to the contractor in this regard. The site office shall have also an arrangement of one room for office of Employers representatives. No additional cost shall be paid for same.
4. Proper upkeep and maintenance and safety of store and stocks of materials brought at site shall be the sole responsibility of the contractor. The materials got damaged due to negligence of its up keeping at site or due to mishandling shall have to be replaced by the contractor at his own cost. On discovery of such damages the USCL shall recover the amount paid through the running bills to the contractor and shall only be reimbursed after the replacement of the same. The USCL shall also not be responsible for theft of materials from site and the contractor has to replace all such materials at his own cost. No compensation whatsoever shall be payable to the contractor on above grounds.
5. Time being the essence of the contract, the contractor shall before drawl of agreement prepares a detail time bound work execution program which shall be approved by Engineer in charge. The contractor has to execute the work in strict accordance to the time bound execution program (The contractor shall submit the planned as well as executed work in file compatible with Microsoft Project) submitted by him, mutually agreed, approved.
6. Time schedule can be revised by the USCL for any unforeseen unavoidable reasons whatsoever. It may be necessary to stop the work at certain place due to some unavoidable reasons and restart the work at later date. Such contingencies shall not vitiate the contract and shall not be considered a ground for extra claim for any reason whatsoever. However time extension shall be allowed only for such days for which the work was stopped by USCL.
7. The contractor shall not be entitled to any compensation for any loss suffered by him on account of delay in commencement or execution for work whatever the cause of delay may be including delay arising out of other materials, supply of materials, transportation for any matter related with MPPKVV Co. Ltd. &Electrical Safety Department or any other reasons whatsoever, the USCL shall not be liable for any claim in respect thereof.
8. Rate quoted shall be applicable for works at all height unless otherwise specified in the schedule of quantities.
9. The contractor shall submit test reports of the equipment's to be supplied and drawings for approval of the Engineer in charge before supplying/Installation the equipment. The successful tenderer shall also submit the purchase bill of all items as required and directed at no cost.
10. The contractor shall have to arrange all free of cost facilities for the inspection, such as employ or material labor etc. and any fees payable to Government or any competent authority at his own cost.
11. The consultant / Contract employees appointed by USCL are authorized for following:
 - a) To visit the site from time to time to inspect the quality of work.
 - b) To check / issue working drawings with specifications to the contractor.
 - c) Technically guide the contractor if required.
 - d) To accompany USCL officials for factory inspections of material if required.

12. The contractor shall be responsible for removal of all defects and shall make rectification in the work at his own cost if any at the time of handing over without any claim for compensation.
13. The contractor has to quote his rates for items in strict accordance to the list of approved make of materials. The tenderer has to ensure before filling up the rates regarding their availability and period of delivery.
14. The contractor shall note that during the execution of works there is likelihood in change of site/ specification and change in quantities of items entered in the schedule of items for which the contractor has tendered his rates. The increase or decrease in the quantities of such items may be up to any extent and the tenderer shall not be entitled to any compensation for any loss suffered by him on account or procurement of additional quantities of such items due to such changes.
15. Time schedule may be revised by the USCL from time to time keeping in view of the approval of concepts / drawings or items or for any reasons whatsoever. It may be necessary to stop the work at certain places due to some unavoidable reasons and restart the work at later date. Such contingencies shall not vitiate the contract and shall not be considered a ground for extra claim.
16. The contractor shall not be entitled to many compensations for any loss suffered by him on account of delay in commencement or execution of work whatever the cause of delay may be including delay arising out of other materials or any reasons whatever and the USCL shall not be liable for any claim in respect thereof.
17. The Contractor shall:
 - a. comply with all applicable safety regulations,
 - b. take care for the safety of all persons entitled to be on the Site,
 - c. use reasonable efforts to keep the Site and Works clear of unnecessary obstruction so as to avoid danger to the persons. provide fencing, lighting, guarding and watching of the Works until completion.
18. Provide any Temporary Works (including roadways, footways, guards and fences) which may be necessary, because of the execution of the Works, for the use and protection of the public and workers.
19. The Contractor has to ensure that the works included in this contract are done in strict accordance with all approved concepts and specifications and in accordance with manufacturer's instructions for application.
20. The site shall have to be sprinkled with water so that dust settles down. Dust control sprinkling shall have to be done several times a day during hot, dry weather depending on the site requirement.
21. Contractor shall ensure safe workplace and shall install safety signs.
22. The excavation is to be done carefully to avoid damage to underground cables and other service lines.
23. Appointment of Agency will be done on lowest rate quoted in tender, Quantity and place of work shall be decided by the authority and shall be binding to Successful bidder.
24. Order of precedence
In a situation of contractual disputes or ambiguities the priority of documents is set out as
 - a. the Contract Agreement (if any).
 - b. any Addenda / Corrigendum
 - c. the Letter of Acceptance. (if any).
 - d. the Letter of Tender. (if any).
 - e. the Particular Conditions.
 - f. General Conditions,
 - g. Site Works Instructions
 - h. the Specification.
 - i. the Drawings, and
 - j. the Schedules and any other documents forming part of the Contract.
25. Extra items
All such items which are not included in the priced BOQ shall be treated as extra items.
-Not Applicable
26. COVID-19 Health and Safety Protocols
General Obligations of the Contractor:

- To take all necessary precautions to maintain the health and safety of the Contractor's Personnel.
- To ensure, in collaboration with local health authorities, access to medical help, first aid and ambulance services are available for workers/labors, as and when needed.
- Provide health and safety training/orientation on COVID19 to all workers and staff and other employees of the sub-contractor (tips on cough etiquette, hand hygiene and social distancing).
- Prepare a detailed profile of the project work force, key work activities, schedule for carrying out such activities, different durations of contract and rotations, confirmed addresses of the labor and any underlying health conditions that increases the risk of severe infection, to facilitate tracking of workers in case of COVID-19 exposure.
- All laborers to be provided with photo ID cards for accessing the construction site.
- All laborers engaged at construction site to be provided with the required Personal Protection Equipment (PPE) – safety helmet and shoes, secured harness when working at heights, electrical gloves, eye protection for welding etc., without which entry to the construction site shall not be allowed.
- In relation to COVID19, masks, adequate hand washing/ sanitization, clean drinking water and sanitation facilities to be provided at construction site.
- All workers/labor to be regularly checked for symptoms before allowing entry to the work site.
- Paid leave to be mandatorily given if labor contacts COVID-19 and/or any other contagious disease while working at the construction site or in the labor camp.

For Labour Camp:

- Contractor to provide hygienic living conditions and safe drinking water.
- Separate toilets for male and females and adequate hand washing/sanitization facilities.
- Monthly/weekly health check up to be organized at the camp for all labors/family.
- Organize awareness campaign for social distancing and general health and hygiene.

Construction Management in Upgrading of Existing Facilities:

- Maintain a roster of workers/staff at work site indicating their health condition and symptoms and ensure screening procedures (non-physical temperature measurement) at work sites.
- Depute and assign monitoring and reporting responsibilities on environmental management, health and personnel safety.
- Preventing a worker from an affected area or who has been in contact with an infected person from returning to the site for 14 days or (if that is not possible) isolating such worker for 14 days.
- Place posters and signage's at/around the site, with images and text in local languages relating to personal safety, hygiene and on COVID-19 symptoms and guidelines.
- Ensuring hand washing facilities supplied with soap, disposable paper towels and closed waste bins exist at key places throughout site, including at entrances/exits to work areas; where there is a toilet, canteen or food distribution, or provision of drinking water; in worker accommodation; at waste stations; at stores; and in common spaces.
- Segregate lunch hours at worksite of workers to maintain social distancing.
- Securing the construction site with entry only for authorized personnel and disinfecting of the worksite to be undertaken at close of work every day or as may be required.
- Any medical waste produced during the care of ill workers should be collected safely in designated containers or bags and treated and disposed of following relevant requirements (e.g., Biomedical Waste Rules-2018, WHO).

27. Coordination with other Contractors

Due to the peculiar nature and location of the project, and in view of the objective of proper laying of all utility services, and adjacent works being done by other contractors the different contractors will need to work simultaneously and ensure proper mutual coordination. EMPLOYER reserves the right to require each Contractor to schedule the order of performance of their Work in such a manner as will minimize interference with work of any of the parties involved.

28. Photographic record of works

All the processes of conservation works should be well documented before , during and after execution of the works through photographs by the contractor's team and submitted to the USCL Project regularly, supported with relevant photographs. These photographed should be saved date wise as per work description

29. Add the following Additional Clause 17.5 under C. Quality Control, 17 – Tests in GCC (General Conditions of Contract)

17.5 Third Party Inspection

17.5.1 The bidder will also facilitate third party quality control and inspections on behalf of Engineer in charge as required. All the cost of third party inspection shall be born by the contractor and the contractor shall the quote accordingly.

17.5.2 The inspection and testing of the samples from a lot will be carried out by the employer and or inspecting agency approved by the employer, in the manufacture's workshop, before application of any paint. All the tests, as required as per the IS, shall be carried out on samples from each lot (number of samples from a lot shall be as per the relevant IS for sampling and testing), in presence of the inspecting agency. The materials will be dispatched only after issue of the test certificate by the inspecting agency for satisfactory performance of the tested materials. The inspection charges for such tests shall be paid by the contractor to the inspecting agency, No Reimbursement shall be made for the same and the rates quoted for this bid shall include these costs also.

17.5.3 Ten percent (10%) of the mandatory test prescribed under the specification shall be got carried out through laboratories accredited by national Accreditation Board of laboratories (NABL) By the Engineer-in-charge and the cost of such testing shall be deducted form the payments due to contractor .

17.5.4 The supplier shall give the inspection notice before or at least 10 days prior to the last date of supply of material. The material will be dispatched by the supplier after inspection by the representative of USCL. The supplier is required to dispatch the material within 10 days from the date of acceptance of material. In case the time taken in dispatch the material exceeds 10 days, the excess period shall be counted for levy of penalty. USCL's representative will visit the manufacturer's work and witness the tests as per specifications on each type of lighting fixtures as per the samples selected by USCL's representative. The sample of the material may also be sent to the government approved NABL laboratory at the cost of supplier for any kind of specific test required by USCL. Supplier shall submit the schedule with date, time & venue of the inspection to USCL in writing for the inspection of the material. USCL is authorized to get the material tested from the approved laboratory at the supplier cost for any kind of specific test if required. The contractor needs to make arrangements for Factory Inspection at his own cost for Luminaires, Brackets. INSPECTION WILL BE CARRIED OUT AT MANUFACTURER PREMISISONLY. It will not be permitted at vendor's place.

30. The contractor may have to do only manual excavation on site. The payment for same shall be as per BOQ / UADD SOR / Other SOR

31. If any heritage structure / Article etc. is encountered / found at site during Excavation, then the work must be stopped by the contractor till its solution/ Decision. No compensation shall be given to contractor for delay caused due to stopping of work except

Annexure - Y
(See ContractData, Point No 13.1)

PROCESS PARAMETERS -			
Sr. No.	MIS Report	Frequency of Submission	Submission Date
1	Quarterly Plan	Quarterly	7 th of every quarter ad as and when required.
2	Construction Schedule for next Quarter	Quarterly	7 th of every quarter
3	Plan vs Achievement Report - Turnover (WD Status)	Weekly	
4	Daily Progress Report/Daily Labour Report / Including Gender segregated Labour report.	Daily	-
5	Material Identification/Tracker	Process	-
6	Monthly Dia-wise Steel & Cement requirement	Monthly	1 st of every month
7	Drawing Register	Process	-
8	Fortnightly Labour Report	Fortnightly	7 th / 22 nd
9	Sub-Contractor employed Details	Process	-
10	Material Stock Report	Monthly	7 th of every month
11	Hinderance Register Copy	Monthly	7 th of every month

SECTION 5

Bill of Quantities

PREAMBLE TO BILL OF QUANTITIES (BOQ)

Name of Work: Development of Shani-Navagraha Lok at Ujjain

1. The Bill of Quantities (BOQ) forms part of the Tender Documents for the work of “*Development of Shani-Navagraha Lok, Ujjain*”. The quantities indicated in the BOQ are based on the approved drawings, master plan, and detailed estimates prepared for the project.
2. The **Probable Amount of Contract (PAC)** has been derived from detailed estimates prepared primarily on the basis of the **Schedule of Rates of Madhya Pradesh Public Works Department (MP PWD SOR–2024)** along with amendments issued from time to time. Certain specialized or non-scheduled items not covered under the SOR have been included in the estimates based on prevailing market rates, standard analysis of rates, or approved quotations.
3. The tender is invited on the basis of **percentage tender premium** over the PAC. The bidder shall quote a **single percentage premium (above/below/at par)** on the PAC in the prescribed format. The quoted premium shall be deemed to apply uniformly to all items of work included in the BOQ, including SOR and non-SOR items, unless otherwise specified in the tender documents.
4. This contract shall be an **Item Rate / Admeasurement Contract**, and the quantities mentioned in the BOQ are **indicative only**. The actual quantities executed at site may vary depending upon site conditions, detailed drawings, and instructions issued by the Engineer-in-Charge. Payment shall be made based on the **actual quantities of work executed and measured** at site in accordance with the relevant specifications and contract conditions.
5. The contractor shall submit **Running Account (RA) Bills on a monthly basis**, based on the measured quantities of work executed during the billing period. Payments shall be processed after verification of measurements and certification by the Engineer-in-Charge in accordance with the provisions of the contract.
6. The bidder shall carefully examine the drawings, specifications, site conditions, and BOQ before quoting the tender premium. The quoted premium shall be deemed to include **all costs necessary for complete execution of the works**, including but not limited to:
 - Establishment and maintenance of site office and site infrastructure
 - Mobilization and demobilization of manpower, machinery, and equipment

- Temporary works, barricading, safety measures, and traffic management
 - Surveys, setting out, and site investigations required during execution
 - Quality control measures, testing of materials and works at approved laboratories, third party inspections
 - Preparation of mock-ups, samples, and trial panels for approval
 - Documentation, drawings, and coordination with consultants
 - All incidental and miscellaneous expenses required for proper completion of the works.
7. No separate payment shall be made for the above activities, and the cost of such incidental, testing, mock-up, survey, investigation, and establishment-related works shall be **deemed to be included in the quoted tender premium.**
8. The contractor shall execute the works in accordance with the approved drawings, technical specifications, applicable codes and standards, and instructions issued by the Engineer-in-Charge from time to time. All works shall be completed in a workmanlike manner to the satisfaction of the Engineer-in-Charge.
9. Monolithic Basalt Stone Construction: The Main Temple structure is proposed to be constructed using monolithic Basalt stone elements in accordance with the approved architectural concept and drawings. The Contractor shall be responsible for sourcing suitable basalt stone from approved quarries, cutting, dressing, carving, transportation, handling, and precise erection of large monolithic stone members required for the temple structure and associated architectural components. Preparation of detailed shop drawings, installation methodology, mock-ups, samples, and all related activities necessary for proper execution of monolithic basalt construction shall be included in the Contractor's scope. All costs associated with these works shall be deemed to be included in the quoted tender premium, and no separate payment shall be admissible.
10. The contractor shall also take into account the operational requirements of the temple premises and the need for safe movement of pilgrims during execution. The quoted premium shall therefore include provisions for appropriate construction planning, phasing, safety arrangements, and protection of existing structures and utilities.
11. The BOQ shall be read in conjunction with the **Conditions of Contract, Technical Specifications, Drawings, and other Tender Documents**, all of which shall form part of the Contract Agreement.

ABSTRACT OF COST

Name of Work: Development of Shani-Navagraha Lok at Ujjain

SNo	Description	Amount (In Rupees)
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
Grand Total (excluding GST)		
Total Amount in Words: Rupees		

DETAILED BILL OF QUANTITIES

Attached Separately.

SECTION 6

AGREEMENT FORM

AGREEMENT

This agreement, made on the _____ day of _____ between:
_____ (name and address of Employer) (hereinafter called "the Employer)
and _____ (name and address of contractor) hereinafter
called "the Contractor" of the other part.

Whereas the Employer is desirous that the Contractor execute
_____ (name and identification number of Contract) (hereinafter
called "the Works") and the Employer has accepted the Bid by the Contractor for the execution and
completion of such Works and the remedying of any defects therein, at a cost of Rs.....

NOW THIS AGREEMENT WITNESSED as follows:

1. In this Agreement, words and expression shall have the same meaning as are respectively assigned to them in the conditions of contract hereinafter referred to and they shall be deemed to form and be read and construed as part of this Agreement.
2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all aspects with the provisions of the contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein 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.
4. The following documents shall be deemed to form and be ready and construed as part of this Agreement viz.
 - i. Letter of Acceptance
 - ii. Contractor's Bid
 - iii. Condition of Contract: General and Special -
 - iv. Contract Data
 - v. - Bid Data
 - vi. Drawings
 - vii. Bill of Quantities and
 - viii. Any other documents listed in the Contract Data as forming part of the Contract.

In witnessed where of the parties there to have caused this Agreement to be executed the day and year first before written.

The Common Seal of _____ was hereunto affixed in the presence of:

Signed, Sealed and Delivered by the said _____ in the presence of:

Binding Signature of Employer _____

Binding Signature of Contractor _____

UJJAIN SMART CITY LIMITED			
Development of Shani-Navagraha Lok at Ujjain			
S. no.	Description	Amount	Remark
1	Building Work	₹ 46,42,12,015.07	
A	Dismantling Work	₹ 7,50,173.55	
B	Main Temple		
	Civil Work	₹ 11,00,20,994.00	
	Stone Work	₹ 18,17,57,817.00	
C	Temple Plaza Development	₹ 6,84,21,857.00	
D	Ornamental Grill Shed		
	Civil Work	₹ 2,37,79,266.75	
	ORNAMENTAL GRILL SHED	₹ 1,49,68,250.74	
	Granite Flooring	₹ 34,88,756.00	
E	Queue Hall	₹ 1,26,66,393.25	
F	Muiltipurpose Hall	₹ 1,36,71,229.19	
G	Admin Building	₹ 1,19,73,604.21	
H	Florist Shops	₹ 52,27,801.84	
I	Public Amenities		
	Shose Stand 1 in Temple Plaza	₹ 80,88,707.56	
	Shose Stand near Admin Building	₹ 37,39,857.37	
	DRINKING WATER FACILITY WITH R.O. PLANT(2 NOS)	₹ 20,47,673.84	
	Toilet Block	₹ 36,09,632.78	
2	Site Development Work	₹ 14,87,42,488.24	
A	Parking Development	₹ 52,69,906.75	
B	Landscaping Work	₹ 2,46,31,885.42	
C	Boundry Wall		
	Boundry Wall (Civil Work)	₹ 46,77,654.56	
	Boundry Wall (Civil Stone Work)	₹ 1,27,40,633.96	
D	Entry Gate		
	Civil Work 2 no.s Gate	₹ 61,98,600.00	
	Stone Work 2 Nos. Gate	₹ 2,27,48,227.30	
E	RCC Road	₹ 65,62,523.54	
F	RCC Retaining Wall		
	Retaining Wall R1 Nala Side	₹ 1,59,92,015.84	
	Retaining Wall R2 Road Side	₹ 1,56,46,165.09	
G	ETP & STP PLANT (For Filtrating Oil Which is Collected from Main Shani Temple)	₹ 75,00,000.00	
H	Drainage & Water Supply Work	₹ 76,56,897.80	
I	Under Ground Water Tank	₹ 1,91,17,977.99	
3	Services	₹ 10,46,61,341.30	
A	INTERNAL ELECTRICAL WORK	₹ 90,19,788.00	
B	EXTERNAL ELECTRICAL WORK	₹ 4,70,22,708.50	
C	Façade Lighting	₹ 2,59,84,048.00	
D	HVAC	₹ 31,74,081.00	
E	CCTV	₹ 50,88,879.00	
F	Access Control System	₹ 34,78,000.00	
G	Fire Fighting System	₹ 55,67,709.80	
H	Fire Alarm System	₹ 23,38,195.00	
I	PA SYSTEMS	₹ 29,87,932.00	
	Total	₹ 71,76,15,844.61	
	Amount in Cr.	71.76 Cr.	

DETAILED ESTIMATE

NAME OF PROJECT :-SHANI TEMPLE & SURROUNDING DEVELOPMENT , UJJAIN

NAME OF WORK :- DISMENTALING SURROUNDING EXISTING TEMPLE STRUCTURE

S N O	SOR NO.	ITEM NAME	Description	Qty	Unit	Rate	Amount
1	14.1	Repairs to plaster	Repairs to plaster of thickness 12mm to 20mm in patches of area 2.5 sq. metres and underincluding cutting the patch inproper shape, raking out joints and preparing and plastering the surface of the walls completeincluding disposal of rubbish tothe dumping ground within 50metres lead : With cement mortar 1:4 (1 cement : 4 sand).				
				800	Sqm	₹ 180.00	₹1,44,000.0
2	14.16	Repointing or Replastering	Raking out joints in lime orcement mortar and preparing the surface for re-pointing or replastering including disposal of rubbish to the dumping ground within 50 metres lead.				
				300	Sqm	₹ 17.00	₹5,100.0
3	14.27	Scrapping	Removing white or colour wash by scrapping and sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete	50	Sqm	₹ 5.00	₹250.0
2	14.30	Removing dry or oil bound distemper	Removing dry or oil bound distemper, water proofing cement paint and the like by scrapping, sand papering and preparing thesurface smooth including necessary repairs to scratches etc. complete.	50	Sqm	₹ 6.00	₹300.0
4	15.2	Demolishing cement concrete	Demolishing cement concrete manually/by mechanical means including disposal of material within 50 metres lead as per direction of Engineer-in Charge.				
	15.2.1	1:3:6 or richer	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix).	50	Cum	₹ 578.00	₹28,900.0
	15.2.2	1:4:8 or leaner	Nominal concrete 1:4:8 or leaner mix (i/c equivalent design mix).	50	Cum	₹ 356.00	₹17,800.0
5	15.3	Demolishing R.C.C.	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in Charge				
				90.904	Cum	₹ 844.00	₹76,723.0
6	15.4	Cutting reinforcement bar	Extra for cutting reinforcement bars manually/ by mechanical means in R.C.C. work (Payment shall be made on the cross sectional area of R.C.C. work) as per direction of Engineer-in Charge.				
				234.52	Sqm	₹ 276.00	₹64,727.5
7	15.5	Scrapping, cleaning straightening reinforcement	Extra for scrapping, cleaning and straightening reinforcement from R.C.C. work.				
				100	KG	₹ 2.25	₹225.0
8	15.6	Demolishing brick work	Demolishing brick work manually/ by mechanical means including stacking ofserviceable material and disposal of unserviceable material within 50 metres leadas per direction of Engineer-in-Charge.				
	15.6.3	In cement mortar	In cement mortar	206.8	Cum	₹ 487.00	₹1,00,711.6
9	15.9	Dismantling dressed stone work ashlar face stone work	Dismantling dressed stone work ashlar face stone work, marble work or precast concrete work manually/ by mechanical means including stacking of serviceable and disposal of unserviceable material within50 metres lead as per direction of Engineer-in Charge:				
	15.9.1		In lime mortar.	48.4	Cum	₹ 348.00	₹16,843.2
	15.9.2		In cement mortar.	50	Cum	₹ 680.00	₹34,000.0
10	15.11	Dismantling tile/ kota /marble/ Granite work	Dismantling tile/ Kota stone/ Marble / Granite work in floors/walls and roofs laid in cement mortar including stacking material within 50 metres lead.				
	15.11.1	Upto 25mm thick	For thickness of tiles 10 mm to 25 mm.	25	Sqm	₹ 17.00	₹425.0
	15.11.2	Above 25mm thick	For thickness of tiles above 25 mm and upto 40 mm	25	Sqm	₹ 26.00	₹650.0

11	15.12	Dismantling stone slab flooring	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.				
			Front ramp	242	Sqm	₹ 64.00	₹15,488.0
12	15.13	Taking out paver blocks	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.				
			Front plaza and nearest area	1650	Sqm	₹ 31.00	₹51,150.0
13	15.14	Dismantling doors, windows, shutter including chowkhats,	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead :				
	15.14.1	Area upto 3 sq.m.	Of area 3 sq. metres and below.	24	each	₹ 85.00	₹2,040.0
	15.14.2	Area > 3.0 sq.m.	Of area beyond 3 sq. metres.	5	each	₹ 117.00	₹585.0
14	15.19	Dismantling steel work in single sections	Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in:				
	15.19.1	Joist	R.S. Joists	5	KG	₹ 1.33	₹6.7
	15.19.2	Angle, Tees etc	Channels, angles, tees and flats	5	KG	₹ 0.92	₹4.6
15	15.20	Dismantling steel work in built up sections with span upto 10 meter including dismembering	Dismantling steel work in built up sections with span upto 10 meter and height 5 meter in angles, tees, flats and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc. including dismembering and stacking within 50 metres lead.				
				50	KG	₹ 2.28	₹114.0
16	15.27	Dismantling roofing sheet	Dismantling roofing including ridges, hips valleys and gutters etc., and stacking the material within 50 metres lead of:				
	15.27.1	G.S.	G.S. Sheet	50	SQM	₹ 39.00	₹1,950.0
17	15.58	Dismantling of roads	Dismantling manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in charge :				
	15.58.2	Bituminous road	Bituminous road	760	SQM	₹ 168.00	₹1,27,680.0
18	15.64	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved.				
				500	CUM	₹ 121.00	₹60,500.0
				SUB TOTAL			₹7,50,173.5
<p>Applicable SoR : :MPPWD SoR In force from JAN 1,2024 For BUILDING WORKS (VOLUME-I & VOLUME-II)</p>							

Name of Client :- SMART CITY, UJJAIN							
Name of Project :- DEVELOPMENT OF NAVGRAH SHANI MANDIR CAMPUS, UJJAIN							
Name of Work:- CIVIL WORK FOR MAIN TEMPLE							
SNo.	Item No.	Item Name	Description	Qty.	Unit	Rate	Amount in Rs.
1	2.1	Surface Dressing	Surface dressing of the ground including removing vegetation and in-equalities not exceeding 15 cm deep and disposal of rubbish, lead up to 50 m and lift up to 1.5 m. in all kinds of soil.				
			All kinds of soil.	2585.00	100/sqm.		
				25.85	100/sqm.	₹ 803.00	₹ 20,758
2	2.6	Excavation soil	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottom disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed. (No extra lift is payable if work is done by mechanical means) All kinds of soil.				
				8072.47	Cum	₹ 147.00	₹ 11,86,654
3	2.23	Extra for under water and foul position	Extra rates for quantities of works, executed:				
(i)	2.23.1	Under Water	In or under water and/or liquid mud, including pumping out water as required.				
		Note: -	The extra percentage rate is applicable in respect of each item but limited to quantities of work executed in these difficult conditions. The unit, namely, meter depth, to be considered for payment, shall be the depth measured from the sub soil water level up to the centre of gravity of the qty executed in difficult condition. The depth shall be reckoned correct to 0.10m, 0.05m or more shall be taken as 0.10m and less than 0.05m ignored.			Metre depth 20%	
			20% of excavation	1614.49	Cum	₹ 29.40	₹ 47,466
4	2.24	Filling available excavated earth	Filling available excavated earth (excluding hard rock / Ordinary rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.				
				4068.93	cum	₹ 95.00	₹ 3,86,548
5	2.25	Extra for every additional lift	Extra for every additional lift of 1.5 m or part thereof in.				
	2.25.1		All kind of soil.				
			QTY.	4068.93	Cum	₹ 30.00	₹ 1,22,068
6	1.1	Transportation by mechanical means	Transportation by mechanical transport including unloading and stacking.				
	1.1.1	Moorum	Lime, moorum, building rubbish				
				4003.54	Cum		
				4003.54	Cum	₹ 139.46	₹ 5,58,334
7	4.1	C.C. upto plinth level	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
	4.1.1.3	M-15	M-15 – Grade concrete				
				407.82	Cum	₹ 4,471.00	₹ 18,23,383
8	22.1	Water proofing on horizontal surface, kota stone	Providing and laying integral cement based treatment for water proofing on horizontal surface at all depth below ground level for under ground structures as directed by Engineer-in-Charge consisting of: (i) 1st layer of 22mm to 25mm thick approved and specified rough stone slab over a 25mm thick base of cement mortar 1:3 (1 cement: 3 sand) mixed with water proofing compound conforming to IS: 2645 in the recommended proportion over the levelling course (levelling course to be paid separately). Joints sealed and grouted with cement slurry mixed with waterproofing compound. (ii) 2nd layer of 25mm thick cement mortar 1:3 (1 cement: 3 sand) mixed with water proofing				

SNo.	Item No.	Item Name	Description	Qty.	Unit	Rate	Amount in Rs.
			compound in recommended proportions. (iii) Finishing top with stone aggregate of 10mm to 12mm nominal size spreading @ 8 cum/sqm thoroughly embedded in the 2nd layer. (with 5 years service guarantee) Using rough Kota stone				
				94.90	sqm	₹ 916.00	₹ 86,928
9	22.2	Water proofing on vertical surface, kota stone	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement: 3 sand) 20 mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge (with 5 years service guarantee) Using rough Kota stone				
				761.38	Sqm	₹ 1,013.00	₹ 7,71,278
10	2.27	Under floor filling	Supplying and filling in plinth under floors including watering ramming consolidating in layers not exceeding 20cm in depth and dressing complete.				
	2.27.1	Hard muram hard copra	With hard muram having CBR >12 % at under floors including watering, ramming and compacting (minimum compaction 95% of MDD) in layers not exceeding 20cm in thickness and dressing complete. (Note:- maximum thickness of this layer to be provided shall be 30cm).				
				2280.00	Cum	₹ 393.00	₹ 8,96,040
11	5.3	RCC in beams, floors, staircases etc	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in beams, suspended floors, roofs having slope of any degree landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral staircases above plinth level and upto floor two level excluding the cost of centering, shuttering, finishing and reinforcement in concrete grade.				
	5.3.1	M-20	M-20 Grade Concrete				
				285.30	Cum	₹ 6,541.00	₹ 18,66,147
12	5.30	RMC	Providing and laying in position ready mixed concrete (RMC) of M-20 grade for reinforced cement concrete work, using cement content as per approved design mix and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centering, shuttering, finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate / retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. Note: Minimum cement content is @ 320 kg/cum. (No extra payment for using extra cement as per requirement of mix design.)				
a)	5.30.1	Upto plinth	All works up to plinth level.				
				3900.21	Cum	₹ 6,332.00	₹ 2,46,96,133
b)	5.30.2	Upto floor V level	All works above plinth level and upto floor V level.				
				1702.25	Cum	₹ 6,814.00	₹ 1,15,99,159
c)	5.30.3	Extra for Additional floor	Extra for each additional floor for all works above floor five level				
			Extra for above floor six level	1702.25	Cum	₹ 72.00	₹ 1,22,562

SNo.	Item No.	Item Name	Description	Qty.	Unit	Rate	Amount in Rs.
13	5.28	Extra for richer BMC mix/ RMC	extra for providing richer mixes of BMC/RMC design mix as per item no 5.27&5.30 up to plinth level and at all floor levels. (No extra payment for using extra cement as per requirement of mix design.)				
	5.28.2	M-30	Providing M-30 grade concrete instead of M 20 grade. (Note : minimum cement content is @ 340 kg/cum)	1702.25	Cum		
				1702.25	Cum	₹ 140.00	₹ 2,38,316
14	5.2	RCC in walls, columns, pillars etc	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, posts and struts etc. above plinth level and upto floor two level excluding cost of centering, shuttering, finishing and reinforcement:				
	5.2.1	M-20 Grade Concrete	M-20 Grade Concrete				
				10.00			
				10.00	Cum	₹ 6,231.00	₹ 62,310
15	5.5	RCC in arches, domes, shells etc.	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in arches, archribs, domes, vaults, shells, folded plate above plinth level and upto floor two level excluding the cost of centering, shuttering, finishing and reinforcement in Concrete grade.				
	5.5.1	M-20	M-20 Grade Concrete				
			Quantity	10.00			
				10.00	Cum	₹ 6,906.00	₹ 69,060
16	5.16	Reinforcement	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding upto floor level including cost of binding wire, wastage and over laps upto 12mm horizontal/ inclined position of reinforcement bars in slab and beams, plinth, chajias, lintels, upto 4.5m vertical length of reinforcement in wall columns (over laps shall be provided as per requirement of IS : 13920; IS 456 & SP :34) etc. complete.				
	5.16.6	TMT (FE 500D or more)	Thermo-Mechanically Treated bars.FE 500 D or more conforming to IS 1786				
			100 kg Steel Weight Per/Cu. M. Of R.C.C.	590776.45	Kg		
				590776.45	Kg	₹ 80.00	₹ 4,72,62,116
17	5.17	Reinforcement above floor two level	Add extra for providing reinforcement above Floor two level for every additional floor or part thereof.	590776.45	Kg	₹ 0.20	₹ 1,18,155
18	5.9	Centering and Shuttering	Centering and shuttering including strutting, propping etc. and removal of form for:				
	a)	Upto plinth	Foundations, footings, bases of columns, etc. for concrete upto plinth level				
			RAFT				
				1738.08	Sqm	₹ 190.60	₹ 3,31,278
	b)	Walls	Walls (any thickness) including attached pilasters butteresses, plinth beams and string courses etc.				
	5.9.2.1		Upto plinth level.				
				2140.52	Sqm	₹ 219.00	₹ 4,68,774
	5.9.2.2	Above plinth	Above plinth upto 3.6 m height from plinth level				
				100.00	Sqm		
				100.00	Sqm	₹ 330.00	₹ 33,000
	5.9.2.3	Extra for additional height in centering, shuttering	Extra for additional height in centering, shuttering where ever required with adequate bracing, propping etc. including cost of de-shuttering and decentering at all levels, over a height of 3.6 m, for every additional height of 1 metre or part thereof.				
				2000.00			
				2000.00	Sqm	₹ 40.00	₹ 80,000
	c)	Suspended floors, roofs etc	Suspended floors, roofs, landings, balconies and access platform.				
				2322.01	Sqm	₹ 439.60	₹ 10,20,758
	d)	Lintels, Beams and Cantilevers	Lintels, beams, girders, bressumers and cantilevers				
				2757.70	Sqm	₹ 435.70	₹ 12,01,528

SNo.	Item No.	Item Name	Description	Qty.	Unit	Rate	Amount in Rs.
e)	5.9.6	Columns	Columns, Pillars, Piers, Abutments, Posts and Struts.				
				2541.52	Sqm	₹ 471.20	₹ 11,97,564
f)	5.9.9	Arches	Arches, domes, vaults upto 6m span	100.00			
				100.00	Sqm	₹ 1,141.60	₹ 1,14,160
g)	5.9.10	Extra for arches >6m	Extra for arches, domes, vaults exceeding 6 m span				
			Quantity	100.00			
				100.00	Sqm	₹ 451.30	₹ 45,130
h)	5.9.15	Extra for circular or other geometrical shape	Extra for shuttering in circular work or any other geometrical shape (20% of respective centering and shuttering items).			20% rate of item 5.9.6	
			Quantity	50.00	Sqm		
				50.00	Sqm	₹ 94.24	₹ 4,712
i)	5.9.17	Cornices and mouldings	Cornices and mouldings				
				100.00	Sqm	₹ 565.00	₹ 56,500
29	5.10	Extra for additional height in centering, shuttering	Extra for additional height in centering, shuttering where ever required with adequate bracing, propping etc. including cost of de-shuttering and decentering at all levels, over a height of 3.6 m, for every additional height of 1 metre or part thereof (Plan area to be measured)				
	5.10.1	Suspended floors	Suspended floors, roofs, landing, beams and balconies (Plan area to be measured).				
			shikhar	706.50	Sqm	₹ 212.00	₹ 1,49,777
30	6.1	Brick work with 40kg/cm2 chimney bricks up to plinth	Brick work with well burnt chimney bricks in bulls pattern trench kiln manufactured by ghol process, crushing strength not less than 40kg /cm2 and water absorption not more than 15% in foundation and plinth i/c curing etc. complete.				
	6.1.2		Cement mortar 1:6 (1 cement : 6 sand)				
				10.00	Cum	₹ 5,626.00	₹ 56,260
31	6.37	Brick work with fly ash bricks up to plinth	Brick work with fly ash lime bricks (FALG Bricks) conforming to IS:12894-2002,				
	6.37.3	50 kg / cm2	Having 50 kg / cm2 average compressive strength.				
	6.37.3.2	CM 1:6	Cement mortar 1:6 (1 cement : 6sand)				
				10.00	Cum	₹ 4,689.00	₹ 46,890
32	6.7	Brick work fly ash bricks in superstructure	Brick work with fly ash lime bricks (FALG Bricks) conforming to IS:12894-2002, in super structure above plinth level up to floor two level in :				
	6.7.3	50 kg / cm2	Having 50 kg / cm2 average compressive strength.				
	6.7.3.1	CM 1:4	Cement mortar 1:4 (1 cement : 4sand)				
			Shikhar	390.85	Cum	₹ 5,158.00	₹ 20,16,025
34	6.26	Autoclaved Aerated Concrete (AAC) blocks masonry	Providing and laying Autoclaved Aerated Concrete (AAC) blocks masonry, using AAC blocks (Size length 300, 400, 500, 600 mm Height 200, 250, 300 mm Width 100, 150, 200, 250 mm) conforming to IS 2185 PART 3, having compressive strength not less than 4 MPa (Grade II) in super structure, blocks jointed with approved block laying polymer modified adhesive mortar as per ASTM 1660-09, applied in uniform thickness of 2 to 3 mm in horizontal and verticals joints using special trowel, polymer modified mortar having minimum compressive strength and minimum splitting tensile strength of not less than 5MPa and 0.34 MPa respectively as per ASTM international standard including raking out joints. The surface of masonry				

SNo.	Item No.	Item Name	Description	Qty.	Unit	Rate	Amount in Rs.
			units (AAC Block) should be slightly moist prior to application of jointing mortar. Block should be gently pressed down using a rubber mallet to expel out entrapped air and the masonry shall be cured two days. 1st layer of masonry block shall be placed on perfectly leveled surface, which if required, shall be leveled with M-15 cement concrete at plinth or floor level.				
			Masonry shall have 75mm thick RCC band with M-15 cement concrete having 2 bars horizontal of 8 mm dia with 8mm dia U- shaped single stirrup @300mm C/C. Such horizontal bands shall be placed at sill level and lintel level where there is a provision of windows in walls otherwise placed at vertical interval of 1.8 meter in vertical direction shall be spaced at 4.5 meter in horizontal direction. Mullion, Vertical bands, shall be placed along jams (vertical member of chowkhats) and extend upto lintel levels to arrest cracking at corner openings. RCC bands shall be measured with AAC block masonry. Rates include all materials including steel bars, wastages, RCC, Centering scaffolding and all labour etc. complete.				
	6.26.1	Polymer modified mortar	AAC Masonry in polymer modified mortar				
			20% of item no. 6.7	78.17	cum	₹ 5,500.00	₹ 4,29,939
35	4.20	Precast string/lacing Courses, copings etc. M-20	Providing and fixing up to floor two level precast cement concrete string or lacing courses, copings, bed plates, anchor blocks, plain window sills, shelves, louvers, steps, stair cases, etc., including hoisting and setting in position with cement mortar 1:3 (1 Cement : 3 coarse sand), cost of required Centering complete.				
			1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) : 3 graded stone aggregate 20mm nominal size)				
				10.00	cum	₹ 6,583.00	₹ 65,830
36	13.1	12 mm cement plaster of mix :	12 mm cement plaster of mix :				
	13.1.1	1:4 (1 cement : 4 sand)	1:4 (1 cement : 4 sand)				
			PLINTH LEVEL TO FIRST LEVEL				
				3982.51	sqm	₹ 173.00	₹ 9,18,633
37	13.2	15 mm cement plaster	15 mm cement plaster on the rough side of single or half brick wall of mix				
	13.2.1	1:4 (1 cement : 4 sand)	1:4 (1 cement : 4 sand)				
				1327.50	sqm		
				1327.50	sqm	₹ 184.00	₹ 2,44,261
38	13.7	18 mm cement plaster cm 1:5 & 1:3 rough finished with spong	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 sand) and a top layer 6mm thick cement plaster 1:3 (1 cement : 3 sand) finished rough with sponge.				
				350.00	Sqm	₹ 236.00	₹ 82,600
39	13.8	6 mm cement plaster	6 mm cement plaster of mix : 1:3 (1 cement : 3 sand)				
				3076.89	Sqm	₹ 144.00	₹ 4,43,072
40	13.13	21mm sand faced plaster	Providing sand faced plaster upto 10meter hight above ground level concrete or brick masonry surfaces in two coats, base coat of 13 mm thick in cement mortar 1:4 (1 cement: 4 sand),clearing the surface by combing it and finishing coat of 8 mm. thick in cement mortar 1:3 (1 cement: 3 sand) and taking out surface grains by mechanical arrangement or applying second coat by mechanical means including cost of all material, labour, and T and P including all lead, lift and scaffolding etc. complete.				
				200.00	Sqm		
				200.00	Sqm	₹ 314.00	₹ 62,800

SNo.	Item No.	Item Name	Description	Qty.	Unit	Rate	Amount in Rs.
41	13.15	Extra for plastering exterior/interior walls height more than 10m	Extra for plastering				
	13.15.1	Exterior walls	Exterior walls of height more than 10 m from ground for every additional height of 3 m or part thereof				
			Extra for above floor service level	5310.02	sqm	₹ 34.00	₹ 1,80,541
	13.15.2	interior walls	Interior walls of height more than 6 m from floor level for every additional height of 3 m or part thereof				
			ITEM NO. 13.2 + 13.7	1677.50	sqm	₹ 22.00	₹ 36,905
42	13.16	Extra for plastering on circular work	Extra for plastering on circular work not exceeding 6 m in radius:				
	13.16.2	Two coat	in two coat				
			qtv.	250.00			
				250.00	Sqm	₹ 18.00	₹ 4,500
43	13.17	Extra for plastering on moulding cornices	Extra for plastering done on moulding cornices or architraves including neat finish to line and level:				
	13.17.2	Two coat	in two coat	450.00			
				450.00	Sqm	₹ 260.00	₹ 1,17,000
44	13.27	Mesh in plaster	Providing and fixing mesh in vertical and horizontal junction of RCC and brick/AAC work including scaffolding and all lead and lift etc. complete				
a)	13.27.1	Chicken mesh in plaster	G.I. chicken mesh as per ISI specification and in the required width with 50mm long Bombay nails before plastering upto 10 meter height.				
				150.00	Sqm	₹ 62.00	₹ 9,300
b)	13.27.2	Fibre mesh in Plaster	Providing and fixing fibre mesh of 145 GSM weight in required width with cement mortar before plastering upto 10m height.				
				22.50	Sqm	₹ 45.00	₹ 1,013
45	13.39	POP punning	Plaster of paris punning				
	13.39.1	10 mm average thickness	Providing and applying plaster of paris punning of 10 mm average thickness over plastered surface to prepare the surface even and smooth complete.	200.00	Sqm		
				200.00	Sqm	₹ 130.00	₹ 26,000
46	13.41	White cement based putty	Providing and applying white cement based putty of average thickness 1 mm, of approved brand over the plastered wall surface to prepare the surface even and smooth i/c all cost of material, labour and scaffold etc in all position complete. Note : Putty shall be applied only on the internal walls, for application on the exterior walls prior permission of APD/Chief Engineer will be required.				
				100.00	Sqm	₹ 74.00	₹ 7,400
47	13.51	Textured exterior paint	Finishing walls by only mechanical or manual means with textured exterior paint of required shade: New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including priming coat of exterior primer applied @ 2.20kg/10 sqm				
				500.00	Sqm	₹ 132.00	₹ 66,000
48	13.54	Deluxe multi surface paint	Finishing walls with Deluxe Mulf surface paint system for interiors and exterior using primer as per manufacturers specifications :				
	13.54.2	Painting steel work	Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @ 0.90 ltr/10 sqm over an under coat of primer applied @ 0.80 ltr/ 10 sqm of approved brand or manufacture.				
			Window and Ventilator area	100.00			
				100.00	Sqm	₹ 71.00	₹ 7,100
	13.54.3	Two or more coats	Two or more coats applied on walls @ 1.25 ltr/10 sqm. over and including one coat of Special primer applied @ 0.75 ltr / 10 sqm.				
				50.00	Sqm	₹ 81.00	₹ 4,050
55	9.43	M.S. grills and windows	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete				

SNo.	Item No.	Item Name	Description	Qty.	Unit	Rate	Amount in Rs.
	9.43.2	Fixed to openings /wooden frames	Fixed to openings /wooden frames with rawl plugs screws etc.				
				500.00	kg.	₹ 128.00	₹ 64,000
58	10/10.25	Stainless steel railing	Providing and fixing stainless steel (Grade 304) railing made of Hollowtubes, channels, plates etc. including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete i/c fixing the railing with necessary accessories and stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer in-charge. (For payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)				
				100.00	kg.	₹ 582.00	₹ 58,200
63	11.19	Marble stone flooring	Marble stone flooring with 18 mm thick marble stone (sample of marble shall be approved by Engineer-in-charge) laid over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 sand and grey cement slurry, joints treated with white cement mixed with pigment to match colour of stone including rubbing and polishing complete with : (area of slabs over 0.5 sqm)				
	11.19.1	Makrana white	Makrana white second quality.				
				50.00	Sqm	₹ 3,051.00	₹ 1,52,550
64	11.31	Granite flooring 30mm thick mirror polished pre moulded	Providing and laying gang saw cut 30 mm hick, mirror polished pre moulded and pre polished machine cut granite stone of required size and shape of approved shade, colour and texture in footpath, flooring in road side plazas and similar locations, laid over 20mm thick base of cement mortar 1:4 (1 cement: 4 sand) including grouting the joints with white cement mixed with matching pigment, epoxy touch ups etc. complete as per direction of Engineer-in-Charge. (area of slab more than 0.50 sqm)				
	11.31.1	Granite (fine grained)	Fine grained granite dark Black/dark Red/ White or equivalent with self design/ pattern/crystals of other colors of glitter				
			BORDER	350.00	Sqm		
				350.00	Sqm	₹ 3,616.00	₹ 12,65,600
	11.31.2	Granite(coarse grained)	Coarse grained granite light Black/light Red/ off White or equivalent with self design/ pattern/crystals of other colors of glitter				
				350.00	Sqm	₹ 3,250.00	₹ 11,37,500
	11.31.3	Granite (with pattern)	Gray/Pink/Brown or equivalent with various patterns				
				350.00	Sqm	₹ 2,793.00	₹ 9,77,550
65	11.34	Granite work in riser steps, skirting, dado and pillars	Granite stone work 18mm thick of any colour in riser of steps, skirting, dado and pillars laid on 12 mm average thick cement mortar 1:3 (1 cement:3 sand) and jointed with white cement slurry mixed with pigment to match the shade of slab.				
			STEP RISER	105.60	Sqm		
				105.60	Sqm	₹ 3,413.00	₹ 3,60,413
66	11.40	Edge moulding of stone work	Providing edge moulding to 18mm thick marble stone counters, Vanities, window sills etc. including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge.				
	11.40.2	Granite work.		570.00	RM	₹ 269.00	₹ 1,53,330

SNo.	Item No.	Item Name	Description	Qty.	Unit	Rate	Amount in Rs.
67	11.33	Polished Granite Stone	Providing and laying Granite stone flooring in required design and patterns in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry admixed with pigment of matching shade including rubbing, curing and polishing and as directed by the Engineer-in-Charge Granite stone slab Dark Black, Dark Red, White or equivalent,				
	11.33.1	Flame finish	Flamed Finish Granite				
				450.00	Sqm	₹ 2,542.00	₹ 11,43,900
	11.33.2	Leather finish	Leather Finish Granite				
				400.00	Sqm	₹ 2,809.00	₹ 11,23,600
86	22.6	Water proofing treatment Fibre glass cloth and cement slurry	Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying : a) After surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. b) Laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm. c) Third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30cm on parapet wall and tucked into groove in parapet all around.				
				2795.35	sgm	₹ 207.00	₹ 5,78,637
87	22.7	Water proofing treatment brick coba	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations: a) Applying a slurry coat of neat cement using 2.75 kg/sqm. of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment. b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge. d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3mm deep. e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge : (with 5 years service guarantee) With average thickness of 120mm and minimum thickness at khurra as 65 mm.				
				822.50	Sqm	₹ 885.00	₹ 7,27,913

SNo.	Item No.	Item Name	Description	Qty.	Unit	Rate	Amount in Rs.
1		NON SOR (approved in UDA)	Item :-Extra for CNC work as perrequired design an pattern on natural stone surface i.e. Granite / Marble / Kota , Sand Stone etc. All work should be done as per the drawing, design, pattern, specifications and instructions of Engineer in Charge. Measurement for billing purpose boundary out to out in Length and breadth of CNC work area only.				
				500.00	SQM	₹ 375.00	₹ 1,87,500
2		NON SOR (approved in UDA)	Providing and applying acrylic water based putty used on alkali resistant Primer in two coats including sand papering for making the surface smooth for applying any or vinyl paints including all cost of material, at any floor and height and labour etc complete.				
			50% OF INNER PLASTER	838.75	Sqm	₹ 90.00	₹ 75,488
							₹ 2,62,988
							₹ 11,00,20,994
			TOTAL COST (IN WORDS) - ELEVEN CRORE TWENTY ONE THOUSAND ONLY				
			ESTIMATE BASED ON :-				
			In Force From January, 1st 2024 Issued by :Engineer-in-Chief (Building) MP Public Works Department BHOPAL				
			BUILDING WORK (VOLUME-I AND VOLUME-II) In Force From January 01, 2024 Issued by :- ENGINEER-IN-CHIEF MP Public Works Department (P.I.U) BHOPAL				

DETAILED ESTIMATE

Name of Client :- SMART CITY, UJJAIN

Name of Project :- DEVELOPMENT OF NAVGRAH SHANI MANDIR CAMPUS, UJJAIN

Name of Work:- STONE WORK FOR MAIN TEMPLE

S O	Item No.	Item Name	Description	AREA	Unit	Rate in Rs.	Amount
1	NON-S.O.R	Stone Work in selected Stone	Providing and fixing of Stone work in Bansi Pahadpur pink stone/ White stone/ Red stone/ Jaiselmer Yellow stone/ Teak stone/ basalt black and any type and color Best Quality Stone, as approved by Engineer-in-charge and consultant, with specific design, Size and as per drawings upto any height, thickness, size with necessary scaffolding / centering etc and as per requirement of items and proportion of design. Stone Carving depth 10mm to 50mm varies as per design including 3-D carving work, sunk and moulding works, grooves, cornices etc works as per drawings backing filled with grout of cement mortar 1:3(1 cement : 3 sand) minimum 12mm thick, including pointing in white cement mortar 1:2 (1 cement : 2 marble dust) with an admixture of pigment matching the stone shade, to be secured backing by means of Stainless Steel cramps/ anchor/ Pins/fastner of required size/ strength and shape, to anchoring the stone. Column/wall lining to the backing or securing adjacent stone in cement mortar 1:2(1 cement : 2 sand) including making necessary chases in stone and holes in wall/RCC where ever required including bonding agent/chemicals/epoxy etc. (k2/Tinex/ Roff Make) wherever required. All fixing work should be executed as instructions of engineer in charge with providing facilities and cooperation needed to execute any other counterpart agencies works. The traditional pattern of fixing the stone work. For protection of stone, from weatheric action coat of protection layer shall be apply on whole stone surface area, Stone work should have coated in two or more coat of clear lacquar coat of pidlilite / k2 / Nippon are equivalent. The process of coating should be followed: (i) cleaning of stone (ii) rubbing and polishing of stone (iii) first coat of clear lacquar and after drying of this coat ,second coat of clear lacquar shall be applied. All this coating of clear lacquar shall be done with spray paint machine. All work shall be done in satisfactory manner and as per instruction of engineer in charge and consultant. mode of mesurement as per drawing.				
			PLINTH TO FIRST LEVEL	46.05	CU M	₹ 1,26,098	₹ 58,06,662
			SMALL COLUMN 2	409.54	CU M	₹ 1,26,098	₹ 5,16,41,671
			SMALL COLUMN 2	187.91	CU M	₹ 1,26,098	₹ 2,36,94,520
				191.81	CU M	₹ 1,26,098	₹ 2,41,86,605
			BIG DOME				
			TOTAL NO.OF DOME	274.47	CU M	₹ 1,26,098	₹ 3,46,10,370.26
			SMALL DOME				
			TOTAL NO.OF DOME	73.82	CU M	₹ 1,26,098	₹ 93,09,058.75
			SHIKHAR				
				185.13	CU M	₹ 1,26,097	₹ 2,33,44,085.42
			CHAJJA - 2	17.44	CU M		
				59.46	CU M	₹ 1,26,098	₹ 74,97,220
4	NON-SOR	Stone Jaali	BANSI PAHADPUR PINK SAND STONE White stone/ Red stone/ Jaiselmer Yellow stone/ Teak stone/ basalt black and any type and color Best Quality CLADDING WITH BOTH SIDE 3D CARVING WORK AS PER DESIGN ON JALI 70mm (JL) 70 MM Thick Stone Jali work in Bansi Pahadpur pink stone, Best Quality Stone, as approved by Engineer-in-charge and consultant, with specific design and as per drawings upto any height,with necessary scaffolding / centering etc. as per design required. Both side Stone Carving as per design in 3-D carving work, .Jointsand grout filled with cement mortar 1:3(1 cement : 3 sand) minimum. including pointing in white cement mortar 1:2 (1 cement : 2 marble dust) with an admixture of pigment matching the stone shade, If needed to be secured by means of Stainless Steel Rod/ cramps/anchor/ pins/ fastner of required size and shape anchoring stone with adjacent stone/floor etc. including making necessary chases in stone/wall/RCC where ever required including bonding agent/chemicals epoxy etc (Tinex) wherever required. All fixing work should be executed as per instructions of engineer in charge and consultant and the traditional pattern of fixing the stone work. For protection of stone, from weatheric action coat of protection layer shall be apply on whole stone surface area, Stone work should have coated in				

			two or more coat of clear lacquar coat of pidiite / K2 / Nippon make. The process of coating should be as followed: (i) cleaning of stone (ii) rubbing and polishing of stone (iii) first coat of clear lacquar and after drying of this coat ,second or more coat of clear lacquar shall be applied. All this coating of clear lacquar shall be done with spray paint machine. All work shall be done in satisfactory manner and as per instruction of engineer in charge and consultant. For payment of item the area of stone work will be measured from flat elevation of stone jali work. Note: measurement of sculpture will be as per attached sample drawing.				
				20.00	SQM	₹ 14,145	₹ 2,82,900
5	NON-S.O.R	Color and finish on sand stone	Providing and applying approved mineral-based breathable color/pigment on sandstone sculpture, carvings, and architectural stone elements, including surface preparation by cleaning, brushing, washing, and filling minor cracks and pores with compatible filler, complete in all respects. Color shall be applied in minimum three or more coats to achieve uniform shade as approved by the Engineer-in-Charge. The finished surface shall have a natural matte appearance without gloss/other finish as required or approved by engineer-in-charge and without clogging of carvings and detailing. The paint shall be of any color including gold, silver, copper etc. as required /suitable for overall design and approved by engineer-in-charge.The color system shall be inorganic mineral-based silicate or lime-based system from approved manufacturers such as Zuber /KEM /Eas				

		based system from approved manufacturers such as Zyoex / KEIM / Eco House Coating, or equivalent approved by the Engineer-in-Charge. Acrylic, polymer-based, or synthetic emulsion paints shall not be permitted. Measurement and Payment- Payment shall be made based on the 2D elevation area of all sides of the sculpture, including front, rear, and both side elevations, measured in				
			350.00	SQM	₹ 3,000	₹ 10,50,000
6	Sand Blasting		1200.00	SQM	278.94	₹ 3,34,724
		<small>Removal of rust, existing coating, mill scale, dirt, oil, grease, and other contaminants from steel sections/stone surface using 100-mesh sand with the help of pressure pump.</small>				₹ 18,17,57,816

IN WORDS: Rs. EIGHTEEN CRORE FORTEEN LACS TWENTY FOUR THOUSAND ONLY

CONDITION NOTE -

- The drawings and images provided are conceptual in nature. The contractor shall prepare and submit detailed structural designs, stone detailing drawings, and shop drawings. All submitted drawings shall be subject to approval by the Engineer-in-Charge and may be verified by a Third-Party Technical Institute. The verification charges of the institute shall be borne separately by the Department.
- Prior to commencement of the work, the contractor shall obtain all necessary approvals for stone designs, artwork, religious motifs, historical story-related carvings, patterns, sculptures, and any other stone design components required for the project. The contractor shall submit the same in the form of drawings, 3D models, 2D drawings, views, mock-ups, etc., for approval by the Authorized Approval Committee and the Engineer-in-Charge.
- The contractor shall be responsible for the operation and maintenance of the stone works (including carvings, cladding, sculptures, and architectural elements) for a period of five (5) years. All operation and maintenance works shall be included, except for items covered under the Defect Liability Period (DLP) as per tender provisions.
- The contractor/sculptor shall submit detailed technical literature and recommended procedures for the cleaning, protection, and maintenance of stone works, carvings, and sculptures.
- All works shall be carried out in accordance with the approved drawings and designs, at any height, including any modifications required in shape and size due to site constraints, statutory requirements, or other reasons.
- If the stone is found to be fake, artificial, substituted, composite, laminated, patched, repaired, or inferior quality, or if the stone is cracked, weathered, defective, or not conforming to the specified type, grade, source, finish, strength, and texture, the stone work shall be rejected. All stone materials shall be subjected to testing for physical properties, strength, durability, water absorption, density, and other relevant parameters in accordance with scientific standards at a Government-approved laboratory and applicable codes/norms.
- The contractor shall submit certificates, test reports if required and approved samples/mock-ups prior to execution. No stone shall be used without approval of the Engineer-in-Charge.

DETAIL ESTIMATE

Name of PROJECT :- DEVELOPMENT OF SHANI TEMPLE AND SURROUNDING AREA , UJJAIN

Name of WORK :- TEMPLE PLAZA DEVELOPMENT (SURROUNDING TEMPLE)

Qty.	Chapter No. /Item No.	item name	Description	Qty	Unit	Rate	Amount
1	1.1	Transportation by mechanical means	Transportation By Mechanical Transport including loading, unloading and stacking				
	1.1.1		Lime, moorum, building rubbish	1974.84	sqm	₹ 139.46	₹ 2,75,411.19
2	15.12	Dismantling stone slab flooring	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.				
			old plaza flooring	1800.00	sqm	₹ 64.00	₹ 1,15,200.00
1	2/2.1	Surface dressing	Surface dressing of the ground including removing vegetation and in- equalities not exceeding 15 cm deep and disposal of rubbish, lead up to 50 m and lift up to 1.5 m. in all kinds of soil.				
				75.00	100/sq m.	₹ 803.00	₹ 60,225.00
2	2/2.6		Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed.				
	2.6		All kinds of soil				
				2600	Cum	₹ 147.00	₹ 3,82,200.00
4	2.24	Filling available excavated earth	Filling available excavated earth (excluding hard rock/Ordinary rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.				
				7150.00	cum	₹ 95.00	₹ 6,79,250.00
5	2.26		Supplying and filling in plinth with crusher stone dust / coarse sand under floors including, watering, ramming and compacting in layers not exceeding 20cm in depth and dressing complete Note: - Maximum thickness of this layer shall be 20 cm.				
	2.26		Crusher Stone Dust				
				2600.00	cum	₹ 672.00	₹ 17,47,200.00
6	2.27		Supplying and filling in plinth under floors including watering ramming consolidating in layers not exceeding 20cm in depth and dressing complete.				
	2.27.1		With hard muram having CBR >12 % at under floors including watering, ramming and compacting (minimum compaction 95% of MDD) in layers not exceeding 20cm in thickness and dressing complete. (Note:- maximum thickness of this layer to be provided shall be 30cm)				
			Moorum/Hard copra				
				1974.84	cum	₹ 393.00	₹ 7,76,112.12
7	4.1		Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level :				
(a)	4.1.1.4		M-10Nominal (Mix-1 Cement : 3 sand : 6 graded stone aggregate)				
				975.00	Cum	₹ 3,890.00	₹ 37,92,750.00
8	5.1		Providing and laying in position specified grade of reinforced cement concrete (with 20mm nominal size graded stone aggregate) excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
	5.1.1		M-20 Grade Concrete				
				2600.00	Cum	₹ 6,153.00	₹ 1,59,97,800.00

7	PWD Road and Bridge 6.8		Add extra in Item No.6.3, 6.4, 6.6 & 6.10 above for the cost of steel in dowel bar and tie rod including cradde, laps etc. complete required as per design.				
	(I)		Mild steel	0.5	MT	₹ 57,734.00	₹ 28,867.00
	(II)		Tor steel	0.5	MT	₹ 58,734.00	₹ 29,367.00
10	5.16		Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding including cost of binding wire all wastages and overlaps, couplers (overlaps shall be provided as per requirement of IS 13920 for ductile detailing IS 456 RCC Design & SP 34 Reinforcement detailing) etc. complete . (Note:- 1. Spacer bars (chairs) shall be paid separately as shown in the drawing and as per direction of engineer in charge. 2. No extra payment shall be done for overlaps and/or couplers. 3.Couplers shall be conforming to IS code on "Reinforcement Couplers for Mechanical Splices of Bars for Concrete Reinforcement - Specification")				
	5.16.6		Thermo-Mechanically Treated bars. (TMT/TMX) FE 500 or more conforming to IS 1786				
			Thermo-Mechanically Treated bars				
			Steel,50 Kg. Per/Cu. M. Of R.C.C.	130000	KG	₹ 80.00	₹ 1,04,00,000.00
	11.19	Marble stone flooring	Marble stone flooring with 18 mm thick marble stone (sample of marble shall be approved by Engineer-in-charge) laid over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 sand and grey cement slurry, joints treated with white cement mixed with pigment to match colour of stone including rubbing and polishing complete with : (area of slabs over 0.5 sqm)				
	11.19.1	Makrana white	Makrana white second quality.				
				3250.00	Sqm	₹ 3,051.00	₹ 99,15,750.00
	11.43	Mirror (glass) polishing	Mirror polishing on marble work/Granite work/stone work wherever required to give high gloss finish complete.				
				3250.00	Sqm	₹ 164.00	₹ 5,33,000.00
14	11.31	Granite flooring 30mm thick mirror polished pre moulded	Providing and laying gang saw cut 30 mm thick, mirror polished pre moulded and pre polished machine cut granite stone of required size and shape of approved shade, colour and texture in footpath, flooring in road side plazas and similar locations, laid over 20mm thick base of cement mortar 1:4 (1cement: 4 sand) including grouting the joints with white cement mixed with matching pigment, epoxy touch ups etc. complete as per direction of Engineer-in-Charge. (area of slab more than 0.50 sqm)				
	11.31.1	Granite (fine grained)	Fine grained granite dark Black/dark Red/ White or equivalent with self design/ pattern/crystals of other colors of glitter				
				3250.00	Sqm	₹ 3,616.00	₹ 1,17,52,000.00
	11.31.3	Granite (with pattern)	Gray/Pink/Brown or equivalent with various patterns				
				LS 50.00	Sqm	₹ 2,793.00	₹ 1,39,650.00
17	12/12.32		Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.				
	12.32.2		110mm diameter				
				400	Meter	₹ 238.00	₹ 95,200.00

NON SOR ITEM							
	NON SOR	Black Basalt Stone	45 mm TO 50mm thick fine dressed black basalt stone (minimum size of stone 0.30 sqm) as approved flooring over 25 mm (average) thick base of cement mortar 1:4 (1 cement : 4 sand) including pointing with cement mortar 1:2 (1 cement : 2 sand) with an admixture of pigment to match the shade of stone.				
			Black Basalt Stone	700	sqm	₹ 3,426.00	₹ 23,98,200.00
	NON SOR	Cobble stone	Providing and laying Hand dressed cobble stone flooring of size 300x150x150mm over 25 mm (minimum) thick base of Cement Mortar 1:4 (1 cement : 4 sand) including flush pointing with Cement Mortar with an admixture of pigment to match the shade of stone, Joints between stones should be less than 12 mm. pattern & design as per drawing and all work should be done as per instructions of EIC.				
			Cobble Stone	700	sqm	₹ 4,413.00	₹ 30,89,100.00
	NON SOR	NON SOR ITEM OF CNC work	Item :-Extra for CNC work as per required design an pattern on natural stone surface i.e. Granite / Marble / Kota , Sand Stone etc. All work should be done as per the drawing, design, pattern, specifications and instructions of Engineer in Charge. Measurement for billing purpose boundary out to out in Length and breadth of CNC work area only.				
			IN PLAZA FLOORING 50 % QUANTITY	1625	SQM	₹ 375.00	₹ 6,09,375.00

	NON SOR	Protection layer of stone	Providing and applying protection layer on whole stone surface area for protection of stone, from weatheric action, Stone work should have coated in two or more coat of clear lacquar coat of pidilite / K2 / Nippon make. The process of coating should be as followed: (i) cleaning of stone (ii) rubbing and polishing of stone (iii) first coat of clear lacquar and after drying of this coat ,second or more coat of clear lacquar shall be applied. All this coating of clear lacquar shall be done with spray paint machine. All work shall be done in satisfactory manner and as per instruction of engineer in charge and consultant.				
	NSR NON BOQ Approved vide USCL letter No. 2009	For Pathway	Providing & fixing of 40 mm thickness Basalt Stone Shot Blasted as per given design and	3250	sqm	₹ 288.00	₹ 9,36,000.00
1200				Sqm	₹ 3,891.00		
				TOTAL			68421857.31
				ESTIMATE BASED ON :-			
				GOVERNMENT OF MADHYA PRADESH PUBLIC WORKS DEPARTMENT			
				SCHEDULE OF RATES (SOR) For BUILDING WORKS (VOLUME-I)			
				BUILDING WORKS INFORCE FROM 15th September 2022			
				ISSUED BY :- PROJECT DIRECTOR			
				M.P. Public Works Department (P.I.U.)			
				BHOPAL			
				DEVELOPMENT DEPARTMENT Govt. OF M.P.			
				AND AMMENDMENT ISSUED TIME TO TIME			

DETAIL ESTIMATE						
Name Of Project :- DEVELOPMENT OF SHANI TEMPLE AND SITE SURROUNDINGS, UJJAIN (M.P.)						
Name Of Work :- ORNAMENTAL SHED CIVIL WORK						
S.No	Chapter No. / Item No.	Description	Qty	Unit	Rate	Amount
1		Surface dressing of the ground including removing vegetation and in equalities not exceeding 15 cm deep and disposal of rubbish, lead up to 50 m and lift up to 1.5 m. in all kinds of soil.				
		All kinds of soil.	13.9	100/sqm. Sq.M.	₹ 803.00	₹ 11,161.70
2	2.6	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottom disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed. (No extra lift is payable if work is done by mechanical means) All kinds of soil	950.40	Cum	₹ 147.00	₹ 1,39,708.80
3	2.24	Filling available excavated earth (excluding hard rock/Ordinary rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	448.47	Cum	₹ 95.00	₹ 42,604.65
3	20.10	Boring, Providing and installing cast in situ single under reamed piles of specified diameter and length below pile cap in M 25 cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring, cement concrete and the length of the pile to be embedded in pile cap etc. all complete. (Length of pile for payment shall be measured upto to the bottom of pile cap) :Note: - The minimum grade of concrete to be used for piling shall be M-20 and the minimum cement content shall be 400 kg/m3 in all condition.				
	20.10.3	400 mm dia piles. (FOR SHED)	45	Rmt.		
			45	Rmt.	₹ 941.00	₹ 42,345.00
4	20.11	Extra for providing bulb for item no.20.10				
	20.11.3	400 mm dia piles. (FOR SHED)	4	Each		
			4	Each	₹ 1,437.00	₹ 5,748.00
5	2.26	Supplying and filling in plinth with crusher stone dust / coarse sand under floors including, watering, ramming consolidating in layers not exceeding 20cm in depth and dressing complete.(Note:- Maximum thickness of this layer to be provided shall	695	Cum	₹ 672.00	₹ 4,67,040.00
5	2/2.27	Supplying and filling in plinth under floors including watering ramming consolidating in layers not exceeding 20cm in depth and dressing complete.				
	2.27.1	With hard muram having CBR >12 % at under floors including watering, ramming and compacting (minimum compaction 95% of MDD) in layers not exceeding 20cm in thickness and dressing complete. (Note:- maximum thickness of this layer to be provided shall be 30cm)	695.00	Cum	₹ 393.00	₹ 2,73,135.00
6	4/4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
	4.1.1	With 20mm nominal size graded stone aggregate				
	4.1.1.4	Nominal Mix -1 Cement : 3 sand : 6 graded stone aggregate (M -10)	114.35	Cum	₹ 3,890.00	₹ 4,44,802.05

7	5.1	Providing and laying in position specified grade of reinforced cement concrete (with 20mm nominal size graded stone aggregate) excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
	5.1.1	M-20 Grade Concrete				
			659.59	Cum	₹ 6,153.00	₹ 40,58,426.51
8	5.2	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, posts and struts etc. above plinth level and upto floor two level excluding cost of centering, shuttering, finishing and reinforcement:				
		RCC in walls,columns,pillars etc				
	5.2.1	M-20 Grade Concrete				

			707.50	Cum	₹ 6,231.00	₹ 44,08,432.50
10	5.9	Centering and shuttering including strutting, propping etc. and removal of form for :				
	5.9.1	Foundations, footings, bases of columns, etc. for concrete upto plinth level				
			712.80	Sqm	₹ 190.60	₹ 1,35,859.68
11	5.9.2	Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.				
	5.9.2.1	Up to Plinth Level				
		Horizontal tie Beam	245.00	Sqm	₹ 219.00	₹ 53,655.00
12	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers				
			57.00	Sqm	₹ 356.00	₹ 20,292.00
13	5.9.6	Columns, Pillar , Piers, Abutments, Posts and Struts.				
			118.80	Sqm	₹ 471.20	₹ 55,978.56
14	5/5.16	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
	5.16.6	Thermo-Mechanically Treated bars of grade Fe-500D or more.				
		110 Kg. Steel Per/Cu. M. Of R.C.C.				
		Total Steel in kg.	167907.30	Kg	₹ 80.00	₹ 1,34,32,584.00
15	6.7	Brick work with fly ash lime bricks (FALG Bricks) conforming to IS:12894-2002, in super structure above plinth level up to floor two level in				
	6.7.3	Having 50 kg / cm2 average compressive strength.				
	6.7.3.2	Cement mortar 1:6 (1 cement : 6 sand)				
			5.00	Cum	₹ 4,936.00	₹ 24,680.00
17	13.13	Providing sand faced plaster upto 10meter hight above ground level concrete or brick masonry surfaces in two coats, base coat of 13 mm thick in cement mortar 1:4 (1 cement: 4 sand),clearing the surface by combing it and finishing coat of 8 mm. thick in cement mortar 1:3 (1 cement: 3 sand) and taking out surface grains by mechanical arrangement or applying second coat by mechanical means including cost of all material, labour, and T and P including all lead, lift and scaffolding etc. complete				
			250.00	Sqm	₹ 314.00	₹ 78,500.00
18	5.18	Providing and fixing in position copper plate as per design for expansion joints.				
		Wall Joint of 100 mm gap	5.00	Kg.		
			5.00	Kg.	₹ 472.00	₹ 2,360.00
19	5.19	Providing and filling in position, blown bitumen in expansion joints.				
			0.50	per cum	₹ 45,353.00	₹ 22,676.50
20	5.20	Providing and filling in position bitumen mix filler of Proportion 80 kg. Of hot bitumen, 1 kg. Of cement and 0.25 cubic metre of sand for expansion joints.				
		Quantity	1.00	per cum	₹ 13,863.00	₹ 13,863
21	5.21	Providing and filling gap in expansion joint between RCC/ Stone/Ceramic tiles/Granite/ Marble by providing silicon sealant over backer rod of approved quality weather sealant as per drawing and direction of engineer in charge up to 25mm width & 12 mm depth				
		Quantity	20.00		₹ 104.54	₹ 2,091
22	5.36	Providing and sealing the retaining wall expansion Joints with anodized aluminum				
		Quantity	5.00	Meter	₹ 3,234.00	₹ 16,170
23	5.37	Providing and fixing sheet covering over expansion joints with iron screws as per design. Non- asbestos cement bonded particle board 6 mm thick as IS: 14276				
	5.37.1	150mm wide	5.00	Meter	₹ 96.00	₹ 480

DETAILED ESTIMATE						
Name of Project:		DEVELOPMENT OF SHANI TEMPLE AND SITE SURR				
Name of Work:		ORNAMENTAL SHED				
S.NO	ITEM NO.	DESCRIPTION	Total Quantity	UNIT	Rate in Rs. (w/o GST)	AMOUNT
	PWD S.O.R. ITEM 10.15	Design, supply, fabrication, taransportion and erection of structural steel/mild steel built-up sections for steel building in column, rafter, truss, floor joist, wind bracings, tie beam, foundation bolts, fasteners etc. Including two coats ofEpoxy paint and one coat of primer. These structural steel/built-up sections shall be manufactured using advanced CNC Plasma/Oxy Acetylene cutter and H Beam Welding line. Welding shall be in full depth on both sides of the plate adopting relevant I.S Code.				
		15kg/ sqm	20790.00	Kg	₹ 132	₹ 27,44,280.00
11	12.41	Providing and fixing in position roof tile under lay using 12mm thick(minimum) Moisture/fire Resistance heavy duty fibre cement board(High Pressure Steam Cured) Type A,Category 4 conforming to IS 14862:2000, fixed on Steel frame work of 610mmx610mm or 610mmx1220mm grid by counter sunk stainless screw @ 300mm C/C all complete as per the drawings. The boards are to be fixed on the frame work in staggered manner keeping a uniform gap of 2mm.Finally, the roof tile like Shingles/Mangalorian Tiles etc may be laid on the board substrate by sealing the joints properly with filler material or sealant to ensure no leakage through joints. All completeas per drawings, specification and as per direction of Engineer-in-Charge. Note - MS Section structure and roof tile like Shingles/Mangalorian Tiles etc cost will be paid seprately.				
			347.50	sqm	₹ 1,503.00	₹ 5,22,292.50
12	NON SOR	Providing & fixing of cast iron & ms fabricated decorative ornamental grill , partition, gates, railing, arches, brackets, customised items & crown etc. as per drawings instructions and Specifications-				
		1 - Cast iron material must follow FG-150 grade(as per isi specification) having hardness 135 to 165 BHN. 2 - Colour finishing - all parts must be first sand blasted or shot blasted to expose the metal surface than use epoxy primer for prevent the rust after than use again epoxy top coat for extra metal look in require antique shed with top coating of UV base clear lacquer to protect colour from UV rays i/c. cutting and fixing of members by nut bolts, welding with Co2 / M.IG, grinding, smmoth finishing , transportation, labour, tools				

		and plants etc. complete as per direction of Engineer-in-charge. 3 - All cast iron parts must have thickness of 20 to 30 mm (as per drawings), as required as per design & minimum gate's having sliding (if required) arrangements for opening and closing and it must be fitted with crown. & welded with co2/mig welding process & fully grinded for best finish.				
		Grill , partition, gates, railing, arches, brackets, customised items & crown etc. (Average weight of MS 90 KG is Per Sq.Mt.)				
			46504.26	KG	₹ 218.00	₹ 1,01,37,928.24
13	non sor item of shingles	Shingle Roofing System (Shed) Providing and fixing roofing shingles of approved make (e.g., IKO, GAF, Tegola, or equivalent), made of fiberglass-reinforced asphalt with mineral granule surfacing, conforming to ASTM/DIN/IS standards, laid over a suitable base , including: Starter shingles at the eaves and ridge cap shingles at ridges/hips. Proper cutting and alignment to maintain the aesthetic and water flow integrity. Cost of labour, scaffolding, tools, and tackles included.				
			1042.50	sqm	₹ 1,500.00	₹ 15,63,750.00
				GRAND TOTAL		₹ 1,49,68,251

**ESTIMATE BASED ON :-
GOVERNMENT OF MADHYA PRADESH PUBLIC
WORKS DEPARTMENT
SCHEDULE OF RATES (SOR) For
In force from January 01st 2024**

DETAILED ESTIMATE							
NAME OF PROJECT :-DEVELOPMENT OF SHANI TEMPLE AND SITE SURROUNDINGS, UJJAIN (M.P.)							
NAME OF WORK :- ORNAMENTAL SHED (GRANITE FLOORING)							
NO	SOR NO.	ITEM NAME	DESCRIPTION	Qty	Unit	Rate	Amount
1	11.3	Mirror polished pre moulded granite flooring 18 mm thick	Providing and laying gang saw cut 18 mm thick, mirror polished pre moulded (wherever required) and pre polished machine cut granite stonework in flooring of required size shape of approved shade, color and texture in flooring laid over 20 mm thick base of cement mortar 1:4 (1 Cement: 4 sand) including grouting the joints with white cement mixed with matching pigments epoxy touch up setc. complete as per direction of Engineer-in Charge.				
	11.30.1	Stone slab over 0.50sqm	Area of slab over 0.50 sqm				
	11.30.1.1	Granite (fine grained)	Fine grained granite dark Black/dark Red/ White or equivalent with self design/ pattern/crystals of other colors of glitter	417	SQM	₹2,642.00	₹11,01,714.00
	11.30.1.2	Granite (coarse grained)	Coarse grained granite light Black/light Red/ offWhite or equivalent with self design/pattern/crystals of other colors of glitter	417	SQM	₹2,422.00	₹10,09,974.00
	11.30.1.3	Granite (with pattern)	Gray/Pink/Brown or equivalent with various patterns	556	SQM	₹2,153.00	₹11,97,068.00
2	NON SOR	NON SOR ITEM OF LAPATTRO FINISH ON 30 MM THK. GRANITE	Rate for lapattro Finish Granite already approved in UDA.	75	SQM	₹250.00	₹18,750.00
3	NON SOR	NON SOR ITEM OF FLAMED FINISH ON 30 MM THK. GRANITE	Rate for Flamed finish Granite already approved in UDA.	75	SQM	₹150.00	₹11,250.00
4	NON SOR	NON SOR ITEM OF CNC work	Item :-Extra for CNC work as per required design a pattern on natural stone surface i.e. Granite / Marble / Kota , Sand Stone etc. All work should be done as per the drawing, design, pattern, specifications and instructions of Engineer in Charge. Measurement for billing purpose boundary out to out in Length and breadth of CNC work area only.	400.00	SQM	₹375.00	₹1,50,000.00
SUB TOTAL						₹34,88,756.00	
ESTIMATE BASED ON :-							
GOVERNMENT OF MADHYA PRADESH PUBLIC WORKS DEPARTMENT SCHEDULE OF RATES (SOR) For BUILDING WORKS (VOLUME-I & VOLUME-II) In force from January 01st , 2024							

DETAILED ESTIMATE

Name Of Project :- DEVELOPMENT WORK AT SHANI MANDIR TEMPLE , UJJAIN

Name Of Work :- CIVIL WORK OF SHANI MANDIR QUEUE HALL

S.No	Item No.	Description	Qty	Unit	Rate	Amount
1	2.1	Surface dressing of the ground including removing vegetation and in-equalities not exceeding 15 cm deep and disposal of rubbish, lead up to 50 m and lift up to 1.5 m. in all kinds of soil.				
		All kinds of soil.				
		LAND AREA	600.00	100/sqm.		
			6.00	100/sqm.	₹ 803.00	₹ 4,818.00
2	2/2.6	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottom disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed. (No extra lift is payable if work is done by mechanical means) All kinds of soil				
	2.6	All kinds of soil				
		EXCAVATION OF FOOTING	189.00	Cum		
			189.00	Cum	₹ 147.00	₹ 27,783.00
3	2/2.7	Earth work in excavation/ by mechanical means (Hydraulic Excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottom disposal of excavated earth, Note:-Excavation of hard rock shall be the property of the contractor subject to recovery. excavated material has to shift from site within 15 days after instruction issued by Engineer-In Charge otherwise after this penalty will imposed on contractor at the rate of Rs 50 per cum per day.				
	2.7.2	Ordinary rock				
		50% OF ITEM 2.6	94.50	Cum		
			94.50	Cum	₹ 287.00	₹ 27,121.50
4	15.2	Demolishing cement concrete manually/by mechanical means including disposal of material within 50 metres lead as per direction of Engineer-in Charge				
	15.2.1	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix).				
			10.00	Cum	₹ 578.00	₹ 5,780.00
5	2.24	Filling available excavated earth (excluding hard rock/Ordinary rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.				
		40% qty from item no. - 2.6.1	75.60	Cum		
			75.60	Cum	₹ 95.00	₹ 7,182.00
6	1.1	Transportation By Mechanical Transport including loading, unloading and stacking.				
	1.1.1	Lime, moorum, building rubbish 4km.				
		Qty.	207.90	Cum		
			207.90	Cum	₹ 152.75	₹ 31,756.73
7	2.25	Extra for every additional lift of 1.5 m or part thereof in excavation. (No extra lift is payable if work is done by mechanical means)				
	2.25.1	All kind of soil.				
		50% QTY. OF ITEM No. 2	141.75	Cum	₹ 30.00	₹ 4,252.50

8	2.26	Supplying and filling in plinth with crusher stone dust / coarse sand under floors including, watering, ramming and compacting in layers not exceeding 20cm in depth and dressing complete Note: - Maximum thickness of this layer shall be 20 cm.				
	2.26.1	Crusher Stone Dust				
			360.00	Cum	₹ 672.00	₹ 2,41,920.00
9	2.27	Supplying and filling in plinth under floors including watering ramming consolidating in layers not exceeding 20cm in depth and dressing complete.				
	2.27.1	With hard muram having CBR >12 % at under floors including watering, ramming and compacting (minimum compaction 95% of MDD) in layers not exceeding 20cm in thickness and dressing complete. (Note:- maximum thickness of this layer to be provided shall be 30cm)				
		Moorum/Hard copra				
			360.00	Cum	₹ 393.00	₹ 1,41,480.00
10	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level :				
	4.1.1.3	M-15 – Grade concrete				
			9.90	Cum	₹ 4,471.00	₹ 44,262.90
11	5.1	Providing and laying in position specified grade of reinforced cement concrete (with 20mm nominal size graded stone aggregate) excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
	5.1.1	M-20 Grade Concrete				
			1.00	Cum	₹ 6,153.00	₹ 6,153.00
12	5.2	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, posts and struts etc. above plinth level and upto floor two level excluding cost of centering, shuttering, finishing and reinforcement:				
		RCC in walls,columns,pillars etc				
	5.2.1	M-20 Grade Concrete				
			2.00	Cum	₹ 6,231.00	₹ 12,462.00
13	5.3 RCC in beams, floors, staircases etc	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in beams, suspended floors, roofs having slope of any degree landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral staircases above plinth level and upto floor two level excluding the cost of centering, shuttering, finishing and reinforcement in concrete grade.				
	5.3.1	M-20 Grade Concrete				
			1.00	Cum	₹ 6,541.00	₹ 6,541.00
14	5.30	Providing and laying in position ready mixed concrete (RMC) of M-20 grade for reinforced cement concrete work, using cement content as per approved design mix and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centering, shuttering, finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate / retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. Note: Minimum cement content is @ 320 kg/cum. (No extra payment for using extra cement as per requirement of mix design.)				
	5.30.1	All works upto plinth level.				
			135.48	cum	₹ 6,332.00	₹ 8,57,834.03

	5.30.2	All works above plinth level and upto top level.				
		GROUND FLOOR ROOF				
			141.98	Cum	₹ 6,814.00	₹ 9,67,451.72
15	5.28	Extra for providing richer mixes of BMC/RMC design mix as per item no 5.27&5.30 up to plinth level and at all floor levels. (No extra payment for using extra cement as per requirement of mix design.)				
	5.28.2	Providing M-30 grade concrete instead of M 20 grade. (Note : minimum cement content is @ 140 kg/cum)				
			277.46	Cum	₹ 140.00	₹ 38,843.84
16	5.9	Centering and shuttering including strutting, propping etc. and removal of form for :				
	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete up to plinth level.				
			167.04	Sqm	₹ 190.60	₹ 31,837.82
17	5.9.2	Walls (any thickness) in cluding attached pilasters butter esses, plinth beams and string courses etc.				
	5.9.2.1	Upto plinth level.				
			194.85	Sqm	₹ 219.00	₹ 42,672.15
18	5.9.3	Suspended floors, roofs, landings, balconies and access platform				
		GROUND FLOOR ROOF				
			506.95	Sqm	₹ 439.60	₹ 2,22,855.22
19	5.9.5	Lintels, beams, girders, bressumers and cantilevers				
		GROUND FLOOR ROOF				
			189.50	Sqm	₹ 356.00	₹ 67,462.00
20	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts.				
		GROUND FLOOR				
		Column	180.00	Sqm		
			180.00	Sqm	₹ 471.20	₹ 84,816.00
21	5.9.9	Arches, domes,vaults upto 6m span				
			10.00	Sqm	₹ 1,141.60	₹ 11,416.00
22	5.9.10	Extra for arches, domes, vaults exceeding 6 m span				
			5.00	Sqm	₹ 451.30	₹ 2,256.50
23	5/5.16	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding including cost of binding wire all wastages and overlaps, couplers (overlaps shall be provided as per requirement of IS 13920 for ductile detalingIS 456 RCC Design & SP 34 Reinforcement detailing) etc. complete . (Note:- 1. Spacer bars (chairs) shall be paid separately as shown in the drawing and as per direction of engineer in charge. 2. No extra payment shall be done for overlaps and/or couplers. 3.Couplers shall be conforming to IS code on "Reinforcement Couplers for Mechanical Splices of Bars for Concrete Reinforcement - Specification")				
	5.16.6	Thermo-Mechanically Treated bars. (TMT/TMX) FE 500 or more conforming to IS 1786				
		110 Kg. Steel Per/Cu. M. Of R.C.C.				
		Total Steel in kg.	30960.16	Kg	₹ 80.00	₹ 24,76,812.80
24	6.2	Brick work with well burnt chimney bricks in bulls patent trench kiln manufactured by ghol process ,crushing strength not less than 40kg /cm2 and water absorption not more than 15% in superstructure above plinth level and up to floor two level i/c curing etc. complete.				
	6.2.2	Cement mortar 1:6 (1 cement : 6 sand)				

GROUND FLOOR						
			147.24	Cum	₹ 5,821.00	₹ 8,57,084.04
25	10.15	Design, supply, fabrication, transportation and erection of structural steel/mild steel built-up sections for steel building in column, rafter, truss, floor joist, wind bracings, tie beam, foundation bolts, fasteners etc. Including two coats of Epoxy paint and one coat of primer. These structural steel/built-up sections shall be manufactured using advanced CNC Plasma/Oxy Acetylene cutter and H Beam Welding line. Welding shall be in full depth on both sides of the plate adopting relevant I.S Code.				
26	12/12.32	Providing and fixing on wall face Rigid Unplasticised rigid PVC (upvc) Single socketed rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.				
	12.32.2	110 mm diameter (minimum wall thickness 2.2mm)	48.00	Meter	₹ 238.00	₹ 11,424.00
27	13.6	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 sand) finished with a top layer 6mm thick cement plaster 1:4 (1 cement : 4 sand).	697.60	sqm	₹ 220.00	₹ 1,53,472.00
28	13.8	6 mm cement plaster of mix : 1:3 (1 cement : 3 sand)	603.60	sqm	₹ 144.00	₹ 86,918.40
29	13.16	Extra for plastering on circular work not exceeding 6 m in radius:				
	13.16.2	in two coat	5.00	sqm	₹ 18.00	₹ 90.00
30	13.17	Extra for plastering done on moulding cornices or architraves including neat finish to line and level:				
	13.17.2	in two coat	10.00	sqm	₹ 260.00	₹ 2,600.00
31	13.27	Providing and fixing mesh in vertical and horizontal junction of RCC and brick/AAC work including scaffolding and all lead and lift etc. complete				
	13.27.1	G.I. chicken mesh as per ISI specification and in the required width with 50mm long Bombay nails before plastering upto 10 meter height.	50.00	sqm	₹ 62.00	₹ 3,100.00
b)	13.27.2	Providing and fixing fibre mesh of 145 GSM weight in required width with cement mortar before plastering upto 10m height.	100.00	Sqm	₹ 45.00	₹ 4,500.00
32	13.41	Providing and applying white cement based putty of average thickness 1 mm, of approved brand over the plastered wall surface to prepare the surface even and smooth i/c all cost of material, labour and scaffold etc in all position complete. Note : Putty shall be applied only on the internal walls, for application on the exterior walls prior permission of APD/Chief Engineer will be required.	1301.20	sqm	₹ 74.00	₹ 96,288.80
33	13.54.3	Two or more coats applied on walls @ 1.25 ltr/10 sqm. over and including one coat of Special primer applied @ 0.75 ltr / 10 sqm.	1301.20	sqm	₹ 81.00	₹ 1,05,397.20

49	9.19	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) non decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.				
	9.19.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.				
		Ground Floor				
			38.40	sqm	₹ 1,870.00	₹ 71,808.00
50	9.134	Providing and Fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt / suede finish with high density protective surface layer and reverse side of adhesive bonding quality conforming to IS : 2046 Type S including cost of adhesive of approved quality.				
	9.134.2	1.0 mm thick.				
		Ground Floor				
			76.80	sqm	₹ 691.00	₹ 53,068.80
51	9.69	Providing and fixing ISI marked stainless steel handles with necessary screws etc. complete :				
	9.69.1	125 mm				
		Ground Floor				
			20.00	each	₹ 60.00	₹ 1,200
52	9.76	Providing and fixing Stainless steel hanging type floor door stopper with necessary screws, etc. complete.				
		Ground Floor				
			20.00	each	₹ 103.00	₹ 2,060
53	9.79	Providing and fixing bright finished brass tower bolts (barrel type) with necessary screws etc. complete :				
	9.79.2	250 x10 mm				
		Ground Floor				
			20.00	each	₹ 329.00	₹ 6,580
54	9.81	Providing and fixing bright finished brass handles with necessary screws etc. complete.				
	9.81.1	125 mm				
		Ground Floor				
			22.00	each	₹ 205.00	₹ 4,510
55	9.43	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete				
	9.43.2	Fixed to openings / wooden frames with rawl plugs screws etc.				
			1260	kg.	₹ 128.00	₹ 1,61,280
56	9.84	Providing and fixing bright finished brass 100 mm mortice latch and lock ISI marked with six levers and a pair of anodised (anodic coating not less than grade AC 10 as per IS : 1868) aluminium lever handles with necessary screws etc. complete (Best make of approved quality).				
		Ground Floor				
			22.00	each	₹ 820.00	₹ 18,040
57	10.22	Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.				
	10.22.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.				
			500.00	kg.	₹ 105.00	₹ 52,500

58	10/10.25	Providing and fixing stainless steel (Grade 304) railing made of Hollowtubes, channels, plates etc. including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete i/c fixing the railing with necessary accessories and stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer in-charge. (For payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)				
			300	kg.	₹ 582.00	₹ 1,74,600
59	10/10.26	Providing and fixing fly proof wire gauze to windows, clerestory windows and doors with M.S. Flat 15x3mm and nuts and bolts complete.				
	10.26.2	Stainless steel (grade 304) wire gauze of 0.5 mm dia wire and 1.4 mm aperture on both sides.				
			84	Sqm	₹ 1,334.00	₹ 1,12,056
60	10.27	Providing and fixing glass panels/ steel sheet/ Fibre sheet with putty and glazing clips in steel doors, windows, clerestory windows all complete.				
	10.27.1	With 4.0 mm thick glass panes ventilators				
			84	sqm	₹ 792.00	₹ 66,528
61	10.28	Add extra for providing and fixing froasted glass instead of float glass.				
	10.28.2	With 5.5 mm thick glass panes.				
			84	sqm	₹ 262.00	₹ 22,008
62	11.22	Providing and fixing 18mm thick gang saw cut mirror polished (premoulded and prepolished) machine cut for kitchen platforms, vanitycounters, window sills , facias and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing moulding and polishing to edge to givehigh gloss finish wherever required etc. complete at all levels. Samples approved by Engineer-in- Charge.				
	11.22.2	Granite fine grained dark crystal of other colours and various patterns				
			35.60	sqm	₹ 2,356.00	₹ 83,874
	11.22.3	Granite coarse grained light black/ light red/white with crystal of other colours and various patterns				
			2.00	Sqm	₹ 2,113.00	₹ 4,226
63	11.19	Marble stone flooring with 18 mm thick marble stone (sample of marble shall be approved by Engineer-in-charge) laid over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 sand and grey cement slurry, joints treated with white cement mixed with pigment to match colour of stone including rubbing and polishing complete with : (area of slabs over 0.5 sqm)				
	11.19.1	Makrana white second quality.				
			490	Sqm	₹ 3,051.00	₹ 14,94,990
64	11.33	Providing and laying Granite stone flooring in required design and patterns in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry admixed with pigment of matching shade including rubbing, curing and polishing and as directed by the Engineer-in-Charge Granite stone slab Dark Black. Dark Red, White or equivalent,				
	11.33.2	Leather Finish Granite				
			20	Sqm	₹ 2,809.00	₹ 56,180

65	11.34	Granite stone work 18mm thick of any colour in riser of steps, skirting, dado and pillars laid on 12 mm average thick cement mortar 1:3 (1 cement:3 sand) and jointed with white cement slurry mixed with pigment to match the shade of slab.				
			96.00	Sqm	₹ 3,413.00	₹ 3,27,648
66	11.4	Providing edge moulding to 18mm thick marble stone counters, Vanities, window sills etc. including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge.				
	11.40.2					
			310.00	RM	₹ 269.00	₹ 83,390
67	11.75	Providing and fixing 16mm thick gang saw cut mirror polished pre moulded and pre polished machine cut Granite of approved shade, colour and texture of Granite Door frame. in cement mortar 1:3 (1 cement :3 sand) including pointing with an mixture of pigment to match the shade including fixing of granite stone door frame with epoxy resin based adhesive including secured to the backing by means of cramps, drilling of hole with rawl plugs and screws 75mm long cleaning etc. complete. Including rubbing, curing, moulding and polishing edges to give high glossy finish and drilling of hole for fixing stainless steel hinges, aldrops, towerbolts etc complete at all levels as per instruction of Engineer-in-Charge.				
(ii)	11.75.2	Granite Door frame for 200mm thick wall Thickness.				
			137.60	Rmt	₹ 1,512.00	₹ 2,08,051
68	11.78	Providing and laying Vitrified floor tiles multy charges (Minimum top layer 2.0 mm) Nano Polished Self design, in different size with water absorption less than 0.05% and conforming to IS:15622, of approved make in all colours and shade , 1 quality / premium in flooring, laid 20 mm thick cement mortar 1:4 (1 cement :4 sand) including grouting the joints with white cement and matching pigments etc, complete.				
	11.78.1	In light shade glossy/ rustic /stain finished				
	11.78.1.1	Size 600X600mm thickness 09-10mm				
			53.50	Sqm	₹ 1,104.00	₹ 59,064
	11.78.1.3	Size 800X1200 mm thickness 11-12mm				
			53.50	Sqm	₹ 1,413.00	₹ 75,596
72	11.79	Providing and laying vitrified floor tiles Multi/Double charged (Minimum top layer thickness 2.0mm) Neno Polished self design, in different size with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours& shades, 1st quality/ premium quality in skirting laid on 12mm thick cement mortar 1:4(1cement :4sand) including grouting the joints with white cement and matching pigments etc. complete				
	11.79.1	In light shade glossy/ rustic /stain finished				
	11.79.1.3	(c) Size 800X1200 mm thickness 11-12mm				
			490.00	sqm	₹ 1,403.00	₹ 6,87,470
73	11.8	Providing and laying vitrified floor-tiles Full Body Design Homogenous Body matt/rustic finish in different size with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours& shades, 1st quality/ premium quality in flooring laid on 20mm thick cement mortar 1:4 (1cement :4sand) including grouting the joints with white cement and matching pigments etc. complete				
	11.80.1	In light colour and shades as ivory, beige blanco, grey etc.				
	11.80.1.2	(b) Size 600X600mm thickness 9-10mm				
			40	sqm	₹ 1,206.00	₹ 48,240

74	11.82	Providing and laying digital print random design(PGVT)/(GVT) vitrified tiles in different sizes with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours& shades, 1st quality/ premium quality including grouting the joints with white cement and matching pigments etc. complete				
	11. 82.1	For floor glossy/ rustic /stain/matt finished laid on 20mm thick cement mortar 1:4 (1 cement:4sand)				
	11. 82.1.1	Size 600X600 mm thickness 9-10 mm				
			40.00	Sqm	₹ 1,140.00	₹ 45,600
	11. 82.1.6	800X1200				
			40.00	Sqm	₹ 1,450.00	₹ 58,000
75	11.83	Providing and laying digital print random design (PGVT)/(GVT) vitrified tiles in different sizes with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours& shades, 1st quality / premium in skirting, riser laid our 12mm thick cement mortar 1:3 including grouting the joints with white cement and matching pigments etc. complete				
	11.83.1	For skirting, risers etc. glossy/ rustic /stain/matt finished in all colours and shades				
	11.83.1.5	Size 800X1200 mm thickness 11-12 mm				
			200.00	Sqm		
			200.00	Sqm	₹ 1,440.00	₹ 2,88,000
76	11.53	Providing and laying Antiskid floor tiles of any sizes, 12 mm thickness with water absorption less than 0.08% and conforming to IS:15622 of approved make in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 sand) including grouting the joints with white cement with matching pigments etc., complete.				
			50.00	sqm	₹ 880.00	₹ 44,000
77	11.84	Granite work gang saw cut (polished machine cut) of thickness 12 mm for wall lining, skirting, risers of steps and dado (veneer work), back filling with a grout of average 12 mm thick in cement mortar 1:3 (1 Cement: 3 sand) including pointing with white cement mortar 1:2 (1 white cement: 2 marble dust) with an admixture of pigment to match the marble shade: (To be secured to the beaching by means of cramps, which shall be paid for separately).				
	11. 84.1	Area of tiles not less 0.18 sqm				
	11. 84.1.1	Fine granite dark Black/dark Red/ White with self design/ pattern/crystals of other colors of glitter				
			96.00	sqm	₹ 2,296.00	₹ 2,20,416
78	11.85	Providing and laying gang saw cut 12mm thick, mirror polished pre moulded (wherever required) and pre polished machine cut granite stone of required size and shape of approved shade, colour and texture in flooring laid over 20mm thick base of cement mortar 1:4(1cement:4sand) including grouting the joints with white cement mixed with matching pigments, epoxy touch ups etc. complete as per direction of Engineer-in-Charge.				
	11. 85.1	Area of tiles not less 0.18 sqm				
	11. 85.1.1	Fine granite dark Black/dark Red/ White with self design/ pattern/crystals of other colors of glitter				
		STEPS				
			37.80	sqm	₹ 1,775.00	₹ 67,095
	11.36	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and mirror polishing complete with base of cement mortar 1 : 4 (1 cement : 4 sand) having thickness of slab 25 mm (Area of slab to be over 0.25 sqm) Note: - Deduction shall be made for not mirror polishing according to item no 11.43				
			70.00	sqm	₹ 1,174.00	₹ 82,180
79	11.3	Providing and laying gang saw cut 18 mm thick, mirror				

		polished pre moulded (wherever required) and pre polished machine cut granite stonework in flooring of required size shape of approved shade, color				
	11.30.1	Area of slab over 0.50 sqm				
	11.30.1.1	Fine grained granite dark Black/dark Red/ White or equivalent with self design/ pattern/crystals of other colors of glitter	70.00	SQM	₹ 2,642.00	₹ 1,84,940
80	11.29	Granite work gang saw cut (polished and machine cut) of thickness 18mm for wall lining (vener work), backing filled with a grout of average 12 mm thick in cement mortar 1:3 (1 cement: 3 sand) including pointing with white cement mortar 1:2 (1 white cement: 2 marble dust) with an admixture of pigment to match the marble shade: (To be secured to the backing by means of cramps, which shall be paid for separately).				
	11.29.2	Area of slab upto 0.50 sqm				
	11.29.2.1	Fine grained granite dark Black/dark Red/ White or equivalent with self design/ pattern/crystals of other colors of glitter	70.00	SQM	₹ 2,705.00	₹ 1,89,350
85	21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other				
	21.1.1	For fixed portion.				
	21.1.1.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)				
		Weight @ of 15.00 kg. per sq.m.	1125	kg.	₹ 416.00	₹ 4,68,000
86	22/22.5	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying :				
		a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. This layer will be allowed to air cure for 4 hours.				
		b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.				
			50	sqm	₹ 207.00	₹ 10,350
87	22.7	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations:				
		a) Applying a slurry coat of neat cement using 2.75 kg/sqm. of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment.				
		b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs				
		c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge.				

		d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3mm deep.				
		e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge : (with 5 years service guarantee)				
		With average thickness of 120mm and minimum thickness at khurra as 65 mm.				
			490.00	Sqm	₹ 885.00	₹ 4,33,650
			TOTAL			₹ 1,26,66,393.25

DETAILED ESTIMATE

Name Of Project :- DEVELOPMENT WORK AT SHANI MANDIR , UJJAIN

Name Of Work :- MULTIPURPOSE HALL

S.No	Item No.	Description	Qty	Unit	Rate	Amount
1	2.1	Surface dressing of the ground including removing vegetation and in-equalities not exceeding 15 cm deep and disposal of rubbish, lead up to 50 m and lift up to 1.5 m. in all kinds of soil.				
		All kinds of soil.				
			13.44	100/sqm.	₹ 803.00	₹ 10,792.32
2	2/2.6	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottom disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed. (No extra lift is payable if work is done by mechanical means) All kinds of soil				
	2.6	All kinds of soil				
			330.75	Cum	₹ 147.00	₹ 48,620.25
3	2/2.7	Earth work in excavation/ by mechanical means (Hydraulic Excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottom disposal of excavated earth, Note:-Excavation of hard rock shall be the property of the contractor subject to recovery. excavated material has to shift from site within 15 days after instruction issued by Engineer-In Charge otherwise after this penalty will imposed on contractor at the rate of Rs 50 per cum per day.				
	2.7.1	Ordinary rock				
			165.38	Cum	₹ 287.00	₹ 47,462.63
4	15.2	Demolishing cement concrete manually/by mechanical means including disposal of material within 50 metres lead as per direction of Engineer-in Charge				
	15.2.1	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix).				
			8.00	Cum	₹ 578.00	₹ 4,624.00
5	2.24	Filling available excavated earth (excluding hard rock/Ordinary rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.				
			198.45	Cum	₹ 95.00	₹ 18,852.75
6	1.1	Transportation By Mechanical Transport including loading, unloading and stacking.				
	1.1.1	Lime, moorum, building rubbish 4km.				
			297.68	Cum	₹ 152.75	₹ 45,469.86
7	2.25	Extra for every additional lift of 1.5 m or part thereof in excavation. (No extra lift is payable if work is done by mechanical means)				
	2.25.1	All kind of soil.				
			248.06	Cum	₹ 30.00	₹ 7,441.88
8	2.26	Supplying and filling in plinth with crusher stone dust / coarse sand under floors including, watering, ramming and compacting in layers not exceeding 20cm in depth and dressing complete Note: - Maximum thickness of this layer shall be 20 cm.				
	2.26.1	Crusher Stone Dust				
			76.00	Cum	₹ 672.00	₹ 51,072.00
9	2.27	Supplying and filling in plinth under floors including watering ramming consolidating in layers not exceeding 20cm in depth and dressing complete.				
	2.27.1	With hard muram having CBR >12 % at under floors including watering, ramming and compacting (minimum compaction 95% of MDD) in layers not exceeding 20cm in thickness and dressing complete. (Note:- maximum thickness of this layer to be provided shall be 30cm)				
		Moorum/Hard copra				
			304.00	Cum	₹ 393.00	₹ 1,19,472.00

10	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level :				
	4.1.1.3	M-15 – Grade concrete				
			15.29	Cum	₹ 4,471.00	₹ 68,352.65
11	5.1	Providing and laying in position specified grade of reinforced cement concrete (with 20mm nominal size graded stone aggregate) excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
	5.1.1	M-20 Grade Concrete				
			2.00	Cum	₹ 6,153.00	₹ 12,306.00
12	5.2	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, posts and struts etc. above plinth level and upto floor two level excluding cost of centering, shuttering, finishing and reinforcement:				
		RCC in walls,columns,pillars etc				
	5.2.1	M-20 Grade Concrete				
			5.00	Cum	₹ 6,231.00	₹ 31,155.00
13	5.3	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in beams, suspended floors, roofs having slope of any degree landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral staircases above plinth level and upto floor two level excluding the cost of centering, shuttering, finishing and reinforcement in concrete grade.				
		RCC in beams, floors, staircases etc				
	5.3.1	M-20 Grade Concrete				
			3.00	Cum	₹ 6,541.00	₹ 19,623.00
14	5.30	Providing and laying in position ready mixed concrete (RMC) of M-20 grade for reinforced				
	5.30.1	All works upto plinth level.				
			220.70	cum	₹ 6,332.00	₹ 13,97,497.73
	5.30.2	All works above plinth level and upto top level.				
		GROUND FLOOR ROOF				
			173.33	Cum	₹ 6,814.00	₹ 11,81,070.62
15	5.28	Extra for providing richer mixes of BMC/RMC design mix as per item no 5.27&5.30 up to plinth level and at all floor levels. (No extra payment for using extra cement as per requirement of mix design.)				
	5.28.2	Providing M-30 grade concrete instead of M 20 grade. (Note : minimum cement content is @ 140 kg/cum)				
			394.03	Cum	₹ 140.00	₹ 55,164.76
16	5.9	Centering and shuttering including strutting, propping etc. and removal of form for :				
	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete up to plinth level.				
			232.68	Sqm	₹ 190.60	₹ 44,348.81
17	5.9.2	Walls (any thickness) in cluding attached pilasters butter esses, plinth beams and string courses etc.				
	5.9.2.1	Upto plinth level.				
			113.75	Sqm	₹ 219.00	₹ 24,911.25
18	5.9.3	Suspended floors, roofs, landings, balconies and access platform				
		GROUND FLOOR ROOF				
			777.25	Sqm	₹ 439.60	₹ 3,41,679.10
19	5.9.5	Lintels, beams, girders, bressumers and cantilevers				
			325.50	Sqm	₹ 356.00	₹ 1,15,878.00
20	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts.				
			147.00	Sqm	₹ 471.20	₹ 69,266.40
21	5.9.9	Arches, domes,vaults upto 6m span				
			15.00	Sqm	₹ 1,141.60	₹ 17,124.00
22	5.9.10	Extra for arches, domes, vaults exceeding 6 m span				
			5.00	Sqm	₹ 451.30	₹ 2,256.50

23	5/5.16	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding including cost of binding wire all wastages and overlaps, couplers (overlaps shall be provided as per requirement of IS 13920 for ductile detailing IS 456 RCC Design & SP 34 Reinforcement detailing) etc. complete . (Note:- 1. Spacer bars (chairs) shall be paid separately as shown in the drawing and as per direction of engineer in charge. 2. No extra payment shall be done for overlaps and/or couplers. 3.Couplers shall be conforming to IS code on "Reinforcement Couplers for Mechanical Splices of Bars for Concrete Reinforcement - Specification")				
	5.16.6	Thermo-Mechanically Treated bars. (TMT/TMX) FE 500 or more conforming to IS 1786 110 Kg. Steel Per/Cu. M. Of R.C.C.				
		Total Steel in kg.	44443.74	Kg	₹ 80.00	₹ 35,55,499.20
24	5.17	Add extra for providing reinforcement above Floor two level for every additional floor or part thereof.				
		Total Steel in kg.	44443.74	Kg	₹ 0.20	₹ 8,888.75
			44443.74	Kg	₹ 0.40	₹ 17,777.50
25	6.2	Brick work with well burnt chimney bricks in bulls patent trench kiln manufactured by ghol process ,crushing strength not less than 40kg /cm2 and water absorption not more than 15% in superstructure above plinth level and up to floor two level i/c curing etc. complete.				
	6.2.2	Cement mortar 1:6 (1 cement : 6 sand)				
			183.76	Cum	₹ 5,821.00	₹ 10,69,666.96
26	10.15	Design, supply, fabrication, taransportion and erection of structural steel/mild steel built-up sections for steel building in column, rafter, truss, floor joist, wind bracings, tie beam, foundation bolts, fasteners etc. Including two coats ofEpoxy paint and one coat of primer. These structural steel/built-up sections shall be manufactured using advanced CNC Plasma/Oxy Acetylene cutter and H Beam Welding line. Welding shall be in full depth on both sides of the plate adopting relevant I.S Code.				
			70.00	kg	₹ 132.00	₹ 9,240.00
27	12/12.32	Providing and fixing on wall face Rigid Unplasticised rigid PVC (upvc) Single socketed rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.				
	12.32.2	110 mm diameter (minimum wall thickness 2.2mm)				
			48.00	Meter	₹ 238.00	₹ 11,424.00
28	13.6	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 sand) finished with a top layer 6mm thick cement plaster 1:4 (1 cement : 4 sand).				
			987.60	sqm	₹ 220.00	₹ 2,17,272.00
29	13.8	6 mm cement plaster of mix : 1:3 (1 cement : 3 sand)				
			760.00	sqm	₹ 144.00	₹ 1,09,440.00
30	13.16	Extra for plastering on circular work not exceeding 6 m in radius:				
	13.16.2	in two coat				
			30.00	sqm	₹ 18.00	₹ 540.00
31	13.17	Extra for plastering done on moulding cornices or architraves including neat finish to line and level:				
	13.17.2	in two coat				
			30.00	sqm	₹ 260.00	₹ 7,800.00
32	13.27	Providing and fixing mesh in vertical and horizontal junction of RCC and brick/AAC work including scaffolding and all lead and lift etc. complete				
	13.27.1	G.I. chicken mesh as per ISI specification and in the required width with 50mm long Bombay nails before plastering upt 10 meter height.				
			70.00	sqm	₹ 62.00	₹ 4,340.00
b)	13.27.2	Providing and fixing fibre mesh of 145 GSM weight in required width with cement mortar before plastering upto 10m height.				
			130.00	Sqm	₹ 45.00	₹ 5,850.00

33	13.41	Providing and applying white cement based putty of average thickness 1 mm, of approved brand over the plastered wall surface to prepare the surface even and smooth i/c all cost of material, labour and scaffold etc in all position complete. Note : Putty shall be applied only on the internal walls, for application on the exterior walls prior permission of APD/Chief Engineer will be required.				
			1747.60	sqm	₹ 74.00	₹ 1,29,322.40
34	13.54.3	Two or more coats applied on walls @ 1.25 ltr/10 sqm. over and including one coat of Special primer applied @ 0.75 ltr / 10 sqm.				
			1747.60	sqm	₹ 81.00	₹ 1,41,555.60
49	9.19	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) non decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.				
	9.19.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.				
		Ground Floor				
			26.40	sqm	₹ 1,870.00	₹ 49,368.00
50	9.134	Providing and Fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt / suede finish with high density protective surface layer and reverse side of adhesive bonding quality conforming to IS : 2046 Type S including cost of adhesive of approved quality.				
	9.134.2	1.0 mm thick.				
			67.20	sqm	₹ 691.00	₹ 46,435.20
51	9.69	Providing and fixing ISI marked stainless steel handles with necessary screws etc. complete :				
	9.69.1	125 mm				
			20.00	each	₹ 60.00	₹ 1,200
52	9.76	Providing and fixing Stainless steel hanging type floor door stopper with necessary screws, etc. complete.				
		Ground Floor				
			22.00	each	₹ 103.00	₹ 2,266
53	9.79	Providing and fixing bright finished brass tower bolts (barrel type) with necessary screws etc. complete :				
	9.79.2	250 x10 mm				
		Ground Floor				
			22.00	each	₹ 329.00	₹ 7,238
54	9.81	Providing and fixing bright finished brass handles with necessary screws etc. complete.				
	9.81.1	125 mm				
		Ground Floor				
			22.00	each	₹ 205.00	₹ 4,510
55	9.43	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete				
	9.43.2	Fixed to openings / wooden frames with rawl plugs screws etc.				
			1260	kg.	₹ 128.00	₹ 1,61,280
56	9.84	Providing and fixing bright finished brass 100 mm mortice latch and lock ISI marked with six levers and a pair of anodised (anodic coating not less than grade AC 10 as per IS : 1868) aluminium lever handles with necessary screws etc. complete (Best make of approved quality).				
			22.00	each	₹ 820.00	₹ 18,040
57	10.22	Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.				
	10.22.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.				
			230.00	kg.	₹ 105.00	₹ 24,150

58	10/10.25	Providing and fixing stainless steel (Grade 304) railing made of Hollowtubes, channels, plates etc. including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete i/c fixing the railing with necessary accessories and stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer in-charge. (For payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)				
			70	kg.	₹ 582.00	₹ 40,740
59	10/10.26	Providing and fixing fly proof wire gauze to windows, clerestory windows and doors with M.S. Flat 15x3mm and nuts and bolts complete.				
	10.26.2	Stainless steel (grade 304) wire gauze of 0.5 mm dia wire and 1.4 mm aperture on both sides.				
			84	Sqm	₹ 1,334.00	₹ 1,12,056
60	10.27	Providing and fixing glass panels/ steel sheet/ Fibre sheet with putty and glazing clips in steel doors, windows, clerestory windows all complete.				
	10.27.1	With 4.0 mm thick glass panes ventilators				
			84	sqm	₹ 792.00	₹ 66,528
61	10.28	Add extra for providing and fixing frosted glass instead of float glass.				
	10.28.2	With 5.5 mm thick glass panes.				
			84	sqm	₹ 262.00	₹ 22,008
62	11.22	Providing and fixing 18mm thick gang saw cut mirror polished (premoulded and prepolished) machine cut for kitchen platforms, vanitycounters, window sills, facias and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing moulding and polishing to edge to give high gloss finish wherever required etc. complete at all levels. Samples approved by Engineer-in- Charge.				
	11.22.2	Granite fine grained dark crystal of other colours and various patterns				
			35.60	sqm	₹ 2,356.00	₹ 83,874
	11.22.3	Granite coarse grained light black/ light red/white with crystal of other colours and various patterns				
			2.00	Sqm	₹ 2,113.00	₹ 4,226
63	11.19	Marble stone flooring with 18 mm thick marble stone (sample of marble shall be approved by Engineer-in-charge) laid over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 sand and grey cement slurry, joints treated with white cement mixed with pigment to match colour of stone including rubbing and polishing complete with : (area of slabs over 0.5 sqm)				
	11.19.1	Makrana white second quality.				
			200	Sqm	₹ 3,051.00	₹ 6,10,200
64	11.33	Providing and laying Granite stone flooring in required design and patterns in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry admixed with pigment of matching shade including rubbing, curing and polishing and as directed by the Engineer-in-Charge Granite stone slab Dark Black. Dark Red, White or equivalent,				
	11.33.2	Leather Finish Granite				
			50	Sqm	₹ 2,809.00	₹ 1,40,450
65	11.34	Granite stone work 18mm thick of any colour in riser of steps, skirting, dado and pillars laid on 12 mm average thick cement mortar 1:3 (1 cement:3 sand) and jointed with white cement slurry mixed with pigment to match the shade of slab.				
			24.00	Sqm	₹ 3,413.00	₹ 81,912
66	11.4	Providing edge moulding to 18mm thick marble stone counters, Vanities, window sills etc. including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge.				
	11.40.2					

			164.00	RM	₹ 269.00	₹ 44,116
70	11.75	Providing and fixing 16mm thick gang saw cut mirror polished premoulded and prepolished machine cut Granite of approved shade, colour and texture of Granite Door frame. in cement mortar 1:3 (1 cement :3 sand) including pointing with an admixture of pigment to match the shade including fixing of granite stone door frame with epoxy resin based adhesive including secured to the backing by means of cramps, drilling of hole with rawl plugs and screws 75mm long cleaning etc. complete. Including rubbing, curing, moulding and polishing edges to give high glossy finish and drilling of hole for fixing stainless steel hinges, aldrops, towerbolts etc complete at all levels as per instruction of Engineer-in-Charge.				
(ii)	11.75.2	Granite Door frame for 200mm thick wall Thickness.				
			152.00	Rmt	₹ 1,512.00	₹ 2,29,824
71	11.78	Providing and laying Vitrified floor tiles multi charges (Minimum top layer 2.0 mm) Nano Polished Self design, in different size with water absorption less than 0.05% and conforming to IS:15622, of approved make in all colours and shade, 1 quality/premium in flooring, laid 20 mm thick cement mortar 1:4 (1 cement :4 sand) including grouting the joints with white cement and matching pigments etc, complete.				
	11.78.1	In light shade glossy/ rustic /stain finished				
	11.78.1.1	Size 600X600mm thickness 09-10mm	670.00	Sqm	₹ 1,104.00	₹ 7,39,680
	11.78.1.3	Size 800X1200 mm thickness 11-12mm	53.50	Sqm	₹ 1,413.00	₹ 75,596
72	11.79	Providing and laying vitrified floor tiles Multi/Double charged (Minimum top layer thickness 2.0mm) Neno Polished self design, in different size with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours & shades, 1st quality/ premium quality in skirting laid on 12mm thick cement mortar 1:4 (1 cement :4sand) including grouting the joints with white cement and matching pigments etc. complete				
	11.79.1	In light shade glossy/ rustic /stain finished				
	11.79.1.3	(c) Size 800X1200 mm thickness 11-12mm				
			70.00	sqm	₹ 1,403.00	₹ 98,210
73	11.80	Providing and laying vitrified floor-tiles Full Body Design Homogenous Body matt/rustic finish in different size with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours & shades, 1st quality/ premium quality in flooring laid on 20mm thick cement mortar 1:4 (1 cement :4sand) including grouting the joints with white cement and matching pigments etc. complete				
	11.80.1	In light colour and shades as ivory, beige blanco, grey etc.				
	11.80.1.2	(b) Size 600X600mm thickness 9-10mm				
			200	sqm	₹ 1,206.00	₹ 2,41,200
74	11.82	Providing and laying digital print random design(PGVT)/(GVT) vitrified tiles in different sizes with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours & shades, 1st quality/ premium quality including grouting the joints with white cement and matching pigments etc. complete				
	11.82.1	For floor glossy/ rustic /stain/matt finished laid on 20mm thick cement mortar 1:4 (1 cement:4sand)				
	11.82.1.1	Size 600X600 mm thickness 9-10 mm				
			20.00	Sqm	₹ 1,140.00	₹ 22,800
	11.82.1.6	800X1200				
			20.00	Sqm	₹ 1,450.00	₹ 29,000
75	11.83	Providing and laying digital print random design (PGVT)/(GVT) vitrified tiles in different sizes with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours & shades, 1st quality / premium in skirting, riser laid on 12mm thick cement mortar 1:3 including grouting the joints with white cement and matching pigments etc. complete				
	11.83.1	For skirting, risers etc. glossy/ rustic /stain/matt finished in all colours and shades				
	11.83.1.5	Size 800X1200 mm thickness 11-12 mm				
			130.00	Sqm	₹ 1,440.00	₹ 1,87,200

76	11.53	Providing and laying Antiskid floor tiles of any sizes, 12 mm thickness with water absorption less than 0.08% and conforming to IS:15622 of approved make in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 sand) including grouting the joints with white cement with matching pigments etc., complete.				
			50.00	sqm	₹ 880.00	₹ 44,000
77	11.84	Granite work gang saw cut (polished machine cut) of thickness 12 mm for wall lining, skirting, risers of steps and dado (veneer work), back filling with a grout of average 12 mm thick in cement mortar 1:3 (1 Cement: 3 sand) including pointing with white cement mortar 1:2 (1 white cement: 2 marble dust) with an admixture of pigment to match the marble shade: (To be secured to the beaching by means of cramps, which shall be paid for separately).				
	11. 84.1	Area of tiles not less 0.18 sqm				
	11. 84.1.1	Fine granite dark Black/dark Red/ White with self design/ pattern/crystals of other colors of glitter				
			120.00	sqm	₹ 2,296.00	₹ 2,75,520
78	11.85	Providing and laying gang saw cut 12mm thick, mirror polished pre moulded (wherever required) and pre polished machine cut granite stone of required size and shape of approved shade, colour and texture in flooring laid over 20mm thick base of cement mortar 1:4(1cement:4sand) including grouting the joints with white cement mixed with matching pigments, epoxy touch ups etc. complete as per direction of Engineer-in-Charge.				
	11. 85.1	Area of tiles not less 0.18 sqm				
	11. 85.1.1	Fine granite dark Black/dark Red/ White with self design/ pattern/crystals of other colors of glitter				
		STEPS				
			12.00	sqm	₹ 1,775.00	₹ 21,300
79	11.36	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and mirror polishing complete with base of cement mortar 1 : 4 (1 cement : 4 sand) having thickness of slab 25 mm (Area of slab to be over 0.25 sqm) Note: - Deduction shall be made for not mirror polishing according to item no 11.43				
			50.00	sqm	₹ 1,174.00	₹ 58,700

81	11.29	Granite work gang saw cut (polished and machine cut) of thickness 18mm for wall lining (veneer work), backing filled with a grout of average 12 mm thick in cement mortar 1:3 (1 cement: 3 sand) including pointing with white cement mortar 1:2 (1 white cement: 2 marble dust) with an admixture of pigment to match the marble shade: (To be secured to the backing by means of cramps, which shall be paid for separately).				
	11.29.2	Area of slab upto 0.50 sqm				
	11.29.2.1	Fine grained granite dark Black/dark Red/ White or equivalent with self design/ pattern/crystals of other colors of glitter	70.00	SQM	₹ 2,705.00	₹ 1,89,350
82	21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard				
	21.1.1	For fixed portion.				
	21.1.1.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)				
		Weight @ of 15.00 kg. per sq.m.	810	kg.	₹ 416.00	₹ 3,36,960
83	22/22.5	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying :				
		a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. This layer will be allowed to air cure for 4 hours.				
		b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.				
			70	sqm	₹ 207.00	₹ 14,490
84	22.7	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations:				
		a) Applying a slurry coat of neat cement using 2.75 kg/sqm. of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment.				
		b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs				
		c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge.				
		d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3mm deep.				
		e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge : (with 5 years service guarantee)				
		With average thickness of 120mm and minimum thickness at khurra as 65 mm.				
		TERRACE FLOOR	637.00	Sqm		
			637.00	Sqm	₹ 885.00	₹ 5,63,745
TOTAL						₹ 1,36,71,229.19
ESTIMATE BASED ON :-						
GOVERNMENT OF MADHYA PRADESH PUBLIC WORKS						
DEPARTMENT						

DETAILED ESTIMATE

Name Of Project :- DEVELOPMENT WORK AT SHANI MANDIR , UJJAIN

Name Of Work :- CIVIL WORK OF ADMIN BLOCK BUILDING

S.No	Item No.	Description	Qty	Unit	Rate	Amount
1	2.1	Surface dressing of the ground including removing vegetation and in- equalities not exceeding 15 cm deep and disposal of rubbish, lead up to 50 m and lift up to 1.5 m. in all kinds of soil.				
		All kinds of soil.				
			8.10	100/sqm.	₹ 803.00	₹ 6,504.30
2	2/2.6	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottom disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed. (No extra lift is payable if work is done by mechanical means) All kinds of soil				
	2.6	All kinds of soil				
			283.04	Cum	₹ 147.00	₹ 41,606.15
3	2/2.7	Earth work in excavation/ by mechanical means (Hydraulic Excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottom disposal of excavated earth, Note:- Excavation of hard rock shall be the property of the contractor subject to recovery. excavated material has to shift from site within 15 days after instruction issued by Engineer-In Charge otherwise after this penalty will imposed on contractor at the rate of Rs 50 per cum per day.				
	2.7.2	Ordinary rock				
			141.52	Cum	₹ 287.00	₹ 40,615.52
4	15.2	Demolishing cement concrete manually/by mechanical means including disposal of material within 50 metres lead as per direction of Engineer-in Charge				
	15.2.1	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix).				
			10.00	Cum	₹ 578.00	₹ 5,780.00
5	2.24	Filling available excavated earth (excluding hard rock/Ordinary rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.				
			169.82	Cum	₹ 95.00	₹ 16,133.00
6	1.1	Transportation By Mechanical Transport including loading, unloading and stacking.				
	1.1.1	Lime, moorum, building rubbish 4km.				
			254.73	Cum	₹ 152.75	₹ 38,910.24
7	2.25	Extra for every additional lift of 1.5 m or part thereof in excavation. (No extra lift is payable if work is done by mechanical means)				
	2.25.1	All kind of soil.				
			212.28	Cum	₹ 30.00	₹ 6,368.29

8	2.26	Supplying and filling in plinth with crusher stone dust / coarse sand under floors including, watering, ramming and compacting in layers not exceeding 20cm in depth and dressing complete Note: - Maximum thickness of this layer shall be 20 cm.				
	2.26.1	Crusher Stone Dust				
			364.50	Cum	₹ 672.00	₹ 2,44,944.00
9	2.27	Supplying and filling in plinth under floors including watering ramming consolidating in layers not exceeding 20cm in depth and dressing complete.				
	2.27.1	With hard muram having CBR >12 % at under floors including watering, ramming and compacting (minimum compaction 95% of MDD) in layers not exceeding 20cm in thickness and dressing complete. (Note:- maximum thickness of this layer to be provided shall be 30cm)				
		Moorum/Hard copra				
			364.50	Cum	₹ 393.00	₹ 1,43,248.50
10	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level :				
	4.1.1.3	M-15 – Grade concrete				
			13.47	Cum	₹ 4,471.00	₹ 60,219.90
11	5.1	Providing and laying in position specified grade of reinforced cement concrete (with 20mm nominal size graded stone aggregate) excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
	5.1.1	M-20 Grade Concrete				
			1.00	Cum	₹ 6,153.00	₹ 6,153.00
12	5.2	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, posts and struts etc. above plinth level and upto floor two level excluding cost of centering, shuttering, finishing and reinforcement:				
		RCC in walls,columns,pillars etc				
	5.2.1	M-20 Grade Concrete				
			10.00	Cum	₹ 6,231.00	₹ 62,310.00
13	5.3 RCC in beams, floors, staircases etc	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in beams, suspended floors, roofs having slope of any degree landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral staircases above plinth level and upto floor two level excluding the cost of centering, shuttering, finishing and reinforcement in concrete grade.				
	5.3.1	M-20 Grade Concrete				
			10.00	Cum	₹ 6,541.00	₹ 65,410.00
14	5.30	Providing and laying in position ready mixed concrete (RMC) of M-20 grade for reinforced				
	5.30.1	All works upto plinth level.				
			188.49	cum	₹ 6,332.00	₹ 11,93,544.01
	5.30.2	All works above plinth level and upto top level.				
		GROUND FLOOR ROOF				
			152.43	Cum	₹ 6,814.00	₹ 10,38,623.95

15	5.28	Extra for providing richer mixes of BMC/RMC design mix as per item no 5.27&5.30 up to plinth level and at all floor levels. (No extra payment for using extra cement as per requirement of mix design.)				
	5.28.2	Providing M-30 grade concrete instead of M 20 grade. (Note : minimum cement content is @ 140 kg/cum)				
			340.92	Cum	₹ 140.00	₹ 47,728.66
16	5.9	Centering and shuttering including strutting, propping etc. and removal of form for :				
	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete up to plinth level.				
			237.52	Sqm	₹ 190.60	₹ 45,271.31
17	5.9.2	Walls (any thickness) in cluding attached pilasters butter esses, plinth beams and string courses etc.				
	5.9.2.1	Upto plinth level.				
			182.85	Sqm	₹ 219.00	₹ 40,044.15
18	5.9.3	Suspended floors, roofs, landings, balconies and access platform				
			616.55	Sqm	₹ 439.60	₹ 2,71,035.38
19	5.9.5	Lintels, beams, girders, bressumers and cantilevers				
			455.80	Sqm	₹ 356.00	₹ 1,62,264.80
20	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts.				
			193.60	Sqm	₹ 471.20	₹ 91,224.32
21	5.9.9	Arches, domes,vaults upto 6m span				
			10.00	Sqm	₹ 1,141.60	₹ 11,416.00
22	5.9.10	Extra for arches, domes, vaults exceeding 6 m span				
			5.00	Sqm	₹ 451.30	₹ 2,256.50
23	5/5.16	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding including cost of binding wire all wastages and overlaps, couplers (overlaps shall be provided as per requirement of IS 13920 for ductile detailing IS 456 RCC Design & SP 34 Reinforcement detailing) etc. complete . (Note:- 1. Spacer bars (chairs) shall be paid separately as shown in the drawing and as per direction of engineer in charge. 2. No extra payment shall be done for overlaps and/or couplers. 3.Couplers shall be conforming to IS code on "Reinforcement Couplers for Mechanical Splices of Bars for Concrete Reinforcement - Specification")				
	5.16.6	Thermo-Mechanically Treated bars. (TMT/TMX) FE 500 or more conforming to IS 1786				
		Total Steel in kg.	36191.90	Kg	₹ 80.00	₹ 28,95,352.00
24	6.2	Brick work with well burnt chimney bricks in bulls patent trench kiln manufactured by ghol process ,crushing strength not less than 40kg /cm2 and water absorption not more than 15% in superstructure aboveplinth level and up to floor two level i/c curing etc. complete				
	6.2.2	Cement mortar 1:6 (1 cement : 6 sand)				
			142.44	Cum	₹ 5,821.00	₹ 8,29,143.24

25	10.15	Design, supply, fabrication, transportation and erection of structural steel/mild steel built-up sections for steel building in column, rafter, truss, floor joist, wind bracings, tie beam, foundation bolts, fasteners etc. Including two coats of Epoxy paint and one coat of primer. These structural steel/built-up sections shall be manufactured using advanced CNC Plasma/Oxy Acetylene cutter and H Beam Welding line. Welding shall be in full depth on both sides of the plate adopting relevant I.S Code.				
			100.00	kg	₹ 132.00	₹ 13,200.00
26	12/12.32	Providing and fixing on wall face Rigid Unplasticised rigid PVC (upvc) Single socketed rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.				
	12.32.2	110 mm diameter (minimum wall thickness 2.2mm)				
			64.00	Meter	₹ 238.00	₹ 15,232.00
27	13.6	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 sand) finished with a top layer 6mm thick cement plaster 1:4 (1 cement : 4 sand).				
			485.40	sqm	₹ 220.00	₹ 1,06,788.00
28	13.8	6 mm cement plaster of mix : 1:3 (1 cement : 3 sand)				
			619.00	sqm	₹ 144.00	₹ 89,136.00
29	13.16	Extra for plastering on circular work not exceeding 6 m in radius:				
	13.16.2	in two coat				
			10.00	sqm	₹ 18.00	₹ 180.00
30	13.17	Extra for plastering done on moulding cornices or architraves including neat finish to line and level:				
	13.17.2	in two coat				
			20.00	sqm	₹ 260.00	₹ 5,200.00
31	13.27	Providing and fixing mesh in vertical and horizontal junction of RCC and brick/AAC work including scaffolding and all lead and lift etc. complete				
	13.27.1	G.I. chicken mesh as per ISI specification and in the required width with 50mm long Bombay nails before plastering upto 10 meter height.				
			80.00	sqm	₹ 62.00	₹ 4,960.00
b)	13.27.2	Providing and fixing fibre mesh of 145 GSM weight in required width with cement mortar before plastering upto 10m height.				
			100.00	Sqm	₹ 45.00	₹ 4,500.00
32	13.41	Providing and applying white cement based putty of average thickness 1 mm, of approved brand over the plastered wall surface to prepare the surface even and smooth i/c all cost of material, labour and scaffold etc in all position complete. Note : Putty shall be applied only on the internal walls, for application on the exterior walls prior permission of APD/Chief Engineer will be required.				
			1104.40	sqm	₹ 74.00	₹ 81,725.60

33	13.54.3	Two or more coats applied on walls @ 1.25 ltr/10 sqm. over and including one coat of Special primer applied @ 0.75 ltr / 10 sqm.				
			1104.40	sqm	₹ 81.00	₹ 89,456.40
49	9.19	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) non decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.				
	9.19.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.				
			31.20	sqm	₹ 1,870.00	₹ 58,344.00
50	9.134	Providing and Fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt / suede finish with high density protective surface layer and reverse side of adhesive bonding quality conforming to IS : 2046 Type S including cost of adhesive of approved quality.				
	9.134.2	1.0 mm thick.				
			38.40	sqm	₹ 691.00	₹ 26,534.40
51	9.69	Providing and fixing ISI marked stainless steel handles with necessary screws etc. complete :				
	9.69.1	125 mm				
			18.00	each	₹ 60.00	₹ 1,080
52	9.76	Providing and fixing Stainless steel hanging type floor door stopper with necessary screws, etc. complete.				
			18.00	each	₹ 103.00	₹ 1,854
53	9.79	Providing and fixing bright finished brass tower bolts (barrel type) with necessary screws etc. complete :				
	9.79.2	250 x10 mm				
		Ground Floor				
			18.00	each	₹ 329.00	₹ 5,922
54	9.81	Providing and fixing bright finished brass Handles with necessary screws etc. complete.				
	9.81.1	125 mm				
		Ground Floor				
			22.00	each	₹ 205.00	₹ 4,510
55	9.43	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete				
	9.43.2	Fixed to openings / wooden frames with rawl plugs screws etc.				
			1260	kg.	₹ 128.00	₹ 1,61,280
56	9.84	Providing and fixing bright finished brass 100 mm mortice latch and lock ISI marked with six levers and a pair of anodised (anodic coating not less than grade AC 10 as per IS : 1868) aluminium lever handles with necessary screws etc. complete (Best make of approved quality).				
			18.00	each	₹ 820.00	₹ 14,760
57	10.22	Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.				
	10.22.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.				
			500.00	kg.	₹ 105.00	₹ 52,500

58	10/10.25	Providing and fixing stainless steel (Grade 304) railing made of Hollowtubes, channels, plates etc. including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete i/c fixing the railing with necessary accessories and stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer in-charge. (For payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)				
			30	kg.	₹ 582.00	₹ 17,460
59	10/10.26	Providing and fixing fly proof wire gauze to windows, clerestory windows and doors with M.S. Flat 15x3mm and nuts and bolts complete.				
	10.26.2	Stainless steel (grade 304) wire gauze of 0.5 mm dia wire and 1.4 mm aperture on both sides.				
			50	Sqm	₹ 1,334.00	₹ 66,700
60	10.27	Providing and fixing glass panels/ steel sheet/ Fibre sheet with putty and glazing clips in steel doors, windows, clerestory windows all complete.				
	10.27.1	With 4.0 mm thick glass panes ventilators	70	sqm	₹ 792.00	₹ 55,440
61	10.28	Add extra for providing and fixing froasted glass instead of float glass.				
	10.28.2	With 5.5 mm thick glass panes.	70	sqm	₹ 262.00	₹ 18,340
62	11.22	Providing and fixing 18mm thick gang saw cut mirror polished (premoulded and prepolished) machine cut for kitchen platforms, Vanitycounters, window sills , facias and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing moulding and polishing to edge to give high gloss finish wherever required etc. complete at all levels. Samples approved by Engineer-in- Charge.				
	11.22.2	Granite fine grained dark crystal of other colours and various patterns	35.60	sqm	₹ 2,356.00	₹ 83,874
	11.22.3	Granite coarse grained light black/ light red/white with crystal of other colours and various patterns	5.00	Sqm	₹ 2,113.00	₹ 10,565
63	11.19	Marble stone flooring with 18 mm thick marble stone (sample of marble shall be approved by Engineer-in-charge) laid over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 sand and grey cement slurry, joints treated with white cement mixed with pigment to match colour of stone including rubbing and polishing complete with : (area of slabs over 0.5 sqm)				
	11.19.1	Makrana white second quality.	183	Sqm	₹ 3,051.00	₹ 5,58,333

64	11.33	Providing and laying Granite stone flooring in required design and patterns in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry admixed with pigment of matching shade including rubbing, curing and polishing and as directed by the Engineer-in-Charge Granite stone slab Dark Black. Dark Red, White or equivalent,				
	11.33.2	Leather Finish Granite				
			20	Sqm	₹ 2,809.00	₹ 56,180
65	11.34	Granite stone work 18mm thick of any colour in riser of steps, skirting, dado and pillars laid on 12 mm average thick cement mortar 1:3 (1 cement:3 sand) and jointed with white cement slurry mixed with pigment to match the shade of slab.				
			6.00	Sqm	₹ 3,413.00	₹ 20,478
66	11.4	Providing edge moulding to 18mm thick marble stone counters, Vanities, window sills etc. including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge.				
	11.40.2					
			270.20	RM	₹ 269.00	₹ 72,684
70	11.75	Providing and fixing 16mm thick gang saw cut mirror polished premoulded and prepolished machine cut Granite of approved shade, colour and texture of Granite Door frame. in cement mortar 1:3 (1 cement :3 sand) including pointing with an admixture of pigment to match the shade including fixing of granite stone door frame with epoxy resin based adhesive including secured to the backing by means of cramps, drilling of hole with rawl plugs and screws 75mm long cleaning etc. complete. Including rubbing, curing, moulding and polishing edges to give high glossy finish and drilling of hole for fixing stainless steel hinges, aldrops, towerbolts etc complete at all levels as per instruction of Engineer-in-Charge.				
(ii)	11.75.2	Granite Door frame for 200mm thick wall Thickness.				
			137.60	Rmt	₹ 1,512.00	₹ 2,08,051
71	11.78	Providing and laying Vitrified floor tiles multy charges (Minimum top layer 2.0 mm) Nano Polished Self design, in different size with water absorption less than 0.05% and conforming to IS:15622, of approved make in all colours and shade, 1 quality/premium in flooring, laid 20 mm thick cement mortar 1:4 (1 cement :4 sand) including grouting the joints with white cement and matching pigments etc, complete.				
	11.78.1	In light shade glossy/ rustic /stain finished				
	11.78.1.1	Size 600X600mm thickness 09-10mm				
			60.00	Sqm	₹ 1,104.00	₹ 66,240
	11.78.1.3	Size 800X1200 mm thickness 11-12mm				
			60.00	Sqm	₹ 1,413.00	₹ 84,780

72	11.79	Providing and laying vitrified floor tiles Multi/Double charged (Minimum top layer thickness 2.0mm) Neno Polished self design, in different size with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours& shades, 1st quality/ premium quality in skirting laid on 12mm thick cement mortar 1:4(1 cement :4sand) including grouting the joints with white cement and matching pigments etc. complete				
	11.79.1	In light shade glossy/ rustic /stain finished				
	11.79.1.3	(c) Size 800X1200 mm thickness 11-12mm				
			40.00	sqm	₹ 1,403.00	₹ 56,120
73	11.8	Providing and laying vitrified floor-tiles Full Body Design Homogenous Body matt/rustic finish in different size with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours& shades, 1st quality/ premium quality in flooring laid on 20mm thick cement mortar 1:4 (1cement :4sand) including grouting the joints with white cement and matching pigments etc. complete				
	11.80.1	In light colour and shades as ivory, beige blanco, grey etc.				
	11.80.1.2	(b) Size 600X600mm thickness 9-10mm				
			40	sqm	₹ 1,206.00	₹ 48,240
74	11.82	Providing and laying digital print random design(PGVT)/(GVT) vitrified tiles in different sizes with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours& shades, 1st quality/ premium quality including grouting the joints with white cement and matching pigments etc. complete				
	11. 82.1	For floor glossy/ rustic /stain/matt finished laid on 20mm thick cement mortar 1:4 (1 cement:4sand)				
	11. 82.1.1	Size 600X600 mm thickness 9-10 mm				
			15.00	Sqm	₹ 1,140.00	₹ 17,100
	11. 82.1.6	800X1200				
		GROUND FLOOR AREA	630.00	Sqm	₹ 1,450.00	₹ 9,13,500
75	11.83	Providing and laying digital print random design (PGVT)/(GVT) vitrified tiles in different sizes with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours& shades, 1st quality / premium in skirting, riser laid our 12mm thick cement mortar 1:4 including grouting the joints with white cement and matching pigments etc. complete				
	11.83.1	For skirting, risers etc. glossy/ rustic /stain/matt finished in all colours and shades				
	11.83.1.5	Size 800X1200 mm thickness 11-12 mm				
			106.00	Sqm	₹ 1,440.00	₹ 1,52,640
76	11.53	Providing and laying Antiskid floor tiles of any sizes, 12 mm thickness with water absorption less than 0.08% and conforming to IS:15622 of approved make in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 sand) including grouting the joints with white cement with matching pigments etc., complete.				
			20.00	sqm	₹ 880.00	₹ 17,600

77	11.84	Granite work gang saw cut (polished machine cut) of thickness 12 mm for wall lining, skirting, risers of steps and dado (veneer work), back filling with a grout of average 12 mm thick in cement mortar 1:3 (1 Cement: 3 sand) including pointing with white cement mortar 1:2 (1 white cement: 2 marble dust) with an admixture of pigment to match the marble shade: (To be secured to the beaching by means of cramps, which shall be paid for separately).				
	11. 84.1	Area of tiles not less 0.18 sqm				
	11. 84.1.1	Fine granite dark Black/dark Red/ White with self design/ pattern/crystals of other colors of glitter				
			72.00	sqm	₹ 2,296.00	₹ 1,65,312
78	11.85	Providing and laying gang saw cut 12mm thick, mirror polished pre moulded (wherever required) and pre polished machine cut granite stone of required size and shape of approved shade, colour and texture in flooring laid over 20mm thick base of cement mortar 1:4(1cement:4sand) including grouting the joints with white cement mixed with matching pigments, epoxy touch ups etc. complete as per direction of Engineer-in-Charge.				
	11. 85.1	Area of tiles not less 0.18 sqm				
	11. 85.1.1	Fine granite dark Black/dark Red/ White with self design/ pattern/crystals of other colors of glitter				
			51.12	sqm	₹ 1,775.00	₹ 90,738
	11.36	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and mirror polishing complete with base of cement mortar 1 : 4 (1 cement : 4 sand) having thickness of slab 25 mm (Area of slab to be over 0.25 sqm) Note: - Deduction shall be made for not mirror polishing according to item no 11.43				
		INTERNAL FLOORING	50.00			
			50.00	sqm	₹ 1,174.00	₹ 58,700
79	11.3	Providing and laying gang saw cut 18 mm thick, mirror polished premoulded (wherever required) and pre				
	11.30.1	Area of slab over 0.50 sqm				
	11.30.1.1	Fine grained granite dark Black/dark Red/ White or equivalent with self design/ pattern/crystals of other colors of glitter	50.00	SQM	₹ 2,642.00	₹ 1,32,100
80	11.29	Granite work gang saw cut (polished and machine cut) of thickness 18mm for wall lining (veneer work), backing filled with a grout of average 12 mm thick in cement mortar 1:3 (1 cement: 3 sand) including pointing with white cement mortar 1:2 (1 white cement: 2 marble dust) with an admixture of pigment to match the marble shade: (To be secured to the backing by means of cramps, which shall be paid for separately).				
	11.29.2	Area of slab upto 0.50 sqm				
	11.29.2.1	Fine grained granite dark Black/dark Red/ White or equivalent with self design/ pattern/crystals of other colors of glitter	30.00	SQM	₹ 2,705.00	₹ 81,150
85	21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built				
	21.1.1	For fixed portion.				
	21.1.1.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)				
		Weight @ of 15.00 kg. per sq.m.	675	kg.	₹ 416.00	₹ 2,80,800

86	22/22.5	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying :				
		a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. This layer will be allowed to air cure for 4 hours.				
		b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.				
			30	sqm	₹ 207.00	₹ 6,210
87	22.7	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations:				
		a) Applying a slurry coat of neat cement using 2.75 kg/sqm. of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment.				
		b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs				
		c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge.				
		d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3mm deep.				
		e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge : (with 5 years service guarantee)				
		With average thickness of 120mm and minimum thickness at khurra as 65 mm.				
			600.00	Sqm	₹ 885.00	₹ 5,31,000
TOTAL						₹ 1,19,73,604.21
ESTIMATE BASED ON :-						
GOVERNMENT OF MADHYA PRADESH PUBLIC WORKS						

Name of Project :- DEVELOPMENT OF SHANI TEMPLE DEVELOPMENT, UJJAIN

NAME OF Work - FLORIST SHOPS (22 NOS) AT ZONE-2

DETAILED ESTIMATE ABOVE PLINTH

Qty.	Chapter No. /Item No.	Description	Qty	Unit	Rate	Amount
ABOVE PLINTH						
10	5.2	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, posts and struts etc. above plinth level and upto floor two level excluding cost of centering, shuttering, finishing and reinforcement:				
	5.2.1	M-20 Grade Concrete				
			21.384	Cum	5865	₹ 1,25,417.16
11	5.3	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in beams, suspended floors, roofs having slope of any degree landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral staircases above plinth level and upto floor two level excluding the cost of centering, shuttering, finishing and reinforcement in concrete grade.				
	5.3.1	M-20 Grade Concrete				
			71.46	Cum	6155	₹ 4,39,836.30
12	5.9	Centering and shuttering including strutting, propping etc. and removal of form for:				
13	5.9.3	Suspended floors, roofs, landings, balconies and access platform.				
		Total Qty.	492.00	Sqm	439.60	₹ 2,16,283.20
14	5.9.5	Lintels, beams, girders, bressumers and cantilevers				
			52.80	sqm	356.00	₹ 18,796.80
15	5/5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts.				
			392.04	sqm	471.20	₹ 1,84,729.25
16	5.16	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding including cost of binding wire all wastages and overlaps, couplers (overlaps shall be provided as per requirement of IS				
	5.16.6	Thermo-Mechanically Treated bars. (TMT/TMX) FE 500 or more conforming to IS 1786				
		Thermo-Mechanically Treated bars				
		Steel,100 Kg. Per/Cu. M. Of R.C.C.	9284.4	KG	62.90	₹ 5,83,988.76
17	6.2	Brick work with well burnt chimney bricks in bulls patent trench kiln manufactured by ghol process ,crushing strength not less than 40kg /cm2 and water absorption not more than 15% in				
	6.2.2	Cement mortar 1:6 (1 cement : 6 sand)				
			103.54	Cum	5821	₹ 6,02,683.06
18	11.32	Add extra for polishing on granite work				
	11.32.1	Flamed Finish Polish				
			180	Sqm	254	₹ 45,720.00

19	11.29	Providing and laying gang saw cut 18 mm thick, mirror polished premoulded (wherever required) and pre polished machine cut granite stonework in flooring of required size shape of approved shade, color and texture in flooring laid over 20 mm thick base of cement mortar 1:4 (1 Cement: 4 sand) including grouting the joints with white cement mixed with				
	11.29.1	Area of slab over 0.50 sqm				
	11.29.1	Fine grained granite dark Black/dark Red/ White or equivalent with self design/ pattern/crystals of other colors of glitter				
			180	Sqm	2642	₹ 4,75,560.00
20	11.78	Providing and laying vitrified floor tiles Multi/Double charged (Minimum top layer thickness 2.0mm) Neno Polished self design, in different size with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours & shades, quality/ premium quality in flooring laid on 12mm thick cement mortar 1:4 (1 cement : 4 sand) including grouting the joints with white cement and matching pigments etc. complete				
	11.78.2.2	(b) Size 800X800mm thickness 11-12mm				
			324	Sqm	1295	₹ 4,19,580.00
21	11.79	Providing and laying vitrified floor tiles Multi/Double charged (Minimum top layer thickness 2.0mm) Neno Polished self design, in different size with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours & shades, 1st quality/ premium quality in skirting laid on 12mm thick cement mortar 1:4 (1 cement : 4 sand) including grouting the joints with white cement and matching pigments etc. complete				
	11.79.2.2	(b) Size 800X800mm thickness 11-12mm				
			15	Sqm	1284	₹ 19,260.00
22	11.75	Providing and fixing 16mm thick gang saw cut mirror polished premoulded and prepolished machine cut Granite of approved shade, colour and				
	11.75.2	Granite Door frame for 200mm thick wall Thickness.				
			64.80	Rmt	1512	₹ 97,977.60
23	13.1	12 mm cement plaster of mix :				
	13.1.1	1:4 (1 cement : 4 sand)				
			198.00	sqm	149	₹ 29,502.00
24	13.6	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 sand) finished with a top layer 6mm thick cement plaster 1:4 (1 cement : 4 sand).				
			386.58	sqm	220	₹ 85,047.60
25	13.8	6 mm cement plaster of mix : 1:3 (1 cement : 3 sand)				
			324.00	sqm	96	₹ 31,104.00
26	13.20	Forming groove of uniform size in the top layer of washed stone grit plaster as per approved pattern using wooden battens, nailed to the under layer including removal of wooden battens, repair to the edges of panels and finishing the groove complete as per specifications and direction of the Engineer-in-charge :				
		20 mm wide and 15 mm deep groove				

			6	Rmt	24	₹ 144.00
27	13/13.27	Providing and fixing mesh in vertical and horizontal junction of RCC and brick/AAC work including scaffolding and all lead and lift etc. complete				
	13.27.1	G.I. chicken mesh as per ISI specification and in the required width with 50mm long Bombay nails before plastering upt 10 meter height.				
			526.32	sqm	62	₹ 32,631.84
28	13.41	Providing and applying white cement based putty of average thickness 1 mm,of approved brand over the plastered wall surface to prepare the surface even and smooth i/c all cost of				
			908.58	sqm	74	₹ 67,234.92
29	13/13.51	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade				
(i)	13.51	Finishing walls by only mechanical or manual means with textured exterior paint of required shade: New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including priming coat of exterior primer applied @ 2.20kg/10 sqm.				
			386.58	Sqm	132	₹ 51,028.56
30	13.54.3	Two or more coats applied on walls @ 1.25 ltr/10 sqm. over and including one coat of Special primer applied @ 0.75 ltr / 10 sqm.				
			522.00	Sqm	81	₹ 42,282.00
31	10/10.6	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths interlocked together through their entire length and jointed together at the end by end locks mounted on				
	10.6.1	80x1.25mm M.S. laths with 1.25 mm thick top cover	5.76			
			5.76	sqm	2200	₹ 12,672.00
32	10/10.9	Providing and fixing ball bearing for rolling shutters.				
			27	each	366	₹ 9,882.00
33	22.14	Grading roof for receiving water proofing treatment with				
	22.14.1	Cement concrete 1:2:4 (1 cement : 2 sand : 4 graded stone aggregate 20 mm nominal size)				
			13.2	Cum	6569	₹ 86,710.80

34	22.22	Water proofing treatment over Roof, Wall, Chajjas,, Balcony with fibre glass mesh and Sealer coat at leakage/ seepage area consisting of (i) Surface preparation roughening of surface, opening cracks in 'V' groove in size of 5mmX10mm (WxD), filling of cracks with putty with laying fiber glass mesh, Cleaning of surface by scrubbing with steel wire/Nylon brush. Removing all dust particles and washing with adequate water to clean completely. (ii) Providing and applying 1st coat of fibre glass mesh (minimum thicknes 70-80 micron) and two component flexible waterproof and protective modified mortar, dry powder 80% chemical 20% acrylic resin having 30% solid contents) with mix proportion of part 1 and 2 with proper mixing with laying of fiber glass mesh (of weaving size of 10X10 yarn/inch duly coated with alkaline resistant polymer). Allow the coating to air cure for minimum 2 Hrs. After two hours of 1st coat applying 2nd coat (minimum thickness 100 micron) of fibre glass mesh of with mix proporation of part 1 and 2 with proper mixing. Allow the coating to air cure for minimum 2 hrs. Consumption of two component should be acrylic resin @17.90 kg for 10 sqm area or as per manufacture instructions. (After two coats of diamond shield, surface is to be cured properly minimum for 4 hrs. before application of third coat). (iii) Providing and applying 1st coat of sealer coat 50-60 micron (single component Hight build elastomeric, fixable pure acrylic waterproofing membrane having solid content of 65%) and allow it to air cure for 4Hrs. minimum. After two hours minimum of 1 st coat applying 2nd and finals coat 120-140 micron of sealer coat and allow it to air cure for 4 Hrs mimimum. Consumption of Sealer coat should be @ 5.40 kg per 10 sqm area. (iv) The treated area should be cure with water for 48 hrs. by flooding the surface. (v) The final appearance of the coating will be milky white. All above operations to be done in order.(five years guarantee)				
			324	Sqm	465	₹ 1,50,660.00
35	12.27	Making khurras 45x45 cm (sunk area) with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1mx1mx400micron, finished with 12mm cement plaster 1:3 (1 cement : 3 sand) and a coat of neat cement rounding the edge and making and finishing the outlet complete so as to receive rain water/ spillage water on roof in a sunk area and completely rain out in a near perfect strain meter motion into rain water pipe.				
			15	Each	156	₹ 2,340.00
36	19.31	Constructing soak pit 1.20x1.20x1.20m filled with brickbats including S.W.				
			15	Each	3172	₹ 47,580.00

37	17.58	Providing and fixing unplasticised Rigid PVC soil and waste pipes conforming to IS: 13592 Type B including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion. Single socketed pipes for working pressure of 4 kg/sqcm. (minimum wall thickness 3.2mm)				
	17.58.2	110 mm diameter	25	Rmt.	238	₹ 5,950.00
38	17.59	Providing and fixing unplasticised PVC moulded fittings/ accessories for unplasticised Rigid PVC soil				
39	17.59.4	Single tee without door				
	17.59.4.2	110x110x110 mm	25	Each	266	₹ 6,650.00
40	17.59.5	Bend 87.50				
	17.59.5.2	110 mm bend	25	Each	172	₹ 4,300.00
41	17.60	Providing and fixing Unplasticised - PVC pipe clips of approved design to Unplasticised - PVC soil and waste pipes by means of bombay nail of required length including and making good the wall etc. complete.				
	17.60.2	110 mm	25	Each	50	₹ 1,250.00
					TOTAL B	₹ 38,96,801.84
					TOTAL A+B	₹ 52,27,801.84
					ESTIMATE BASED ON :-	
					GOVERNMENT OF MADHYA PRADESH PUBLIC WORKS DEPARTMENT	
					SCHEDULE OF RATES (SOR) For BUILDING WORKS (VOLUME-I & II)	
					BUILDING WORKS INFORCE FROM 1st JANUARY 2024	

DETAIL ESTIMATE

Name Of Project :- DEVELOPMENT WORK AT SHANI MANDIR , UJJAIN
Name Of Work :- CIVIL WORK OF SHOE STAND-1 IN TEMPLE PLAZA BUILDING

S.No	Item No.	Description	Qty	Unit	Rate	Amount
1	2.1	Surface dressing of the ground including removing vegetation and inequalities not exceeding 15 cm deep and disposal of rubbish, lead up to 50 m and lift up to 1.5 m. in all kinds of soil. All kinds of soil.	3.00	100/sqm.	₹ 803.00	₹ 2,409.00
2	2/2.6	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottom disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed. (No extra lift is payable if work is done by mechanical means) All kinds of soil	267.75	Cum	₹ 147.00	₹ 39,359.25
	2.6	All kinds of soil				
3	2.24	Filling available excavated earth (excluding hard rock/Ordinary rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	213.23	Cum	₹ 95.00	₹ 20,257.23
4	1.1	Transportation By Mechanical Transport including loading, unloading and stacking.				
	1.1.1	Lime, moorum, building rubbish	30.00	Cum	₹ 152.75	₹ 4,582.50
5	2.25	Extra for every additional lift of 1.5 m or part thereof in excavation. (No extra lift is payable if work is done by mechanical means)				
	2.25.1	All kind of soil.	133.88	Cum	₹ 30.00	₹ 4,016.25
6	2.26	Supplying and filling in plinth with crusher stone dust / coarse sand under floors including, watering, ramming and compacting in layers not exceeding 20cm in depth and dressing complete Note: - Maximum thickness of this layer shall be 20 cm.				
	2.26.1	Crusher Stone Dust	75.00	Cum	₹ 672.00	₹ 50,400.00
7	2.27	Supplying and filling in plinth under floors including watering ramming consolidating in layers not exceeding 20cm in depth and dressing complete.				
	2.27.1	With hard muram having CBR >12 % at under floors including watering, ramming and compacting (minimum compaction 95% of MDD) in layers not exceeding 20cm in thickness and dressing complete. (Note:- maximum thickness of this layer to be provided shall be 30cm)				
		Moorum/Hard copra	75.00	Cum	₹ 393.00	₹ 29,475.00
8	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level :				
	4.1.1.3	M-15 – Grade concrete	19.63	Cum	₹ 4,471.00	₹ 87,774.67
9	5.1	Providing and laying in position specified grade of reinforced cement concrete (with 20mm nominal size graded stone aggregate) excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
	5.1.1	M-20 Grade Concrete	1.00	Cum	₹ 6,153.00	₹ 6,153.00
10	5.2	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, posts and struts etc. above plinth level and upto floor two level excluding cost of centering, shuttering, finishing and reinforcement:				
		RCC in walls,columns,pillars etc				
	5.2.1	M-20 Grade Concrete	2.00	Cum	₹ 6,231.00	₹ 12,462.00
11	5.3	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in beams, suspended floors, roofs having slope of any degree landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral staircases above plinth level and upto floor two level excluding the cost of centering, shuttering, finishing and reinforcement in concrete grade.				
	5.3.1	M-20 Grade Concrete	1.00	Cum	₹ 6,541.00	₹ 6,541.00
12	5.30	Providing and laying in position ready mixed concrete (RMC) of M-20 grade for reinforced				

	5.30.1	All works upto plinth level.				
			154.60	cum	₹ 6,332.00	₹ 9,78,927.20
	5.30.2	All works above plinth level and upto top level.				
			74.46	cum	₹ 6,814.00	₹ 5,07,370.44
13	5.28	Extra for providing richer mixes of BMC/RMC design mix as per item no 5.27&5.30 up to plinth level and at all floor levels. (No extra payment for using extra cement as per requirement of mix design.)				
	5.28.2	Providing M-30 grade concrete instead of M 20 grade. (Note : minimum cement content is @ 340 kg/cum)				
			229.06	Cum	₹ 140.00	₹ 32,068.40
14	5.9	Centering and shuttering including strutting, propping etc. and removal of form for :				
	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete up to plinth level.				
			162.70	Sqm	₹ 190.60	₹ 31,010.62
15	5.9.2	Walls (any thickness) in cluding attached pilasters butter esses, plinth beams and string courses etc.				
	5.9.2.1	Upto plinth level.				
			41.10	Sqm	₹ 219.00	₹ 9,000.90
16	5.9.3	Suspended floors, roofs, landings, balconies and access platform				
			197.90	Sqm	₹ 439.60	₹ 86,996.84
17	5.9.5	Lintels, beams, girders, bressumers and cantilevers				
			114.00	Sqm	₹ 356.00	₹ 40,584.00
18	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts.				
			158.40	Sqm	₹ 471.20	₹ 74,638.08
19	5.9.9	Arches, domes,vaults upto 6m span				
			20.00	Sqm	₹ 1,141.60	₹ 22,832.00
20	5.9.10	Extra for arches, domes, vaults exceeding 6 m span				
			10.00	Sqm	₹ 451.30	₹ 4,513.00
21	5/5.16	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding including cost of binding wire all wastages and overlaps, couplers (overlaps shall be provided as per requirement of IS 13920 for ductile detailingIS 456 RCC Design & SP 34 Reinforcement detailing) etc. complete . (Note:- 1. Spacer bars (chairs) shall be paid separately as shown in the drawing and as per direction of engineer in charge. 2. No extra payment shall be done for overlaps and/or couplers. 3.Couplers shall be conforming to IS code on "Reinforcement Couplers for Mechanical Splices of Bars for Concrete Reinforcement - Specification")				
	5.16.6	Thermo-Mechanically Treated bars. (TMT/TMX) FE 500 or more conforming to IS 1786				
		Total Steel in kg.	27967.20	Kg	₹ 80.00	₹ 22,37,376.00
22	6.2	Brick work with well burnt chimney bricks in bulls patent trench kiln manufactured by ghol process ,crushing strength not less than 40kg /cm2 and water absorption not more than 15% in superstructure above plinth level and up to floor two level i/c curing etc. complete.				
	6.2.2	Cement mortar 1:6 (1 cement : 6 sand)				
			141.74	Cum	₹ 5,821.00	₹ 8,25,045.26
23	10.15	Design, supply, fabrication, taransportion and erection of structural steel/mild steel built-up sections for steel building in column, rafter, truss, floor joist, wind bracings, tie beam, foundation bolts, fasteners etc. Including two coats ofEpoxy paint and one coat of primer. These structural steel/built-up sections shall be manufactured using advanced CNC Plasma/Oxy Acetylene cutter and H Beam Welding line. Welding shall be in full depth on both sides of the plate adopting relevant I.S Code.				
			100.00	kg	₹ 132.00	₹ 13,200.00
24	12/12.32	Providing and fixing on wall face Rigid Unplasticised rigid PVC (upvc) Single socketed rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.				
	12.32.2	110 mm diameter (minimum wall thickness 2.2mm)				
			12.00	Meter	₹ 238.00	₹ 2,856.00
25	13.6	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 sand) finished with a top layer 6mm thick cement plaster 1:4 (1 cement : 4 sand).				
			587.70	sqm	₹ 220.00	₹ 1,29,294.00
26	13.8	6 mm cement plaster of mix : 1:3 (1 cement : 3 sand)				

			60.00	sqm	₹ 144.00	₹ 8,640.00
27	13.16	Extra for plastering on circular work not exceeding 6 m in radius:				
	13.16.2	in two coat				
			1.00	sqm	₹ 18.00	₹ 18.00
28	13.17	Extra for plastering done on moulding cornices or architraves including neat finish to line and level:				
	13.17.2	in two coat				
			1.00	sqm	₹ 260.00	₹ 260.00
29	13.27	Providing and fixing mesh in vertical and horizontal junction of RCC and brick/AAC work including scaffolding and all lead and lift etc. complete				
	13.27.1	G.I. chicken mesh as per ISI specification and in the required width with 50mm long Bombay nails before plastering upto 10 meter height.				
			50.00	sqm	₹ 62.00	₹ 3,100.00
b)	13.27.2	Providing and fixing fibre mesh of 145 GSM weight in required width with cement mortar before plastering upto 10m height.				
			50.00	Sqm	₹ 45.00	₹ 2,250.00
30	13.41	Providing and applying white cement based putty of average thickness 1 mm, of approved brand over the plastered wall surface to prepare the surface even and smooth i/c all cost of material, labour and scaffold etc in all position complete. Note : Putty shall be applied only on the internal walls, for application on the exterior walls prior permission of APD/Chief Engineer will be required.				
			647.70	sqm	₹ 74.00	₹ 47,929.80
31	13.54.3	Two or more coats applied on walls @ 1.25 ltr/10 sqm. over and including one coat of Special primer applied @ 0.75 ltr / 10 sqm.				
			647.70	sqm	₹ 81.00	₹ 52,463.70
35	9.19	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) non decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.				
	9.19.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.				
			22.08	sqm	₹ 1,870.00	₹ 41,289.60
36	9.134	Providing and Fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt / suede finish with high density protective surface layer and reverse side of adhesive bonding quality conforming to IS : 2046 Type S including cost of adhesive of approved quality.				
	9.134.2	1.0 mm thick.				
			44.16	sqm	₹ 691.00	₹ 30,514.56
37	9.69	Providing and fixing ISI marked stainless steel handles with necessary screws etc. complete :				
	9.69.1	125 mm				
			8.00	each	₹ 60.00	₹ 480.00
38	9.76	Providing and fixing Stainless steel hanging type floor door stopper with necessary screws, etc. complete.				
			8.00	each	₹ 103.00	₹ 824.00
39	9.79	Providing and fixing bright finished brass tower bolts (barrel type) with necessary screws etc. complete :				
	9.79.2	250 x10 mm				
			8.00	each	₹ 329.00	₹ 2,632.00
40	9.81	Providing and fixing bright finished brass handles with necessary screws etc. complete.				
	9.81.1	125 mm				
			8.00	each	₹ 205.00	₹ 1,640.00
41	9.43	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete				
	9.43.2	Fixed to openings / wooden frames with rawl plugs screws etc.				
			180	kg.	₹ 128.00	₹ 23,040.00
42	9.84	Providing and fixing bright finished brass 100 mm mortice latch and lock ISI marked with six levers and a pair of anodised (anodic coating not less than grade AC 10 as per IS : 1868) aluminium lever handles with necessary screws etc. complete (Best make of approved quality).				
			4.00	each	₹ 820.00	₹ 3,280.00
43	10.22	Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.				

	10.22.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.				
			500.00	kg.	₹ 105.00	₹ 52,500.00
44	10/10.25	Providing and fixing stainless steel (Grade 304) railing made of Hollowtubes, channels, plates etc. including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete i/c fixing the railing with necessary accessories and stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer in-charge. (For payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)				
			500	kg.	₹ 582.00	₹ 2,91,000.00
45	10/10.26	Providing and fixing fly proof wire gauze to windows, clerestory windows and doors with M.S. Flat 15x3mm and nuts and bolts complete.				
	10.26.2	Stainless steel (grade 304) wire gauze of 0.5 mm dia wire and 1.4 mm aperture on both sides.				
		WINDOW 1	12	Sqm	₹ 1,334.00	₹ 16,008.00
46	10.27	Providing and fixing glass panels/ steel sheet/ Fibre sheet with putty and glazing clips in steel doors, windows, clerestory windows all complete.				
	10.27.1	With 4.0 mm thick glass panes ventilators	5	sqm	₹ 792.00	₹ 3,960.00
47	10.28	Add extra for providing and fixing froasted glass instead of float glass.				
	10.28.2	With 5.5 mm thick glass panes.	5	sqm	₹ 262.00	₹ 1,310.00
48	11.22	Providing and fixing 18mm thick gang saw cut mirror polished (premoulded and prepolished) machine cut for kitchen platforms, vanitycounters, window sills , facias and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing moulding and polishing to edge to givehigh gloss finish wherever required etc. complete at all levels. Samples approved by Engineer-in- Charge.				
	11.22.2	Granite fine grained dark crystal of other colours and various patterns				
		WINDOW JAMBING	5.60	sqm	₹ 2,356.00	₹ 13,193.60
	11.22.3	Granite coarse grained light black/ light red/white with crystal of other colours and various patterns	2.00	Sqm	₹ 2,113.00	₹ 4,226.00
49	11.19	Marble stone flooring with 18 mm thick marble stone (sample of marble shall be approved by Engineer-in-charge) laid over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 sandand grey cement slurry, joints treated with white cement mixed with pigment to match colour of stone including rubbing and polishing complete with : (area of slabs over 0.5 sqm)				
	11.19.1	Makrana white second quality.	20	Sqm	₹ 3,051.00	₹ 61,020.00
50	11.33	Providing and laying Granite stone flooring in required design and patterns in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry admixed with pigment of matching shade including rubbing, curing and polishing and as directed by the Engineer-in-Charge Granite stone slab Dark Black. Dark Red, White or equivalent,				
	11.33.2	Leather Finish Granite	10	Sqm	₹ 2,809.00	₹ 28,090.00
51	11.34	Granite stone work 18mm thick of any colour in riser of steps, skirting, dado and pillars laid on 12 mm average thick cement mortar 1:3 (1 cement:3 sand) and jointed with white cement slurry mixed with pigment to match the shade of slab.				
			136.32	Sqm	₹ 3,413.00	₹ 4,65,260.16
52	11.4	Providing edge moulding to 18mm thick marble stone counters, Vanities, window sills etc. including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge.				
	11.40.2		118.00	RM	₹ 269.00	₹ 31,742.00

53	11.72	Providing and laying factory made chamfered edge Cement Concrete paver blocks in footpath, parks, lawns, drive ways or light traffic parking etc. of required colour strength, thickness pattern, surface texture (smooth/rough) and size/shape, conforming to 15658- 2006 made by table vibratory method using PU mould, laid in required colour and pattern over 50mm thick compacted bed of sand, compacting and proper embedding/ laying of inter locking paver blocks into the bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand including locking with M15 cement concrete in footpath, parks, lawns, drive ways or light traffic parking etc. complete as per manufacturer's specifications and direction of Engineer-in-Charge.				
	11.72.1	80 mm thick C.C. paver block of M-35 grade	200	Sqm	₹ 805.00	₹ 1,61,000.00
54	11.75	Providing and fixing 16mm thick gang saw cut mirror polished pre moulded and pre polished machine cut Granite of approved shade, colour and texture of Granite Door frame. in cement mortar 1:3 (1 cement :3 sand) including pointing with an admixture of pigment to match the shade including fixing of granite stone door frame with epoxy resin based adhesive including secured to the backing by means of cramps, drilling of hole with rawl plugs and screws 75mm long cleaning etc. complete. Including rubbing, curing, moulding and polishing edges to give high glossy finish and drilling of hole for fixing stainless steel hinges, aldrops, towerbolts etc complete at all levels as per instruction of Engineer-in-Charge.				
(ii)	11.75.2	Granite Door frame for 200mm thick wall Thickness.	28.00	Rmt	₹ 1,512.00	₹ 42,336.00
55	11.78	Providing and laying Vitrified floor tiles multi charges (Minimum top layer 2.0 mm) Nano Polished Self design, in different size with water absorption less than 0.05% and conforming to IS:15622, of approved make in all colours and shade, 1st quality/premium in flooring, laid 20 mm thick cement mortar 1:4 (1 cement :4 sand) including grouting the joints with white cement and matching pigments etc, complete.				
	11.78.1	In light shade glossy/ rustic /stain finished				
	11.78.1.1	Size 600X600mm thickness 09-10mm	60.00	Sqm	₹ 1,104.00	₹ 66,240.00
	11.78.1.3	Size 800X1200 mm thickness 11-12mm	60.00	Sqm	₹ 1,413.00	₹ 84,780.00
56	11.79	Providing and laying vitrified floor tiles Multi/Double charged (Minimum top layer thickness 2.0mm) Neno Polished self design, in different size with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours & shades, 1st quality/ premium quality in skirting laid on 12mm thick cement mortar 1:4(1cement :4sand) including grouting the joints with white cement and matching pigments etc. complete				
	11.79.1	In light shade glossy/ rustic /stain finished				
	11.79.1.3	(c) Size 800X1200 mm thickness 11-12mm	30.00	sqm	₹ 1,403.00	₹ 42,090.00
57	11.8	Providing and laying vitrified floor-tiles Full Body Design Homogenous Body matt/rustic finish in different size with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours & shades, 1st quality/ premium quality in flooring laid on 20mm thick cement mortar 1:4 (1cement :4sand) including grouting the joints with white cement and matching pigments etc. complete				
	11.80.1	In light colour and shades as ivory, beige blanco, grey etc.				
	11.80.1.2	(b) Size 600X600mm thickness 9-10mm	30	sqm	₹ 1,206.00	₹ 36,180.00
58	11.82	Providing and laying digital print random design(PGVT)/(GVT) vitrified tiles in different sizes with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours & shades, 1st quality/ premium quality including grouting the joints with white cement and matching pigments etc. complete				
	11.82.1	For floor glossy/ rustic /stain/matt finished laid on 20mm thick cement mortar 1:4 (1 cement:4sand)				
	11.82.1.2		10.00	Sqm	₹ 1,261.00	₹ 12,610.00
	11.82.1.6		10.00	Sqm	₹ 1,450.00	₹ 14,500.00
59	11.83	Providing and laying digital print random design (PGVT)/(GVT) vitrified tiles in different sizes with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours & shades, 1st quality / premium in skirting, riser laid our 12mm thick cement mortar 1:3 including grouting the joints with white cement and matching pigments etc. complete				
	11.83.1	For skirting, risers etc. glossy/ rustic /stain/matt finished in all colours and shades				
	11.83.1.5	Size 800X1200 mm thickness 11-12 mm	10.00	Sqm	₹ 1,440.00	₹ 14,400.00

60	11.53	Providing and laying Antiskid floor tiles of any sizes, 12 mm thickness with water absorption less than 0.08% and conforming to IS:15622 of approved make in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 sand) including grouting the joints with white cement with matching pigments etc., complete.				
			1.00	sqm	₹ 880.00	₹ 880.00
61	11.84	Granite work gang saw cut (polished machine cut) of thickness 12 mm for wall lining, skirting, risers of steps and dado (veneer work), back filling with a grout of average 12 mm thick in cement mortar 1:3 (1 Cement: 3 sand) including pointing with white cement mortar 1:2 (1 white cement: 2 marble dust) with an admixture of pigment to match the marble shade: (To be secured to the beaching by means of cramps, which shall be paid for separately).				
	11.84.1	Area of tiles not less 0.18 sqm				
	11.84.1.1	Fine granite dark Black/dark Red/ White with self design/ pattern/crystals of other colors of glitter				
			185.00	sqm	₹ 2,296.00	₹ 4,24,760.00
62	11.85	Providing and laying gang saw cut 12mm thick, mirror polished pre moulded (wherever required) and pre polished machine cut granite stone of required size and shape of approved shade, colour and texture in flooring laid over 20mm thick base of cement mortar 1:4(1cement:4sand) including grouting the joints with white cement mixed with matching pigments, epoxy touch ups etc. complete as per direction of Engineer-in-Charge.				
	11.85.1	Area of tiles not less 0.18 sqm				
	11.85.1.1	Fine granite dark Black/dark Red/ White with self design/ pattern/crystals of other colors of glitter				
		STEPS				
			4.50	sqm	₹ 1,775.00	₹ 7,987.50
63	11.36	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and mirror polishing complete with base of cement mortar 1 : 4 (1 cement : 4 sand) having thickness of slab 25 mm (Area of slab to be over 0.25 sqm) Note: - Deduction shall be made for not mirror polishing according to item no 11.43				
			150.00	sqm	₹ 1,174.00	₹ 1,76,100.00
64	11.3	Providing and laying gang saw cut 18 mm thick, mirror polished premoulded (wherever required) and pre polished machine cut granite stonework in				
	11.30.1	Area of slab over 0.50 sqm				
	11.30.1.1	Fine grained granite dark Black/dark Red/ White or equivalent with self design/ pattern/crystals of other colors of glitter				
			30.00	SQM	₹ 2,642.00	₹ 79,260.00
65	11.29	Granite work gang saw cut (polished and machine cut) of thickness 18mm for wall lining (veneer work), backing filled with a grout of average 12 mm thick in cement mortar 1:3 (1 cement: 3 sand) including pointing with white cement mortar 1:2 (1 white cement: 2 marble dust) with an admixture of pigment to match the marble shade: (To be secured to the backing by means of cramps, which shall be paid for separately).				
	11.29.2	Area of slab upto 0.50 sqm				
	11.29.2.1	Fine grained granite dark Black/dark Red/ White or equivalent with self design/ pattern/crystals of other colors of glitter				
			20.00	SQM	₹ 2,705.00	₹ 54,100.00
66	21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :				
	21.1.1	For fixed portion.				
	21.1.1.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)				
		Weight @ of 15.00 kg. per sq.m.	180	kg.	₹ 416.00	₹ 74,880.00
67	22/22.5	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying : a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. This layer will be allowed to air cure for 4 hours.				

		b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.				
			20	sqm	₹ 207.00	₹ 4,140.00
68	22.7	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations:				
		a) Applying a slurry coat of neat cement using 2.75 kg/sqm. of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment.				
		b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs				
		c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge.				
		d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3mm deep.				
		e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge : (with 5 years service guarantee)				
		With average thickness of 120mm and minimum thickness at khurra as 65 mm.				
			170.00	Sqm	₹ 885.00	₹ 1,50,450.00
69	NON SOR	Providing & fixing of cast iron & ms fabricated decorative ornamental grill , partition, gates, railing, arches, brackets, customised items & crown etc. as Grill , partition, gates, railing, arches, brackets, customised items & crown etc. (Average weight of MS 90 KG is Per Sq.Mt.)				
			900.00	KG	₹ 218.00	₹ 1,96,200.00
					TOTAL	₹ 80,88,707.56
ESTIMATE BASED ON :-						
GOVERNMENT OF MADHYA PRADESH PUBLIC WORKS						

DETAIL ESTIMATE

Name Of Project :- DEVELOPMENT WORK AT SHANI MANDIR , UJJAIN

Name Of Work :- CIVIL WORK OF SHOE STAND NEAR ADMIN BUILDING

S.No	Item No.	Description	Qty	Unit	Rate	Amount
1	2.1	Surface dressing of the ground including removing vegetation and in-equalities not exceeding 15 cm deep and disposal of rubbish, lead up to 50 m and lift up to 1.5 m. in all kinds of soil.				
		All kinds of soil.				
			0.60	100/sqm.	₹ 803.00	₹ 481.80
2	2/2.6	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottom disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed. (No extra lift is payable if work is done by mechanical means) All kinds of soil				
	2.6	All kinds of soil				
			30.38	Cum	₹ 147.00	₹ 4,465.13
3	2.24	Filling available excavated earth (excluding hard rock/Ordinary rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.				
			12.79	Cum	₹ 95.00	₹ 1,214.96
4	1.1	Transportation By Mechanical Transport including loading, unloading and stacking.				
	1.1.1	Lime, moorum, building rubbish				
			30.00	Cum	₹ 152.75	₹ 4,582.50
5	2.25	Extra for every additional lift of 1.5 m or part thereof in excavation. (No extra lift is payable if work is done by mechanical means)				
	2.25.1	All kind of soil.				
			15.19	Cum	₹ 30.00	₹ 455.63
6	2.26	Supplying and filling in plinth with crusher stone dust / coarse sand under floors including, watering, ramming and compacting in layers not exceeding 20cm in depth and dressing complete Note: - Maximum thickness of this layer shall be 20 cm.				
	2.26.1	Crusher Stone Dust				
			45.00	Cum	₹ 672.00	₹ 30,240.00
7	2.27	Supplying and filling in plinth under floors including watering ramming consolidating in layers not exceeding 20cm in depth and dressing complete.				
	2.27.1	With hard muram having CBR >12 % at under floors including watering, ramming and compacting (minimum compaction 95% of MDD) in layers not exceeding 20cm in thickness and dressing complete. (Note:- maximum thickness of this layer to be provided shall be 30cm)				
		Moorum/Hard copra				
			45.00	Cum	₹ 393.00	₹ 17,685.00
8	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level :				
	4.1.1.3	M-15 – Grade concrete				
			2.14	Cum	₹ 4,471.00	₹ 9,576.88
9	5.1	Providing and laying in position specified grade of reinforced cement concrete (with 20mm nominal size graded stone aggregate) excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
	5.1.1	M-20 Grade Concrete				
			1.00	Cum	₹ 6,153.00	₹ 6,153.00
10	5.2	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, posts and struts etc. above plinth level and upto floor two level excluding cost of centering, shuttering, finishing and reinforcement:				
		RCC in walls,columns,pillars etc				
	5.2.1	M-20 Grade Concrete				
			2.00	Cum	₹ 6,231.00	₹ 12,462.00

11	5.3 RCC in beams, floors, staircases etc	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in beams, suspended floors, roofs having slope of any degree landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral staircases above plinth level and upto floor two level excluding the cost of centering, shuttering, finishing and reinforcement in concrete grade.				
	5.3.1	M-20 Grade Concrete	1.00	Cum	₹ 6,541.00	₹ 6,541.00
12	5.30	Providing and laying in position ready mixed concrete (RMC) of M-20 grade for reinforced				
	5.30.1	All works upto plinth level.	22.25	cum	₹ 6,332.00	₹ 1,40,855.34
	5.30.2	All works above plinth level and upto top level.	21.94	cum	₹ 6,814.00	₹ 1,49,465.09
13	5.28	Extra for providing richer mixes of BMC/RMC design mix as per item no 5.27&5.30 up to plinth level and at all floor levels. (No extra payment for using extra cement as per requirement of mix design.)				
	5.28.2	Providing M-30 grade concrete instead of M 20 grade. (Note : minimum cement content is @ 340 kg/cum)	44.18	Cum	₹ 140.00	₹ 6,185.20
14	5.9	Centering and shuttering including strutting, propping etc. and removal of form for :				
	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete up to plinth level.	54.80	Sqm	₹ 190.60	₹ 10,444.88
15	5.9.2	Walls (any thickness) in cluding attached pilasters butter esses, plinth beams and string courses etc.				
	5.9.2.1	Upto plinth level.	34.10	Sqm	₹ 219.00	₹ 7,467.90
16	5.9.3	Suspended floors, roofs, landings, balconies and access platform				
			65.25	Sqm	₹ 439.60	₹ 28,683.90
17	5.9.5	Lintels, beams, girders, bressumers and cantilevers				
			143.70	Sqm	₹ 356.00	₹ 51,157.20
18	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts.				
			79.20	Sqm	₹ 471.20	₹ 37,319.04
19	5.9.9	Arches, domes,vaults upto 6m span				
			20.00	Sqm	₹ 1,141.60	₹ 22,832.00
20	5.9.10	Extra for arches, domes, vaults exceeding 6 m span				
			10.00	Sqm	₹ 451.30	₹ 4,513.00
21	5/5.16	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding including cost of binding wire all wastages and overlaps, couplers (overlaps shall be provided as per requirement of IS 13920 for ductile detailing IS 456 RCC Design & SP 34 Reinforcement detailing) etc. complete . (Note:- 1. Spacer bars (chairs) shall be paid separately as shown in the drawing and as per direction of engineer in charge. 2. No extra payment shall be done for overlaps and/or couplers. 3.Couplers shall be conforming to IS code on "Reinforcement Couplers for Mechanical Splices of Bars for Concrete Reinforcement - Specification")				
	5.16.6	Thermo-Mechanically Treated bars. (TMT/TMX) FE 500 or more conforming to IS 1786				
		120 Kg. Steel Per/Cu. M. Of R.C.C.				
		Total Steel in kg.	5781.60	Kg	₹ 80.00	₹ 4,62,528.00
22	6.2	Brick work with well burnt chimney bricks in bulls patent trench kiln manufactured by ghol process ,crushing strength not less than 40kg /cm2 and water absorption not more than 15% in superstructure above plinth level and up to floor two level i/c curing etc. complete.				
	6.2.2	Cement mortar 1:6 (1 cement : 6 sand)	69.48	Cum	₹ 5,821.00	₹ 4,04,443.08

23	10.15	Design, supply, fabrication, transportation and erection of structural steel/mild steel built-up sections for steel building in column, rafter, truss, floor joist, wind bracings, tie beam, foundation bolts, fasteners etc. Including two coats of Epoxy paint and one coat of primer. These structural steel/built-up sections shall be manufactured using advanced CNC Plasma/Oxy Acetylene cutter and H Beam Welding line. Welding shall be in full depth on both sides of the plate adopting relevant I.S Code.				
			100.00	kg	₹ 132.00	₹ 13,200.00
24	12/12.32	Providing and fixing on wall face Rigid Unplasticised rigid PVC (upvc) Single socketed rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.				
	12.32.2	110 mm diameter (minimum wall thickness 2.2mm)	12.00	Meter	₹ 238.00	₹ 2,856.00
25	13.6	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 sand) finished with a top layer 6mm thick cement plaster 1:4 (1 cement : 4 sand).	593.25	sqm	₹ 220.00	₹ 1,30,515.00
26	13.8	6 mm cement plaster of mix : 1:3 (1 cement : 3 sand)	68.65	sqm	₹ 144.00	₹ 9,885.60
27	13.16	Extra for plastering on circular work not exceeding 6 m in radius:				
	13.16.2	in two coat	1.00	sqm	₹ 18.00	₹ 18.00
28	13.17	Extra for plastering done on moulding cornices or architraves including neat finish to line and level:				
	13.17.2	in two coat	1.00	sqm	₹ 260.00	₹ 260.00
29	13.27	Providing and fixing mesh in vertical and horizontal junction of RCC and brick/AAC work including scaffolding and all lead and lift etc. complete				
	13.27.1	G.I. chicken mesh as per ISI specification and in the required width with 50mm long Bombay nails before plastering up to 10 meter height.	50.00	sqm	₹ 62.00	₹ 3,100.00
b)	13.27.2	Providing and fixing fibre mesh of 145 GSM weight in required width with cement mortar before plastering up to 10m height.	50.00	Sqm	₹ 45.00	₹ 2,250.00
30	13.41	Providing and applying white cement based putty of average thickness 1 mm, of approved brand over the plastered wall surface to prepare the surface even and smooth i/c all cost of material, labour and scaffold etc in all position complete. Note : Putty shall be applied only on the internal walls, for application on the exterior walls prior permission of APD/Chief Engineer will be required.	661.90	sqm	₹ 74.00	₹ 48,980.60
31	13.54.3	Two or more coats applied on walls @ 1.25 ltr/10 sqm. over and including one coat of Special primer applied @ 0.75 ltr / 10 sqm.	661.90	sqm	₹ 81.00	₹ 53,613.90
35	9.19	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) non decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.				
	9.19.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.	14.40	sqm	₹ 1,870.00	₹ 26,928.00
36	9.134	Providing and Fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt / suede finish with high density protective surface layer and reverse side of adhesive bonding quality conforming to IS : 2046 Type S including cost of adhesive of approved quality.				
	9.134.2	1.0 mm thick.	14.40	sqm	₹ 691.00	₹ 9,950.40
37	9.69	Providing and fixing ISI marked stainless steel handles with necessary screws etc. complete :				
	9.69.1	125 mm	8.00	each	₹ 60.00	₹ 480.00
38	9.76	Providing and fixing Stainless steel hanging type floor door stopper with necessary screws, etc. complete.	8.00	each	₹ 103.00	₹ 824.00

39	9.79	Providing and fixing bright finished brass tower bolts (barrel type) with necessary screws etc. complete :				
	9.79.2	250 x10 mm				
			8.00	each	₹ 329.00	₹ 2,632.00
40	9.81	Providing and fixing bright finished brass handles with necessary screws etc. complete.				
	9.81.1	125 mm				
			8.00	each	₹ 205.00	₹ 1,640.00
41	9.43	Providing and fixing M.S. grills of required pattern in frames of windows etc.with M.S. flats, square or round bars etc.including priming coat with approved steel primer all complete				
	9.43.2	Fixed to openings /wooden frames with rawl plugs screws etc.				
			135	kg.	₹ 128.00	₹ 17,280.00
42	9.84	Providing and fixing bright finished brass 100 mm mortice latch and lock ISI marked with six levers and a pair of anodised (anodic coating not less than grade AC 10 as per IS : 1868) aluminium lever handles with necessary screws etc. complete (Best make of approved quality).				
			3.00	each	₹ 820.00	₹ 2,460.00
43	10.22	Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.				
	10.22.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.				
			500.00	kg.	₹ 105.00	₹ 52,500.00
44	10/10.25	Providing and fixing stainless steel (Grade 304) railing made of Hollowtubes, channels, plates etc. including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete i/c fixing the railing with necessary accessories and stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer in-charge. (For payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)				
			500	kg.	₹ 582.00	₹ 2,91,000.00
45	10/10.26	Providing and fixing fly proof wire gauze to windows, clerestory windows and doors with M.S. Flat 15x3mm and nuts and bolts complete.				
	10.26.2	Stainless steel (grade 304) wire gauze of 0.5 mm dia wire and 1.4 mm aperture on both sides.				
		WINDOW 1	9	Sqm	₹ 1,334.00	₹ 12,006.00
46	10.27	Providing and fixing glass panels/ steel sheet/ Fibre sheet with putty and glazing clips in steel doors, windows, clerestory windows all complete.				
	10.27.1	With 4.0 mm thick glass panes ventilators				
			5	sqm	₹ 792.00	₹ 3,960.00
47	10.28	Add extra for providing and fixing froasted glass instead of float glass.				
	10.28.2	With 5.5 mm thick glass panes.				
			5	sqm	₹ 262.00	₹ 1,310.00
48	11.22	Providing and fixing 18mm thick gang saw cut mirror polished (premoulded and prepolished) machine cut for kitchen platforms, vanitycounters, window sills , facias and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing moulding and polishing to edge to givehigh gloss finish wherever required etc. complete at all levels. Samples approved by Engineer-in- Charge.				
	11.22.2	Granite fine grained dark crystal of other colours and various patterns				
		WINDOW JAMBING				
			4.20	sqm	₹ 2,356.00	₹ 9,895.20
	11.22.3	Granite coarse grained light black/ light red/white with crystal of other colours and various patterns				
			2.00	Sqm	₹ 2,113.00	₹ 4,226.00

49	11.19	Marble stone flooring with 18 mm thick marble stone (sample of marble shall be approved by Engineer-in-charge) laid over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 sand and grey cement slurry, joints treated with white cement mixed with pigment to match colour of stone including rubbing and polishing complete with : (area of slabs over 0.5 sqm)				
	11.19.1	Makrana white second quality.				
		GROUND FLOOR	30	Sqm		
			30	Sqm	₹ 3,051.00	₹ 91,530.00
50	11.33	Providing and laying Granite stone flooring in required design and patterns in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry admixed with pigment of matching shade including rubbing, curing and polishing and as directed by the Engineer-in-Charge Granite stone slab Dark Black, Dark Red, White or equivalent,				
	11.33.2	Leather Finish Granite	30	Sqm		
			30	Sqm	₹ 2,809.00	₹ 84,270.00
51	11.34	Granite stone work 18mm thick of any colour in riser of steps, skirting, dado and pillars laid on 12 mm average thick cement mortar 1:3 (1 cement:3 sand) and jointed with white cement slurry mixed with pigment to match the shade of slab.				
			5.25	Sqm	₹ 3,413.00	₹ 17,918.25
52	11.4	Providing edge moulding to 18mm thick marble stone counters, Vanities, window sills etc. including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge.				
	11.40.2		118.00	RM	₹ 269.00	₹ 31,742.00
53	11.72	Providing and laying factory made chamfered edge Cement Concrete paver blocks in footpath, parks, lawns, drive ways or light traffic parking etc. of required colour strength, thickness pattern, surface texture (smooth/rough) and size/shape, conforming to 15658- 2006 made by table vibratory method using PU mould, laid in required colour and pattern over 50mm thick compacted bed of sand, compacting and proper embedding/ laying of inter locking paver blocks into the bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand including locking with M15 cement concrete in footpath, parks, lawns, drive ways or light traffic parking etc. complete as per manufacturer's specifications and direction of Engineer-in-Charge.				
	11.72.1	80 mm thick C.C. paver block of M-35 grade	200			
		Front Covered Corridor	200	Sqm	₹ 805.00	₹ 1,61,000.00
54	11.75	Providing and fixing 16mm thick gang saw cut mirror polished premoulded and prepolished machine cut Granite of approved shade, colour and texture of Granite Door frame. in cement mortar 1:3 (1 cement :3 sand) including pointing with an admixture of pigment to match the shade including fixing of granite stone door frame with epoxy resin based adhesive including secured to the backing by means of cramps, drilling of hole with rawl plugs and screws 75mm long cleaning etc. complete. Including rubbing, curing, moulding and polishing edges to give high glossy finish and drilling of hole for fixing stainless steel hinges, aldrops, towerbolts etc complete at all levels as per instruction of Engineer-in-Charge.				
(ii)	11.75.2	Granite Door frame for 200mm thick wall Thickness.	27.20	Rmt	₹ 1,512.00	₹ 41,126.40
55	11.78	Providing and laying Vitrified floor tiles multi charges (Minimum top layer 2.0 mm) Nano Polished Self design, in different size with water absorption less than 0.05% and conforming to IS:15622, of approved make in all colours and shade, 1 quality/premium in flooring, laid 20 mm thick cement mortar 1:4 (1 cement :4 sand) including grouting the joints with white cement and matching pigments etc, complete.				
	11.78.1	In light shade glossy/ rustic /stain finished				
	11.78.1.1	Size 600X600mm thickness 09-10mm	60.00	Sqm	₹ 1,104.00	₹ 66,240.00
	11.78.1.3	Size 800X1200 mm thickness 11-12mm	60.00	Sqm	₹ 1,413.00	₹ 84,780.00

56	11.79	Providing and laying vitrified floor tiles Multi/Double charged (Minimum top layer thickness 2.0mm) Neno Polished self design, in different size with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours& shades, 1st quality/ premium quality in skirting laid on 12mm thick cement mortar 1:4(1cement :4sand) including grouting the joints with white cement and matching pigments etc. complete				
	11.79.1	In light shade glossy/ rustic /stain finished				
	11.79.1.3	(c) Size 800X1200 mm thickness 11-12mm				
			40.00	sqm	₹ 1,403.00	₹ 56,120.00
57	11.8	Providing and laying vitrified floor-tiles Full Body Design Homogenous Body matt/rustic finish in different size with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours& shades, 1st quality/ premium quality in flooring laid on 20mm thick cement mortar 1:4 (1cement :4sand) including grouting the joints with white cement and matching pigments etc. complete				
	11.80.1	In light colour and shades as ivory, beige blanco, grey etc.				
	11.80.1.2	(b) Size 600X600mm thickness 9-10mm				
			40	sqm	₹ 1,206.00	₹ 48,240.00
58	11.82	Providing and laying digital print random design(PGVT)/(GVT) vitrified tiles in different sizes with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours& shades, 1st quality/ premium quality including grouting the joints with white cement and matching pigments etc. complete				
	11.82.1	For floor glossy/ rustic /stain/matt finished laid on 20mm thick cement mortar 1:4 (1 cement:4sand)				
	11.82.1.2		40.00	Sqm	₹ 1,261.00	₹ 50,440.00
	11.82.1.6					
			40.00	Sqm	₹ 1,450.00	₹ 58,000.00
59	11.83	Providing and laying digital print random design (PGVT)/(GVT) vitrified tiles in different sizes with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours& shades, 1st quality / premium in skirting, riser laid our 12mm thick cement mortar 1:3 including grouting the joints with white cement and matching pigments etc. complete				
	11.83.1	For skirting, risers etc. glossy/ rustic /stain/matt finished in all colours and shades				
	11.83.1.5	Size 800X1200 mm thickness 11-12 mm				
			40.00	Sqm	₹ 1,440.00	₹ 57,600.00
60	11.53	Providing and laying Antiskid floor tiles of any sizes, 12 mm thickness with water absorption less than 0.08% and conforming to IS:15622 of approved make in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 sand) including grouting the joints with white cement with matching pigments etc., complete.				
			40.00	sqm	₹ 880.00	₹ 35,200.00
61	11.84	Granite work gang saw cut (polished machine cut) of thickness 12 mm for wall lining, skirting, risers of steps and dado (vener work), back filling with a grout of average 12 mm thick in cement mortar 1:3 (1 Cement: 3 sand) including pointing with white cement mortar 1:2 (1 white cement: 2 marble dust) with an admixture of pigment to match the marble shade: (To be secured to the beaching by means of cramps, which shall be paid for separately).				
	11.84.1	Area of tiles not less 0.18 sqm				
	11.84.1.1	Fine granite dark Black/dark Red/ White with self design/ pattern/crystals of other colors of glitter				
			40.00	sqm	₹ 2,296.00	₹ 91,840.00
62	11.85	Providing and laying gang saw cut 12mm thick, mirror polished pre moulded (wherever required) and pre polished machine cut granite stone of required size and shape of approved shade, colour and texture in flooring laid over 20mm thick base of cement mortar 1:4(1cement:4sand) including grouting the joints with white cement mixed with matching pigments, epoxy touch ups etc. complete as per direction of Engineer-in-Charge.				
	11.85.1	Area of tiles not less 0.18 sqm				
	11.85.1.1	Fine granite dark Black/dark Red/ White with self design/ pattern/crystals of other colors of glitter				
		STEPS				
			4.50	sqm	₹ 1,775.00	₹ 7,987.50

63	11.36	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and mirror polishing complete with base of cement mortar 1 : 4 (1 cement : 4 sand) having thickness of slab 25 mm (Area of slab to be over 0.25 sqm) Note: - Deduction shall be made for not mirror polishing according to item no 11.43				
			90.00	sqm	₹ 1,174.00	₹ 1,05,660.00
64	11.3	Providing and laying gang saw cut 18 mm thick, mirror polished premoulded (wherever required) and pre polished machine cut granite				
	11.30.1	Area of slab over 0.50 sqm				
	11.30.1.1	Fine grained granite dark Black/dark Red/ White or equivalent with self design/ pattern/crystals of other colors of glitter	40.00	SQM	₹ 2,642.00	₹ 1,05,680.00
65	11.29	Granite work gang saw cut (polished and machine cut) of thickness 18mm for wall lining (veneer work), backing filled with a grout of average 12 mm thick in cement mortar 1:3 (1 cement: 3 sand) including pointing with white cement mortar 1:2 (1 white cement: 2 marble dust) with an admixture of pigment to match the marble shade: (To be secured to the backing by means of cramps, which shall be paid for separately).				
	11.29.2	Area of slab upto 0.50 sqm				
	11.29.2.1	Fine grained granite dark Black/dark Red/ White or equivalent with self design/ pattern/crystals of other colors of glitter	40.00	SQM	₹ 2,705.00	₹ 1,08,200.00
66	21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :				
	21.1.1	For fixed portion.				
	21.1.1.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)				
		Weight @ of 15.00 kg. per sq.m.	180	kg.	₹ 416.00	₹ 74,880.00
67	22/22.5	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying :				
		a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. This layer will be allowed to air cure for 4 hours.				
		b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.	40	sqm	₹ 207.00	₹ 8,280.00
68	22.7	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations:				
		a) Applying a slurry coat of neat cement using 2.75 kg/sqm. of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment.				
		b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs				
		c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge.				

		d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3mm deep.				
		e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge : (with 5 years service guarantee)				
		With average thickness of 120mm and minimum thickness at khurra as 65 mm.				
		TERRACE FLOOR	40.00	Sqm		
			40.00	Sqm	₹ 885.00	₹ 35,400.00
69	NON SOR	Providing & fixing of cast iron & ms fabricated decorative ornamental grill , partition, gates, railing, arches, brackets, customised items & Grill , partition, gates, railing, arches, brackets, customised items & crown etc. (Average weight of MS 90 KG is Per Sq.Mt.)				
			900.00	KG	₹ 218.00	₹ 1,96,200.00
					TOTAL	₹ 37,39,857.37
ESTIMATE BASED ON :-						
GOVERNMENT OF MADHYA PRADESH PUBLIC WORKS						

DETAILED ESTIMATE

Name of Work :- DRINKING WATER KIOSK

Name of Project :- DEVELOPMENT OF SHANI MANDIR , UJJAIN

S.No	Item No.	Item Name	Description	Qty	Unit	Rate	Amount
1	2.1	Surface Dressing	Surface dressing of the ground including removing vegetation and in-equalities not exceeding 15 cm deep and disposal of rubbish, lead up to 50 m and lift up to 1.5 m. in all kinds of soil.				
			All kinds of soil.	0.72	100/sqm.	₹ 803.00	₹ 580.17
2	2/2.6	Excavation on soil	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed.				
	2.6		All kinds of soil	19.44	Cum	₹ 147.00	₹ 2,857.68
3	2.24	Filling available excavated earth	Filling available excavated earth (excluding hard rock/Ordinary rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.				
				12.05	Cum	₹ 95.00	₹ 1,144.75
4	2.25	Extra for additional lift	Extra for every additional lift of 1.5 m or part thereof in.				
	2.25.1		All kind of soil. 50% QTY. OF ITEM No. 2	9.72	Cum	₹ 30.00	₹ 291.60
5	2.26	Under floor filling stone dust	Supplying and filling in plinth with crusher stone dust / coarse sand under floors including, watering, ramming and compacting in layers not exceeding 20cm in depth and dressing complete Note: - Maximum thickness of this layer shall be 20 cm.				
	2.26.1		Crusher Stone Dust	10.13	Cum	₹ 672.00	₹ 6,804.00
6	2.27	Under floor filling	Supplying and filling in plinth under floors including watering ramming consolidating in layers not exceeding 20cm in depth and dressing complete.				
	2.27.1	Hard muram hard copra	With hard muram having CBR >12 % at under floors including watering, ramming and compacting (minimum compaction 95% of MDD) in layers not exceeding 20cm in thickness and dressing complete. (Note:- maximum thickness of this layer to be provided shall be 30cm) Moorum/Hard copra	10.13	Cum	₹ 393.00	₹ 3,979.13
7	4.1	C.C. upto plinth level	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level :				
	4.1.1.4	M-10	M-10Nominal (Mix-1 Cement : 3 sand : 6 graded stone aggregate)	1.70	Cum	₹ 3,890.00	₹ 6,597.44
8	5.1	RCC upto plinth	Providing and laying in position specified grade of reinforced cement concrete (with 20mm nominal size graded stone aggregate) excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
	5.1.1		M-20 Grade Concrete	9.46	Cum	₹ 6,153.00	₹ 58,201.23
9	5.2	RCC in walls, columns, pillars etc	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, posts and struts etc. above plinth level and upto floor two level excluding cost of centering, shuttering, finishing and reinforcement:				
	5.2.1		RCC in walls, columns, pillars etc M-20 Grade Concrete	1.58	Cum	₹ 6,231.00	₹ 9,869.90
10	5.3	RCC in beams, floors, staircases etc	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in beams, suspended floors, roofs having slope of any degree landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral staircases above plinth level and upto floor two level excluding the cost of centering, shuttering, finishing and reinforcement in concrete grade.				
	5.3.1		M-20 Grade Concrete	18.61	Cum	₹ 6,541.00	₹ 1,21,711.66
11	5.5	RCC in arches, domes, shells etc.	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in arches, archribs, domes, vaults, shells, folded plate above plinth level and upto floor two level excluding the cost of centering, shuttering, finishing and reinforcement in Concrete grade.				
	5.5.1		M-20 Grade Concrete	3.00	Cum	₹ 6,906.00	₹ 20,718.00
12	5.9	Centering and shuttering	Centering and shuttering including strutting, propping etc. and removal of form for :				

	5.9.1		Foundations, footings, bases of columns, etc. for mass concrete up to plinth level.				
				20.24	Sqm	₹ 190.60	₹ 3,857.74
13	5.9.2	Walls	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.				
	5.9.2.1	Upto Plinth Level	Ground Beam				
				14.40	Sqm	₹ 219.00	₹ 3,153.60
14	5.9.3	Suspended floors, roofs etc	Suspended floors, roofs, landings, balconies and access platform				
				32.10	Sqm	₹ 439.60	₹ 14,111.16
15	5.9.5	Lintels, Beams and Cantilevers	Lintels, beams, girders, bressumers and cantilevers				
				21.60	Sqm	₹ 356.00	₹ 7,689.60
16	5.9.6	Columns	Columns, Pillars, Piers, Abutments, Posts and Struts.				
				20.88	Sqm	₹ 471.20	₹ 9,838.66
17	5.9.7	Stairs	Stairs, (excluding landings) except spiral-staircases.				
				1.24	Sqm	₹ 435.70	₹ 540.27
18	5.16	Reinforcement	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding including cost of binding wire all wastages and overlaps, couplers (overlaps shall be provided as per requirement of IS 13920 for ductile detailing IS 456 RCC Design & SP 34 Reinforcement detailing) etc. complete . (Note:- 1. Spacer bars (chairs) shall be paid separately as shown in the drawing and as per direction of engineer in charge. 2. No extra payment shall be done for overlaps and/or couplers. 3.Couplers shall be conforming to IS code on "Reinforcement Couplers for Mechanical Splices of Bars for Concrete Reinforcement - Specification")				
	5.16.6	TMT (FE 500D or more)	Thermo-Mechanically Treated bars. (TMT/TMX) FE 500 or more conforming to IS 1786 100 Kg. Steel Per/Cu. M. Of R.C.C. Total Steel in kg.	3265.05	Kg	₹ 80.00	₹ 2,61,204.00
20	6.1	Brick work with 40kg/cm2 chimney bricks up to plinth	Brick work with well burnt chimney bricks in bulls pattern trench kiln manufactured by ghol process, crushing strength not less than 40kg /cm2 and water absorption not more than 15% in foundation and plinth i/c curing etc. complete.				
	6.1.2	CM 1:6	Cement mortar 1:6 (1 cement : 6 sand)	2.88	Cum	₹ 5,626.00	₹ 16,202.88
21	6.26	Autoclaved Aerated Concrete (AAC) blocks masonry	The surface of masonry units (AAC- Block) should be slightly moist prior to application of jointing mortar. Block should be gently pressed down using a rubber mallet to expel out entrapped air and the masonry shall be cured two days. 1st layer of masonry block shall be placed on perfectly leveled surface, which if required, shall be leveled with M-15 cement concrete at plinth or floor level. Masonry shall have 75mm thick RCC band with M-15 cement concrete having 2 bars horizontal of 8 mm dia with 8mm dia U- shaped single stirrup @ 300mm C/C.				
	6.26.1	Polymer modified mortar	Such horizontal bands shall be placed at sill level and lintel level where there is a provision of windows in walls otherwise placed at vertical interval of 1.8 meter in vertical direction shall be spaced at 4.5 meter in horizontal direction. Vertical bands shall be placed along jams (vertical member of chowkhat) and extend upto lintel levels to arrest cracking at corner openings. RCC bands shall be measured with AAC block masonry. Rates include all materials including steel bars, wastages, scaffolding and all labour etc. complete. AAC Masonry in polymer modified mortar	8.15	Cum	₹ 5,500.00	₹ 44,847.00
22	6.27	Extra for AAC work above floor two level	Extra for AAC masonry work in superstructure above floor two level for each additional floor or part thereof	8.15	Cum	1% of item 6.26.1 =5500x1%=116.42 ₹ 55.00	₹ 448.47
23	6.15	Half brick masonry fly ash lime bricks	Half brick masonry with fly ash lime Gypsum bricks (FALG bricks) conforming to IS: 12894, in super structure above plinth and upto floor two level.				
	6.15.3	50 kg/cm2	Having 50 kg/cm2 average compressive strength.				
	6.15.3.1	CM 1:3	Cement mortar 1:3 (1 cement : 3 sand) Parapet wall	18.00	sqm	₹ 479.00	₹ 8,622.00
24	9.43	M.S. grills and windows	Providing and fixing M.S. grills of required pattern in frames of windows etc.with M.S. flats, square or round bars etc.including priming coat with approved steel primer all complete				
	9.43.2	Fixed to openings /wooden frames	Fixed to openings /wooden frames with rawl plugs screws etc. Total weight in Kg.	47.25	Kg.	₹ 128.00	₹ 6,048.00

25	10.27	Glass panes/ steel sheet/ fibre sheet	Providing and fixing glass panels/ steel sheet/ Fibre sheet with putty and glazing clips in steel doors, windows, clerestory windows all complete.				
	10.27.2	5.50 mm glass	With 5.5 mm thick glass panels.				
				13.23	sqm	₹ 873.00	₹ 11,549.79
26	11.75	Granite door frame	Providing and fixing 16mm thick gang saw cut mirror polished premoulded and prepolished machine cut Granite of approved shade, colour and texture of Granite Door frame. in cement mortar 1:3 (1 cement :3 sand) including pointing with an admixture of pigment to match the shade including fixing of granite stone door frame with epoxy resin based adhesive including secured to the backing by means of cramps, drilling of hole with rawl plugs and screws 75mm long cleaning etc. complete. Including rubbing, curing, moulding and polishing edges to give high glossy finish and drilling of hole for fixing stainless steel hinges, aldrops, towerbolts etc complete at all levels as per instruction of Engineer-in-Charge.				
	11.75.2	200 mm wall	Granite Door frame for 200mm thick wall Thickness.	13.00	Rmt	₹ 1,512.00	₹ 19,656.00
27	11.78	Vitrified floor tiles multi charged	Providing and laying Vitrified floor tiles multi charges (Minimum top layer 2.0 mm) Nano Polished Self design, in different size with water absorption less than 0.05% and conforming to IS:15622 , of approved make in all colours and shade, 1 quality/premium in flooring, laid 20 mm thick cement mortar 1:4 (1 cement :4 sand) including grouting the joints with white cement and matching pigments etc, complete.				
	11.78.1	Light shade	In light shade glossy/ rustic /stain finished				
	11.78.1.1	600X600	Size 600X600mm thickness 11-12mm	20.25	sqm	₹ 1,104.00	₹ 22,356.00
28	11.79	Vitrified floor tiles multi charged	Providing and laying vitrified floor tiles Multi/Double charged (Minimum top layer thickness 2.0mm) Neno Polished self design, in different size with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours & shades, 1st quality/ premium quality in skirting laid on 12mm thick cement mortar 1:4 (1 cement :4 sand) including grouting the joints with white cement and matching pigments etc. complete				
	11.79.1.1	600X600	Size 600X600 mm thickness 9-10 mm	1.80	sqm	₹ 1,093.00	₹ 1,967.40
29	13.1	12 mm cement plaster	12 mm cement plaster of mix :				
	13.1.2		1:6 (1 cement : 6 sand)	49.65	sqm	₹ 160.00	₹ 7,944.00
30	13.7	18 mm cement plaster cm 1:5 & 1:3 rough finished with sponge	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 sand) finished with a top layer 6mm thick cement plaster 1:4 (1 cement : 4 sand).	283.01	sqm	₹ 236.00	₹ 66,790.36
31	13.8	6 mm cement plaster	6 mm cement plaster of mix : 1:3 (1 cement : 3 sand)	29.25	sqm	₹ 144.00	₹ 4,212.00
32	13.13	21mm sand faced plaster	Providing sand faced plaster upto 10meter hight above ground level concrete or brick masonry surfaces into two coats, base coat of 13 mm thick in cement mortar 1:4 (1 cement: 4 sand), clearing the surface by combing it and finishing coat of 8 mm. thick in cement mortar 1:3 (1 cement: 3 sand) and taking out surface grains by mechanical arrangement or applying second coat by mechanical means including cost of all material, labour, and T and P including all lead, lift and scaffolding etc. complete.	25.00	sqm	₹ 314.00	₹ 7,850.00
33	13.16	Extra for plastering on circular work	Extra for plastering on circular work not exceeding 6 m in radius:				
	13.16.2		in two coat	25.00	sqm	₹ 18.00	₹ 450.00
34	13.17	Extra for plastering done on moulding cornices	Extra for plastering done on moulding cornices or architraves including neat finish to line and level:				
	13.17.2		in two coat	30.00	sqm	₹ 260.00	₹ 7,800.00
35	5.24	Plaster drip course / groove	Providing for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.				
	5.24.1		Preparation of grooves	40.00	Rmt	₹ 18.50	₹ 740.00
36	13.27	Mesh in plater	Providing and fixing mesh in vertical and horizontal junction of RCC and brick/AAC work including scaffolding and all lead and lift etc. complete				
	13.27.1	Chicken Mesh in plater	G.I. chicken mesh as per ISI specification and in the required width with 50mm long Bombay nails before plastering upt 10 meter height.	26.92	sqm	₹ 62.00	₹ 1,669.04

37	13.41	white cement based putty	Providing and applying white cement based putty of average thickness 1 mm, of approved brand over the plastered wall surface to prepare the surface even and smooth i/c all cost of material, labour and scaffold etc in all position complete. Note : Putty shall be applied only on the internal walls, for application on the exterior walls prior permission of APD/Chief Engineer will be required.				
				70.95	sqm	₹ 74.00	₹ 5,250.30
38	13.54	Deluxe multi surface paint	Finishing walls with Deluxe Mulf surface paint system for interiors and exterior using primer as per manufacturers specifications :				
(i)	13.54.3	Two or more coats	Two or more coats applied @1.25 ltr/10 sqm. Over and including one coat of Special primer applied @07.75 ltr/10 sqm.				
				100.2	Sqm	81	8116.2
39	13.54	Deluxe multi surface paint	Finishing walls with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :				
	13.54.2	Painting Steel work	Painting Steel work with Deluxe Multi Surface Paint to give an even shade.Two or more coat applied @0.90 ltr/10 sqm over an under coat of primer applied @ 0.80 ltr/ 10 sqm of approved brand or manufacture.				
				3.15	sqm	₹ 71.00	₹ 223.65
40	21.1.2	Openable	For shutters of doors, windows and ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately).				
	21.1.1.2	Powder coated	Powder coated aluminium (minimum thickness of powder coating 50 micron)				
				47.25	KG	₹ 416.00	₹ 19,656.00
41	22.7	Water proofing treatment brick coba	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations: a) Applying a slurry coat of neat cement using 2.75 kg/sqm. of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment. b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-Charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 sand) admixed with waterproofing compound conforming to IS : 2645 and approved by Engineer-in-Charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs. c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-Charge. d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement: 4 sand) admixed with water proofing compound				
				20.25	sqm	₹ 885.00	₹ 17,921.25
WATER SUPPLY & R.O. SYSTEM							
42	27.36	50 litres capacity Industrial Model Reverse Osmosis Water-cum purifier	Supplying ,instalation ,testing and commissioning in position of 50 litres capacity Industrial Model Reverse Osmosis Water-cum-purifier to deliver Potable Water with world Health Organisation (WHO) Standards with following accessories (a) MS Skid – 1No (b) Media 11054 No, Vessel with 20 bb Multiport Valve (with Media Pubble and Fine Sand and Activated Carbon Filling) set (c) Feed Pump 0.50 HP – 1 No. (d) Vertical Pump 2- 9, 2.00HP / Single Phase – 1 No (e) Membrane 40 x 40. and Membrane Pressure Vessel 40 x 40 – 1 No. & Pressure Gauge – 2 Nos. (f) Flow Meter – 1 No. 20" Filter with Housing – 1 No., Low Pressure Switch – 1 No., Level Switch – 1 No. & Necessary CPVC Pipes and Fittings. The system shall be provide with Two Panel. Required to complete the Job along with one year warranty and 02 free services which should include mandatory replacement of filters etc.	1.00			
				1.00	EACH	₹ 31,540.00	₹ 31,540.00

43	27.37		Supplying installation ,testing and commissioning in position of 250 liters capacity Industrial Model Reverse Osmosis Water-cum-purifier to deliver Potable Water with world Health Organisation (WHO) Standards with following accessories a) MS Skid – 1No (b) Media 11054 No, Vessel with 20 bb Multiport Valve (with Media Pubble and Fine Sand and Activated Carbon Filling) set (c) Feed Pump 0.50 HP – 1 No. (d) Vertical Pump 2- 9, 2.00HP / Single Phase – 1 No (e) Membrane 40 x 40 & Membrane Pressure Vessel 40 x 40 – 1 No. & Pressure Gauge – 2 Nos. (f) Flow Meter – 1 No. 20" Filter with Housing – 1 No., Low Pressure Switch – 1 No., Level Switch – 1 No. & Necessary CPVC Pipes and Fittings. The system shall be provide with Two Panel. Required to complete the Job along with one year warranty and 02 free services which should include mandatory replacement of filters etc.				
				1.00	EACH	₹ 96,000.00	₹ 96,000.00
44	18.6	CPVC pipes internal work	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC)pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.				
	18.6.2	Concealed	Concealed work including cutting chases and making good the walls etc.				
	18.6.2.1	15mm	15mm dia.	20.00	metre	₹ 207.00	₹ 4,140.00
	18.6.2.2	20mm	20mm dia.	20.00	metre	₹ 234.00	₹ 4,680.00
45	18.7	CPVC pipes for external work	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes,having thermal stability for hot and cold water supply including all CPVC plainand brass threaded fittings. This included jointing of pipes and fittings with onestep CPVC solvent cement, trenching, refilling andtesting of joints complete as per direction of Engineer-in- Charge. External Work				
	18.7.1		15 mm nominal outer dia .Pipes.	8.00	metre	₹ 122.00	₹ 976.00
	18.7.2		20 mm nominal outer dia .Pipes.	8.00	metre	₹ 141.00	₹ 1,128.00
46	18.12	Gun metal gate valve	Providing and fixing gun metal gate valve with brass lever handle of approved quality.(screwed end) :				
	18.12.2.1	25 mm	25 mm	8.00	each	₹ 341.00	₹ 2,728.00
	18.12.2.2	32mm	32mm	8.00	each	₹ 419.00	₹ 3,352.00
47	25.37	Non-return valve	Providing and fixing in position best Indian Health Faucet with 8mm dia 1 meter long Flexible Tube and wall bracket with N. R. V. (non-return wall).(Premium Range Sanitary Ware)				
				9.00	each	₹ 1,818.00	₹ 16,362.00
48	26.10	Gun metal gate valve	Providing, installation, testing and commissioning of gun metal valves of following sizes as required.				
	26.10.4	50 mm dia	25 mm	9.00	each	₹ 1,620.00	₹ 14,580.00
	26.10.5	25 mm dia	32mm	9.00	each	₹ 810.00	₹ 7,290.00
49	18.14	Ball float valve brass	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :				
	18.14.1	15mm	15mm	6.00	each	₹ 316.00	₹ 1,896.00
	18.14.2	20mm	20mm	6.00	each	₹ 431.00	₹ 2,586.00
50	18.54	Enclosed type water meter bulk type	Providing and fixing enclosed type water meter (bulk pe)conforming to IS : 2373 and tested by Municipal Board complete with bolts, nuts, rubber insertions etc. (The tail pieces if required will be paid separately) :				
	18.54.1	80 mm dia	80 mm dia	6.00	each	₹ 3,548.00	₹ 21,288.00
51	19.1	Glazed stoneware pipes SP-1	Providing, laying and jointing glazed stoneware pipes class SP-1 A' with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete : Excavation to be paid seperately				
	19.1.2		150 mm diameter	7.00	each	₹ 260.00	₹ 1,820.00
TOTAL							₹ 10,23,836.92
TOTAL 2 DRINKING WATER KIOSK							₹ 20,47,673.84

DETAILED ESTIMATE

Name of Project :- **DEVELOPMENT OF SHANI MANDIR, UJJAIN**

Name of Work :- **PROPOSED TOILET BLOCK**

S/NO	SOR NO.	ITEM NAME	Description	Qty	Unit	Rate	Amount
1	2.1	Surface Dressing	Surface dressing of the ground including removing vegetation and in equalities not exceeding 15 cm deep and disposal of rubbish, lead up to 50 m and lift up to 1.5 m. in all kinds of soil.	195	100 Sqm.	₹ 803.00	₹ 1,56,585.00
2	2.6	Excavation Soil	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottom disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed. (No extra lift is payable if work is done by mechanical means) All kinds of soil	113.945	Cum	₹ 147.00	₹ 16,749.92
			All kind of soil.				
3	2.25	Extra for every	Extra for every additional lift of 1.5 m or part there of in.				
	2.25.1	Soil	All kind of soil.	56.9725	Cum	₹ 30.00	₹ 1,709.18
4	2.24	Filling	Filling available excavated earth (excluding hard	93.213	Cum	₹ 95.00	₹ 8,855.24
5	2.26	under floors filling stone dust	Supplying and filling in plinth with crusher stone dust / coarse sand under floors including, watering, ramming consolidating in layers not exceeding 20cm in depth and dressing complete.(Note:- Maximum thickness of this layer to be provided shall be 20 cm.)	9.375	Cum	₹ 672.00	₹ 6,300.00
6	2.27	Under floor filling	Supplying and filling in plinth under floors including watering ramming consolidating in layers not exceeding 20cm in depth and dressing complete.				
	2.27.1	Hard muram hard copra	With hard muram having CBR >12 % at under floors including watering, ramming and compacting (minimum compaction 95% of MDD) in layers not exceeding 20cm in thickness and dressing complete. (Note:- maximum thickness of this layer to be provided shall be 30cm)	37.5	Cum	₹ 390.00	₹ 14,625.00
7	4.1	C.C. upto plinth level	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
	4.1.1	20 mm	with 20 mm nominal size graded stone aggregate.				
	4.1.1.4	M-10	M-10 Nominal (Mix-1 Cement : 3 sand : 6 graded stone aggregate)	3.506	Cu.m.	₹ 3,890.00	₹ 13,638.34
8	5.1	RCC upto plinth	Providing and laying in position specified grade of reinforced cement concrete (with 20mm nominal size graded stone aggregate) excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level.				
	5.1.1	M-20	M-20 Grade Concrete	30.786	Cum	₹ 6,153.00	₹ 1,89,426.26
9	5.2	RCC in walls, columns, pillars etc	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, posts and struts etc. above plinth level and upto floor two level excluding cost of centering, shuttering, finishing and reinforcement:				
	5.2.1		M-20 Grade Concrete	4.032	Cum	₹ 6,231.00	₹ 25,123.39
10	5.3	RCC in beams, floors, staircases etc	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate)in beams, suspended floors, roofs havingslope of any degree landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiralstaircases above plinth level and upto floor two level excluding the cost of centering, shuttering, finishing and reinforcement in concrete grade.				
	5.3.1	M-20	M-20 Grade Concrete	18.922	Cum	₹ 6,541.00	₹ 1,23,768.80
11	5.9	Centering and Shuttering	Centering and shuttering including strutting, propping etc. and removal of form for :				

a)	5.9.1	Upto plinth	Foundations, footings, bases of columns, etc. for mass concrete up to plinth level.				
				108.4	Sqm	₹ 190.60	₹ 20,661.04
12	5.9.2	Walls	Walls (any thickness) including attached pilasters buttresses, plinth beams and string courses etc.				
(i)	5.9.2.1	Upto plinth level	up to plinth level.				
				76	Sqm	₹ 219.00	₹ 16,644.00
	5.9.3	Suspended floors, roofs etc	Suspended floors, roofs, landings, balconies and access platform.				
				147.50	Sqm	₹ 439.60	₹ 64,838.80
13	5.9.5	Lintels, Beams and Cantilevers	Lintels, beams, girders, bressumers and cantilevers				
				15.84	Sqm	₹ 356.00	₹ 5,639.04
14	5.9.6	Columns	Columns, P i l l a r s , Piers, Abutments, Posts and Struts.				
				50.4	Sqm	₹ 471.20	₹ 23,748.48
15	5.9.9	Arches	Arches, domes,vaults upto 6m span				
				10.00	Sqm	₹ 1,141.60	₹ 11,416.00
16	5.9.10	Extra for arches >6m	Extra for arches, domes, vaults exceeding 6 m span				
				10.00	Sqm	₹ 451.30	₹ 4,513.00
17	5.9.15	Extra for circular or other geometrical shape	Extra for shuttering in circular work or any other geometrical shape (20% of respective centering and shuttering items).				
				50.00	sqm	₹ 94.24	₹ 4,712.00
18	5.9.17	Cornices and mouldings	Cornices and mouldings				
				30.00	sqm	₹ 565.00	₹ 16,950.00
21	5.16	Reinforcement	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding upto floor level including cost of binding wire, wastage and over laps upto 12mm horizontal/ inclined position of reinforcement bars in slab and beams, plinth, chajjas, lintels, upto 4.5m vertical length of reinforcement in wall columns (over laps shall be provided as per requirement of IS : 13920; IS 456 & SP :34) etc. complete.				
	5.16.6	TMT (FE 500D or more)	Thermo-Mechanically Treated bars. (Fe 500 D or more)				
				4836.6	Kg	₹ 80.00	₹ 3,86,928.00
22	6.1	Brick work with 40kg/cm2 chimney bricks up to plinth	Brick work with well burnt chimney bricks in bulls pattern trench kiln manufactured by ghol process, crushing strength not less than 40kg /cm2 and water absorption not more than 15% in foundation and plinth i/c curing etc. complete.				
	6.1.2	CM 1:6	Cement mortar 1:6 (1 cement : 6 sand)				
			L/s				
				2	Cum	₹ 5,626.00	₹ 11,252.00
23	6.2	Brick work with 40kg/cm2 chimney bricks in superstructure	Brick work with well burnt chimney bricks in bulls patent trench kiln manufactured by ghol process ,crushing strength not less than 40kg /cm2 and water absorption not more than 15% in superstructure above plinth level and up to floor two level i/c curing etc. complete.				
	6.2.2	CM 1:6	Cement mortar 1:6 (1 cement : 6 sand)				
			Public Toilet				
				33.992	Cum	₹ 5,821.00	₹ 1,97,867.43
24	6.13		Providing half brick masonry with well burnt chimney bricks in bull pattern trench kiln crushing strength not less than 25 kg /cm2 and waterabsorption not more than 20% in superstructure above plinth level and up to floor two level.				
	6.13.2		Cement mortar 1:4 (1 cement : 4 sand)				
				73	sqm	₹ 615.00	₹ 44,895.00
25	13.1	12 mm cement plaster	12 mm cement plaster of mix :				
	13.1.1	1:4 (1 cement : 4 sand)	Public Toilet				
				269.94	Sqm	₹ 173.00	₹ 46,699.62

26	13.2	15 mm cement plaster	15 mm cement plaster on the rough side of single or half brick wall of mix				
	13.2.1	1:4 (1 cement : 4 sand)	Public Toilet				
				77	Sqm	₹ 184.00	₹ 14,168.00
27	13.13	21mm sand faced plaster	Providing sand faced plaster upto 10meter high above ground level concrete or brick masonry surfaces into two coats, base coat of 13 mm thick in cement mortar 1:4 (1 cement: 4 sand), clearing the surface by combing it and finishing coat of 8 mm. thick in cement mortar 1:3 (1 cement: 3 sand) and taking out surface grains by mechanical arrangement or applying second coat by mechanical means including cost of all material, labour, and T and P including all lead, lift and scaffolding etc. complete.				
				138.62	Sqm	₹ 314.00	₹ 43,526.68
28	13.8	6 mm cement plaster	6 mm cement plaster of mix :				
				90	Sqm	₹ 144.00	₹ 12,960.00
29	13.27	Mesh in plaster	Providing and fixing chicken mesh as per ISI specification and in the required width with 50mm long Bombay nails on vertical and horizontal junctions of RCC and brick wall including scaffolding and all lead and lift etc. complete before plastering upt 10 meter height.				
(i)	13.27.1	Chicken mesh in plaster	G.I. chicken mesh as per ISI specification and in the required width with 50mm long Bombay nails before plastering upt 10 meter height.				
				80	Sqm	₹ 62.00	₹ 4,960.00
30	11.75	Granite door frame	Providing and fixing 16mm thick gang saw cut mirror polished premoulded and prepolished machine cut Granite of approved shade, colour and texture of Granite Door frame. in cement mortar 1:3 (1 cement :3 sand) including pointing with an admixture of pigment to match the shade including fixing of granite stone door frame with epoxy resin based adhesive including secured to the backing by means of cramps, drilling of hole with rawl plugs and screws 75mm long cleaning etc. complete. Including rubbing, curing, moulding and polishing edges to give high glossy finish and drilling of hole for fixing stainless steel hinges, aldrop, towerbolletc complete at all levels as per instruction of Engineer-in-Charge.				
(i)	11.75.1	100mm thick wall	Granite Door frame for 100mm thick wall Thickness.				
				25	Rmt	₹ 1,010.00	₹ 25,250.00
(ii)	11.75.2	200mm thick wall	Granite Door frame for 200mm thick wall Thickness.				
			Public Toilet				
			Door-1	6			
				6	Rmt	₹ 1,512.00	₹ 9,072.00
31	9.19	Flush door shutters non decorative type 1st class hard wood and well matched teak 3 ply	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) non-decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters of such as duro board, century or equivalent make.				
	9.19.1	35 mm butt hinges	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.				
				21.6	Sqm	₹ 1,870.00	₹ 40,392.00
32	9.134	Laminated sheet	Providing and Fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt / shede finish with high density protective surface layer and reverse side of adhesive bonding qualityconforming to IS : 2046 Type S including cost of adhesive of approved quality.				
	9.134.2	1.0 mm	1.0 mm thick.				
				43.2	Sqm	₹ 691.00	₹ 29,851.20
33	9.66	S.S. tower bolt	Providing and fixing ISI marked stainless steel tower bolt black finish, (Barrel type) with necessary screws etc. complete :				
	9.66.1	250	250 x10 mm				
				10	each	₹ 148.00	₹ 1,480.00
34	9.68	S.S. door latches	Providing and fixing ISI marked stainless steel door latches with screws etc. complete :				
	9.68.1	300 mm	300x20x6 mm				
				20	each	₹ 211.00	₹ 4,220.00

35	9.69	S.S. handles	Providing and fixing ISI marked stainless steel handles with necessary screws etc. complete :				
	9.69.1	125 mm	125 mm				
				20	each	₹ 60.00	₹ 1,200.00
36	9.73	S.S. butt hinges	Providing and fixing IS : 12817 marked stainless steel butt hinges with stainless steel screws etc. complete :				
	9.73.1	125mm	125x64x1.90 mm				
				20	each	₹ 67.00	₹ 1,340.00
37	9.76	Stainless steel hanging type floor	Providing and fixing Stainless steel hanging type floor door stopper with necessary screws, etc. complete.				
				10	each	₹ 103.00	₹ 1,030.00
38	9.43	M.S. grills and windows	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.				
(i)	9.43.2	Fixed to openings /wooden frames	Fixed to openings /wooden frames with rawl plugs screws etc.				
				45	kg	₹ 128.00	₹ 5,760.00
39	10.25	Stainless steel railing	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc. including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete i/c fixing the railing with necessary accessories and stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge. (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)				
				35	Kg.	₹ 582.00	₹ 20,370.00
40	10.27	Glass panes/ steel sheet/ fibre sheet	Providing and fixing glass panes/ steel sheet/ Fibre sheet with putty and glazing clips in steel doors, windows, clerestory windows all complete.				
	10.27.2	5.50 mm glass	With 5.5 mm thick glass panes.				
				3	Sqm	₹ 873.00	₹ 2,619.00
41	11.29.1.1	Granite wall lining (Polished)	Granite work gang saw cut (polished and machine cut) of thickness 18mm for wall lining (veneer work), backing filled with a grout of average 12 mm thick in cement mortar 1:3 (1 cement: 3 sand) including pointing with white cement mortar 1:2 (1 white cement: 2 marble dust) with an admixture of pigment to match the marble shade: (To be secured to the backing by means of cramps, which shall be paid for separately).				
				1.62	Sqm	₹ 2,919.00	₹ 4,728.78
42	11.33	Polished Granite Stone	Providing and laying Granite stone flooring in required design and patterns in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry admixed with pigment of matching shade including rubbing, curing and polishing and as directed by the Engineer-in-Charge Granite stone slab Dark Black. Dark Red, White or equivalent,				
	11.33.1	Flame finish	Flamed Finish Granite				
				24.26	Sqm	₹ 2,542.00	₹ 61,668.92
43	11.34	Granite work in riser steps, skirting, dado and pillars	Granite stone work 18mm thick of any colour in riser of steps, skirting, dado and pillars laid on 12 mm average thick cement mortar 1:3 (1 cement:3 sand) and jointed with white cement slurry mixed with pigment to match the shade of slab.				
				1.80	Sqm	₹ 3,413.00	₹ 6,143.40
44	11.40	Edge moulding of stone work	Providing edge moulding to 18mm thick marble stone counters, Vanities, window sills etc. including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge.				
	11.40.2	Granite work.	Granite work.				
				16.00	Meter	₹ 269.00	₹ 4,304.00

45	11.64	Stone slab in urinal partitions	Providing and fixing stone slab table rubbed on both faces edges rounded and polished of size as required and 1.8 cm thick fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement: 2 sand: 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in charge and finished smooth.				
	11.64.2	Granite Stone	Granite Stone of approved shade.				
				1.62	Sqm	₹ 3,422.00	₹ 5,543.64
46	11.78	Vitrified floor tiles multi charged	Providing and laying vitrified floor tiles Multi/Double charged (Minimum top layer thickness 2.0mm) Neno Polished self design, in different size with water absorption less than 0.05% and conforming to IS:15622 of approved make in all colours & shades, quality/premium quality in flooring laid on 12mm thick cement mortar 1:4 (1 cement :4sand) including grouting the joints with white cement and matching pigments etc. complete				
	11.78.1.1	600X600	Size 600X600mm thickness 9-10mm				
				175	sqm	₹ 1,104.00	₹ 1,93,200.00
47	13.41	White cement based putty	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, Like birla white /JK white or equivalent, over the plastered wall surface to prepare the surface even and smooth i/c all cost of material, labour and scaffold etc in all position complete.				
			Total area				
				115.16	Sqm	₹ 74.00	₹ 8,521.84
48	13.54	Deluxe multi surface paint	Finishing walls with Deluxe Multi surface paint system for interiors and exterior using primer as per manufacturers specifications :				
(i)	13.54.2	Painting steel work	Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @0.90 ltr/10 sqm over an under coat of primer applied @ 0.80 ltr/ 10 sqm of approved brand or manufacture				
				3.6	Sqm	₹ 71.00	₹ 255.60
(ii)	13.54.3	Two or more coats	Two or more coats applied @1.25 ltr/10 sqm. Over and including one coat of Special primer applied @07.75 ltr/10 sqm.				
				301.97	Sqm	₹ 81.00	₹ 24,459.57
49	13.85	Acrylic emulsion paint	Finishing walls with 100% Premium acrylic emulsion paint having VOC less than 50 gm/litre and UV resistance as per IS 15489:2004, Alkali & fungal resistance, dirt resistance exterior paint of required shade (Company Depot Tinted) with silicon additives. New work (Two or more coats applied @ 1.43 litre/ 10 sqm. Over and including priming coat of exterior primer applied @ 0.90 litre/10 sqm.				
				138.62	Sqm	₹ 101.00	₹ 14,000.62
50	21/21.1	Aluminium work for doors, windows, ventilators & partitions	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :				
(a)	21.1.1	Fixed	For fixed portion.				
i	21.1.1.2	Powder coated	Powder coated aluminium (minimum thickness of powder coating 50 micron)				
				100	kg.	₹ 416.00	₹ 41,600.00
(b)	21.1.2	Openable	For shutters of doors, windows and ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately).				
i	21.1.2.2	Powder coated	Powder coated aluminium (minimum thickness of powder coating 50 micron)				
				45	kg.	₹ 484.00	₹ 21,780.00

52	22.7	Water proofing treatment brick coba	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations:				
			a) Applying a slurry coat of neat cement using 2.75 kg/sqm. of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment.				
			b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs				
			c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge.				
			d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3mm deep.				
			e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge : (with 5 years service guarantee)				
			With average thickness of 120mm and minimum thickness at khurra as 65 mm.				
				80	sqm	₹ 885.00	₹ 70,800.00
				TOTAL OF CIVIL WORK			₹ 20,88,750.78
SANITARY AND WATER SUPPLY							
53	25.3	Wall Hung WC	Providing and fixing white vitreous china European Wall hung Anti germ Fluoro-Polymer Coated water closet of approved shape with soft closing seat cover, and 7.2 litre Low level slim dual flushing, PP (Poly Propylene) made 80 mm thick concealed flushing cistern, flushing capacity 3 litre/6 litre, with all fittings and fixtures complete including cutting and making good the wall and floors wherever required.				
	25.3.3	Size 360 x 580 x 360mm	Anti germ Fluoro-Polymer Coated (Nano coating) Wall hung water closet size 360 x 500 x 330mm with solid poly propylene made, soft closing seat cover (Premium Range)	10	each	₹ 21,099.00	₹ 2,10,990.00
54	17.58	Unplasticised rigid PVC soil and waste pipes	Providing and fixing unplasticised Rigid PVC soil and waste pipes conforming to IS: 13592 Type B including jointing with seal ring conforming to IS : 5382 leaving 10mm gap for thermal expansion. Single socketed pipes for working pressure of 4 kg/sqcm. (minimum wall thickness 3.2mm)				
	17.58.1	17.58.1	75 mm dia	25	meter	₹ 136.00	₹ 3,400.00
	17.58.2	17.58.3	110 mm dia	20	meter	₹ 238.00	₹ 4,760.00
55	17.59	Unplasticised PVC pipe fittings	Providing and fixing unplasticised PVC moulded fittings/ accessories for unplasticised Rigid PVC soil and waste pipes conforming to IS: 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.				
a	17.59.1		Coupler				
b	17.59.1.1		75 mm	30	Each	₹ 117.00	₹ 3,510.00
c	17.59.1.2		110 mm	25	Each	₹ 154.00	₹ 3,850.00
d	17.59.3		Single tee with door				
e	17.59.3.1		75x75x75 mm	25	Each	₹ 219.00	₹ 5,475.00
f	17.59.3.2		110x110x110 mm	31	Each	₹ 346.00	₹ 10,726.00
g	17.59.5		Bend 87.50				
h	17.59.5.1		75 mm	23	Each	₹ 117.00	₹ 2,691.00
i	17.59.5.2		110 mm	30	Each	₹ 172.00	₹ 5,160.00
56	25.12	Flat Back Half Stall Sensor Urinal :	Providing and fixing white vitreous china Flat Back Anti germ Fluoro-Polymer Coated urinal (Inbuilt spreaders, Inbuilt Bottle trap and inbuilt ceramic Waste coupling)with sensortronic concealed type flushing valve for urinal complete set with installation box with control cock complete including painting of fittings and brackets, cutting and making good the wall and floors wherever required .				

	25.12.1	Size340x325x650 mm	White Vitreous China Anti germ Fluoro-Polymer Coated Urinal Size 340x325x650 mm with sensoric concealed type flushing valve battery & electrical operated type (9V transformer) for urinal complete set with installation box with control cock. (Premium Range)	8	each	₹ 23,927.00	₹ 1,91,416.00
57	25.10	Counter top Wash Basin	Providing and fixing white vitreous china type Anti germ Fluoro-Polymer Coated Wash Basin with 15 mm Table mounted single lever Tall boy basin mixture, (cartridge size 32 mm) 15mm quarter turn angular stop cock, 32 mm C. P. brass made waste coupling length 130mm and 32 mm C.P. Brass Made Bottle Trap size 200x300mm fittings and fixtures complete including Painting offittings and cutting and making good the wall and floors wherever required.				
	25.10.2	Size 530x420x140 mm	white vitreous china type Anti germ fluoro polymer coated counter top wash basin Size 530x420x140mm with tall boy basin mixture, (cartridge size 32 mm). (Premium Range)	10	each	₹ 16,785.00	₹ 1,67,850.00
58	17.83		Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality and colour.				
	17.83.2	Towel rail 600 mm	600mm long towel rail with total length of 645mm, width 78mm and effective height of 88mm, weighing not less than 190gms.	6	each	₹ 459.00	₹ 2,754.00
59	25.56	Toilet paper holder	Providing and fixing in position best Indian C. P. Brass made (0.3 micron Chrome and 10 micron Nickel plated) Toilet paper holder with Flap. (Premium Range)				
				10	each	₹ 1,888.00	₹ 18,880.00
60	17.68	Mirror (Plastic Frame)	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shape with 6 mm thick hard board backing				
	17.68.1	450mm dia.	Circular shape 450mm dia.	6	each	₹ 806.00	₹ 4,836.00
	17.68.4	1500x450 mm	Rectangular shape 1500x450 mm	4	each	₹ 1,311.00	₹ 5,244.00
61	25.58	Glass Self 600mm	Providing and fixing in position best Indian C. P. Brass made (0.3 micron Chrome and 10 micron Nickel plated) Glass Self-size 600mm with toughened glass (Premium Range)	7	each	₹ 1,934.00	₹ 13,538.00
62	25.19	Bib cock	Providing and fixing in position best Indian (bonut size 24mm, ceramic disc size 19mm andmin. body thickness 2mm, nickel plating 0.10 micron and chrome plating 0.3 micron, quarter turn)Bib cock. (Premium Range)				
				30	each	₹ 2,071.00	₹ 62,130.00
63	25.21	Concealed stop cock	Providing and fixing in position best Indian (bonut size 24mm, ceramic disc size 19mm and min. body thickness 2mm, nickel plating 0.10 micron and chrome plating 0.3 micron, quarter turn) Concealed stop cock. (Premium Range)				
				8	each	₹ 2,015.00	₹ 16,120.00
64	25.20	Angular stop cock	Providing and fixing in position best Indian (bonut size 24mm, ceramic disc size 19mm andmin. Body thickness 2mm, nickel plating. 10 micron and chrome plating 0.3 micron, quarter turn) Angular stop cock. (Premium Range)				
				14	each	₹ 1,573.00	₹ 22,022.00
65	25.18	Pillar cock	Providing and fixing in position best Indian (bonut size 24mm, ceramic disc size 19mm andmin. Body thickness 2mm, nickel plating 0.10 micron and chrome plating 0.3 micron, quarter turn) Pillar cock. (Premium Range)				
				16	each	₹ 2,326.00	₹ 37,216.00
66	25.44	Flush valve 40 mm (dual)	Providing and fixing in position best Indian Auto Closing 40mm Dual Flow (3.0/6.0 liter) Flush valve (for W. C. European and Wall Hung Type) concealed type (with DECOL technology/ cartridge). (Premium Range)	8	each	₹ 4,251.00	₹ 34,008.00
67	25.46	Faucet Wash Basin	Providing and fixing in position best Indian Sensoric Sensor Faucet for Wash Basin use only. (Premium Range)	8	each	₹ 9,734.00	₹ 77,872.00

68	25.47	Faucet For Urinal	Providing and fixing in position best Indian Sensotronic Sensor Faucet For Urinal use only. (Premium Range)	8	each	₹ 14,287.00	₹ 1,14,296.00
69	25.48	Faucet wall mounted	Providing and fixing in position best Indian Sensotronic Sensor concealed type Faucet For Wall Mounted Water Closet use only. (Premium Range)	9	each	₹ 12,800.00	₹ 1,15,200.00
70	25.54	Soap dispenser	Providing and fixing in position best Indian C. P. Brass made (0.3 micron Chrome and 10 micron Nickel plated) Soap Dispenser with Metallic Bottle. (Premium Range)	10	each	₹ 3,653.00	₹ 36,530.00
71	25.37	Non-return valve	Providing and fixing in position best Indian Health Faucet with 8mm dia 1 meter long Flexible Tube and wall bracket with N. R. V. (non-return wall).(Premium Range Sanitary Ware)	10	each	₹ 1,818.00	₹ 18,180.00
72	18.6	CPVC pipes internal work	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.				
	18.6.2	Concealed	Concealed work including cutting chases and making good the walls etc.				
	18.6.2.1	15mm	15mm dia.	20	metre	₹ 207.00	₹ 4,140.00
	18.6.2.2	20mm	20mm dia.	30	metre	₹ 234.00	₹ 7,020.00
	18.6.2.3	25 mm	25 mm dia.	15	metre	₹ 288.00	₹ 4,320.00
	18.6.2.4	32mm	32mm dia.	45	metre	₹ 360.00	₹ 16,200.00
73	18.7	CPVC pipes for external work	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings. This included jointing of pipes and fittings with one step CPVC solvent cement, trenching, refilling and testing of joints complete as per direction of Engineer-in- Charge. External Work				
	18.7.1	18.9.1	15 mm nominal outer dia .Pipes.	20	metre	₹ 122.00	₹ 2,440.00
	18.7.2	18.9.2	20 mm nominal outer dia .Pipes.	30	metre	₹ 141.00	₹ 4,230.00
	18.7.4	18.9.4	32 mm nominal outer dia .Pipes.	15	metre	₹ 238.00	₹ 3,570.00
	18.7.5	18.9.5	40 mm nominal outer dia .Pipes.	16	metre	₹ 324.00	₹ 5,184.00
74	26.10	Gun metal gate valve	Providing, installation, testing and commissioning of gun metal valves of following sizes as required.				
	26.10.4	50 mm dia	25 mm	20	each	₹ 1,620.00	₹ 32,400.00
	26.10.5	25 mm dia	32mm	30	each	₹ 810.00	₹ 24,300.00
75	18.14	Ball float valve brass	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :				
	18.14.1	15mm	15mm	20	each	₹ 316.00	₹ 6,320.00
	18.14.2	20mm	20mm	15	each	₹ 431.00	₹ 6,465.00
76	18.54	Enclosed type water meter bulk type	Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts, nuts, rubber insertions etc. (The tail pieces if required will be paid separately) :				
	18.54.1	80 mm dia	80 mm dia	6	each	₹ 3,548.00	₹ 21,288.00
77	19.1	Glazed stoneware pipes SP-1	Providing, laying and jointing glazed stoneware pipes class SP-1 A' with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete : Excavation to be paid separately				
		19.1.2	150 mm diameter	28	each	₹ 260.00	₹ 7,280.00
78	19.2	Cement concrete 1:5:10 all-round S.W. pipes	Providing and laying cement concrete 1:5:10 (1 cement : 5sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design.				
	19.2.2	150 mm	: 150 mm diameter S.W pipe.	28	metre	₹ 580.00	₹ 16,240.00
79	19.7	S.W. gully trap	Providing and fixing square-mouth S.W. gully trap grade 'A' complete with C.I. grating brick masonry chamber with watertight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design : With Modular Bricks class designation				
	19.7.3	19.7.3	180x150 mm size P type.				

23	16		Supplying and fixing rigid steel conduit ISI marked along with the accessories on surface including painting etc. as required				
	16.2		H.G. Conduit 25 mm, wall thickness-1.6mm	7	Meter	₹ 124	₹ 868
	16.3		H.G. Conduit 32 mm, wall thickness-1.6mm	7	Meter	₹ 180	₹ 1,260
24	18.1		Supplying and fixing factory fabricated hot dip galvanized switch box for normal flush type accessories of minimum 1.2 mm (18 SWG gauge) thickness with earth terminal stud with nut and washer, with 3 mm thick synthetic phenolic resin bonded laminated sheet conforming to grade P-I of IS:2036-1974 on surface / concealed including painting etc. as required as per specification :				
			FOR SURFACE/CONCEALED				
	18.1.1		MS Box 100 mm X 100 mm X60mm deep	3	Each	₹ 98	₹ 294
	18.1.2		MS Box 200 mm X 150 mm X 60 mm Deep	2	Each	₹ 181	₹ 362
	18.1.5		MS Box 200 mm X 250 mm X 60 mm Deep	1	Each	₹ 271	₹ 271
	18.1.7		MS Box 300mm X 380 mm X 60 mm Deep 1.6mm(16swg)	1	Each	₹ 594	₹ 594
			METALLIC SWITCH BOXES & MODULAR BOXES				
25	18.2		Supplying and fixing of approved make modular type G.I. metal box 1.2mm minimum thick and depth 50mm for single row boxes and 60mm depth for two/three row boxes earth terminal stud with nut and washer with modular base and cover plate including fixing in concealed etc. as required for:-				
	18.2.1		1 Or 2 Module	2	Each	₹ 182	₹ 364
	18.2.2		3 Module	2	Each	₹ 216	₹ 432
	18.2.3		4 Module	3	Each	₹ 244	₹ 732
	18.2.4		6 Module	4	Each	₹ 309	₹ 1,236
	18.2.5		8 / 9 Module	2	Each	₹ 373	₹ 746
	18.2.6		12 Module	4	Each	₹ 502	₹ 2,008
	18.2.8		18 Module	1	Each	₹ 642	₹ 642
			WIRING IN EXISTING CONDUIT / PVC CASING - N - CAPPING WITH COPPER CONDUCTOR				
26	19.1		Supplying and drawing single core PVC insulated cable FRLS with copper multi strand conductor ISI marked in existing rigid PVC casing and capping/conduit in surface or concealed as per specification.				
	19.1.1		1 X 1.5 sq mm				
	19.1.1		(a) 1 X 1.5 sq mm	70	Per Mtr	₹ 19	₹ 1,330
	19.1.2		(b) 2 X 1.5 sq mm	15	Per Mtr	₹ 38	₹ 570
	19.1.3		(c) 3 X 1.5 sq mm	15	Per Mtr	₹ 56	₹ 840
	19.1.2		1 X 2.5 sq mm				
	19.1.2.1		(a) 1 X 2.5 sq mm	200	Per Mtr	₹ 30	₹ 6,000
	19.2.2		(b) 2 X 2.5 sq mm	15	Per Mtr	₹ 54	₹ 810
	19.1.3		1 X 4.00 sq mm				
	19.1.3.1		(a) 1 X 4.00 sq mm	150	Per Mtr	₹ 41	₹ 6,150
27	20.1		Wiring for sub-mains with PVC insulated cable FRLS with copper multi strand conductor ISI marked in surface rigid steel ISI marked conduit of suitable size (conduit included) including accessories long neck threaded type, connection painting etc, as required as per specification. (Refer General Notes for Classification of Conduit Wiring Point No.10)				
	20.1.1		2 WIRE SUB MAIN				
	20.1.1.1		a) 2.5 sq mm cable in 20 mm conduit	35	Metre	₹ 208	₹ 7,280
	20.1.1.2		4.0 sq mm cable in 25 mm conduit	35	Metre	₹ 238	₹ 8,330
	20.1.4		4 WIRE SUB MAIN				
	20.1.4.2		b) 4.0 sq mm cable in 25 mm conduit	35	Metre	₹ 335	₹ 11,725
	20.1.4.3		c) 6.0 sq mm cable in 25 mm conduit	30	Metre	₹ 457	₹ 13,710
28	23.1		Wiring for sub-mains with PVC insulated cable FRLS with copper multi strand conductor ISI marked in recessed/concealed rigid PVC conduit (HMS) ISI marked of suitable size (conduit included) including 2mm thick accessories, connection etc, as required as per specification. (Refer General Notes for Classification of Conduit Wiring Point No.10)				
	23.1.1		2 WIRE SUB-MAIN				
	23.1.1.1		2.5 sq mm cable in 20 mm conduit	35	Metre	₹ 175	₹ 6,125
	23.1.1.2		4.0 sq mm cable in 25 mm conduit	35	Metre	₹ 219	₹ 7,665
	23.1.4		4 WIRE SUB-MAIN				
	23.1.4.2		4.0 sq mm cable in 25 mm conduit	35	Metre	₹ 295	₹ 10,325
	23.1.4.3		6.0 sq mm cable in 25 mm conduit	35	Metre	₹ 398	₹ 13,930

29	24.1	Rewiring in existing surface/concealed rigid steel/PVC nonmetallic conduit with PVC insulated cable with copper multi strand conductor FRLS of ISI marked and other materials as required including replacement of wornout/damaged/missing material, painting etc. complete as per specification. This shall include all work, arrangement required for wiring but shall exclude switch, ceiling rose, fitting etc.				
	24.1.1	Light/fan/3 Pin 6 Amp socket outlet on separate board/call bell/buzzer points :-				
	24.1.1.1	Short point	3	Each	₹ 184	₹ 552
	24.1.1.2	Medium point	11	Each	₹ 380	₹ 4,180
	24.1.1.3	Long point	7	Each	₹ 585	₹ 4,095
30	24.2	3 Pin 6 Amp socket outlet point on same board	11	each	₹ 38	₹ 418
31	27.1	Supplying of ISI Marked and approved make of Moulded Case Circuit Breaker (MCCB) suitable for 3 phase,3 pole, 50 Hz, 415 Volts, AC supply with respective interrupting capacity (KA) at 415 Volts cited against their range standard conforming to IS – 8828				
	27.1.3	MCCB 25 to 100A, 25kA, 3P				
		MCCB 25kA current rating, 3P -25 to 100Amp & 80% - 100% adjustable	1	Each	₹ 7,369	₹ 7,369
	27.8	Supply of ISI marked and accepted standard of miniature circuit breaker (MCB) of 'C' series with short circuit indication, suitable for 240/415 Volts,50 Cycle, 10 kA/15 kA Value AC supply conforming to IS : 8828 : 1996, IEC : 60898 :2002 & 60947-2 but without enclosures :-				
	27.8.1	SINGLE POLE (SP)				
	27.8.1.2	MCB SP 6Amp to 32Amp 10kA rating	18	Each	₹ 263	₹ 4,734
	27.8.2	DOUBLE POLE (DP)				
	27.8.2.2	MCB DP 6Amp to 32Amp 10kA rating	3	Each	₹ 887	₹ 2,661
	27.8.3	FOR TRIPLE POLE (TP)				
	27.8.3.2	MCB TP 6Amp to 32Amp 10kA rating	2	Each	₹ 1,411	₹ 2,822
		FIXING OF SFUS, DBs, BUSBAR, MCCBs, MCBs, ISOLATORS & RCBOs				
32	28.4	Fixing of MCB /MCCB/ Isolator in sheet steel enclosure as required as per accepted practice, including mounting on busbar and cable connection etc. complete (Labour only)				
	28.4.1	MCB / Isolator SP/DP	25	Each	₹ 27	₹ 675
	28.4.2	MCB /MCCB Isolator TP /TPN/FP	25	Each	₹ 28	₹ 700
33	29.2	Supplying and fixing as per specification Polycarbonate Batten Holder / Angle Holder of approved make with necessary materials complete	2	Each	₹ 29	₹ 58
34	29.9	Supply and fixing as per specification Switch of approved make ISI marked with necessary material complete.				
	29.9.1	6Amp SP 250 Volt deluxe (piano key type)	15	Each	₹ 18	₹ 270
	29.9.2	16/20Amp SP 250 Volt deluxe (piano key type)	7	Each	₹ 68	₹ 476
	29.9.3	6Amp SP 250 Volt two way F/T	10	Each	₹ 21	₹ 210
	29.9.4	6/10Amp SP 250 Volt modular switch	10	Each	₹ 48	₹ 480
35	29.10	Supply and fixing as per specification socket outlet of approved make & ISI marked with necessary material complete				
	29.10.1	6Amp 250 Volt 3 Pin flush type	7	Each	₹ 50	₹ 350
	29.10.2	16Amp 250 Volt 3 Pin flush type	2	Each	₹ 54	₹ 108
	29.10.3	10Amp 250 Volt 3 Pin modular type	4	Each	₹ 98	₹ 392
	29.10.4	10/16/20Amp 250 Volt 3 Pin modular type	4	Each	₹ 140	₹ 560
		Electric ceiling fan				
36	30.1	Supplying, erection and testing of approved make electric Ceiling fan of double ball bearing complete with standard down rod, canopy, hanging shackle, Aluminium blades, without regulator, A.C. 230-250 volts including connections with all necessary material complete of approved as required confirming to IS :374/2019 with upto date amendments.				
	30.1.2	Ceiling Fan (ISI marked)-1200 mm Sweep, with minimum air delivery 210 m ³ /min and service value ≥ 4.00 as per BEE..	4	Each	₹ 2,292	₹ 9,168
37	30.6	Supplying, erecting and testing of approved make Exhaust Fan heavy duty with mounting frame, blades AC 230-250 complete connection and including, frame bolt/ Anchor hole fastners etc. complete finished of approved as required.				
	30.6.1	300mm sweep 900 RPM	10	Each	₹ 2,571	₹ 25,710
		LUMINAIRES				
		LED tube rod fixture				

38	31.3		Supply and fixing Led tube rod comprising of LED tube with nonintegral/integral driver, upto 6500K color temp having 40000 burning hrs life with minimum @ L 70, system lumen output should be minimum with system efficacy> 100 lm/Watt. LED driver PF> 0.95 & THD < 20%. The colour rendering index of LED light should be more than 70. Submission LM 79-08/IS16106 (2012), IEC60598, IEC61347i/c connection wire, testing etc. to complete the job.				
	31.3.2		Tube light LED 1 X 12W	10	Each	₹ 605	₹ 6,050
39	37.27		Providing and fixing G.I. tape 20mm X 3mm thick on parapet and surface of wall of lightening conductor as required (for Horizontal runs)	50	Meter	₹ 74	₹ 3,700
40	37.28		Providing and fixing G.I. tape 20mm X 3mm thick on parapet and surface of wall of lightening conductor as required (for Vertical runs)	80	Meter	₹ 85	₹ 6,800
			Total SOR items				
						TOTAL OF ELECTRICAL	₹ 3,08,975
						TOTAL	₹ 36,09,633
<p>ESTIMATE BASED ON :- (i) APPLICABLE S.O.R of Building works Chief MADHYA PRADESH - P.W.D. in force from January, 1st 2024</p>							

DETAILED ESTIMATE

Name of PROJECT :- DEVELOPMENT OF SHANI TEMPLE AND SURROUNDING AREA , UJJAIN

Name of WORK :- PARKING DEVELOPMENT

SNo	Chapter No. /Item No.	Description	Qty	Unit	Rate	Amount
1	2/2.1	Surface dressing of the ground including removing vegetation and inequalities not exceeding 15 cm deep and disposal of ubbish, lead up to 50 m and lift up to 1.5 m. in all kinds of soil.				
			18.00	100/sq m.	₹ 803.00	₹ 14,454.00
2	2/2.6	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed.				
	2.6	All kinds of soil				
		50% of soil excavation	2258.06	Cum	₹ 147.00	₹ 3,31,935.41
4	2.24	Filling available excavated earth (excluding hard rock/Ordinary rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.				
			2242.22	cum	₹ 95.00	₹ 2,13,011.28
5	2.26	Supplying and filling in plinth with crusher stone dust / coarse sand under floors including, watering, ramming and compacting in layers not exceeding 20cm in depth and dressing complete Note: - Maximum thickness of this layer shall be 20 cm.				
	2.26	Crusher Stone Dust	180.00	cum	₹ 672.00	₹ 1,20,960.00
6	2.27	Supplying and filling in plinth under floors including watering ramming consolidating in layers not exceeding 20cm in depth and dressing complete.				
	2.27.1	With hard muram having CBR >12 % at under floors including watering, ramming and compacting (minimum compaction 95% of MDD) in layers not exceeding 20cm in thickness and dressing complete. (Note:- maximum thickness of this layer to be provided shall be 30cm)				
		Moorum/Hard copra	540.00	cum	₹ 393.00	₹ 2,12,220.00
7	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level :				
(a)	4.1.1.4	M-10Nominal (Mix-1 Cement : 3 sand : 6 graded stone aggregate)	184.32	Cum	₹ 3,890.00	₹ 7,17,004.80
8	5.1	Providing and laying in position specified grade of reinforced cement concrete (with 20mm nominal size graded stone aggregate) excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
	5.1.1	M-20 Grade Concrete	191.52	Cum	₹ 6,153.00	₹ 11,78,422.56
7	PWD Road and Bridge 6.8	Add extra in Item No.6.3, 6.4, 6.6 & 6.10 above for the cost of steel in dowel bar and tie rod including craddle, laps etc. complete required as per design.				
(I)		Mild steel				
		Expansion joint	0.5	MT		
(II)		Tor steel			₹ 63,587.00	
		logitudinal Joint	0.5	MT		
			1.00	MT	₹ 68,297.00	₹ 68,297.00
9	5.9	Centering and shuttering in cluding strutting, propping etc. and removal of form for:				
(ii)	5.9.2	Walls (any thickness) including attached pilasters butteresses, plinth beams and string courses etc.				
	5.9.2.1	up to plinth level.				
			202.7 Sqm		219	44391.3

10	5.16	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding including cost of binding wire all wastages and overlaps, couplers (overlaps shall be provided as per requirement of IS 13920 for ductile detailing IS 456 RCC Design & SP 34 Reinforcement detailing) etc. complete . (Note:- 1. Spacer bars (chairs) shall be paid separately as shown in the drawing and as per direction of engineer in charge. 2. No extra payment shall be done for overlaps and/or couplers. 3.Couplers shall be conforming to IS code on "Reinforcement Couplers for Mechanical Splices of Bars for Concrete Reinforcement - Specification")				
	5.16.6	Thermo-Mechanically Treated bars. (TMT/TMX) FE 500 or more conforming to IS 1786				
		Thermo-Mechanically Treated bars				
		Steel,50 Kg. Per/Cu. M. Of R.C.C.	9576	KG	₹ 80.00	₹ 7,66,080.00
13	11.40	Providing edge moulding to 18mm thick marble stone counters, Vanities, window sills etc. including machine polishing to edge to give high gloss finish etc. complete as per de				
	11.40.2	GRANITE WORK ON PLANTER TOP	144.00	Meter		
			144.00	Meter	₹ 269.00	₹ 38,736.00
14	11.29	Providing and laying gang saw cut 18 mm thick,mirror polished premoulded (wherever required)and pre polished machine cut granite stonework inflooring of required size shape of approved shade,color and texture in flooring laid over 20 mmthick base of cement mortar 1:4 (1 Cement: 4sand) including grouting the joints with whitecement mixed with matching pigments epoxy touch ups etc. complete as per direction of Engineer-in-Charge.				
	11.29.1	Area of slab over 0.50 sqm				
	11.29.1	Fine grained granite dark Black/dark Red/ White or equivalent with self design/ pattern/crystals of other colors of glitter				
			21.60	Sqm	₹ 2,919.00	₹ 63,050.40
13.13		Providing sand faced plaster upto 10meter hight above ground level concrete or brick masonry surfaces in two coats, base coat of 13 mm thick in cement mortar 1:4 (1 cement: 4 sand),clearing the surface by combing it and finishing coat of 8 mm. thick in cement mortar 1:3 (1 cement: 3 sand) and taking out surface grains by mechanical arrangement or applying second coat by mechanical means including cost of all material, labour, and T and P including all lead, lift and scaffolding etc. complete.				
15			115.20	sqm	₹ 314.00	₹ 36,172.80
16	11.72	Providing and laying factory made chamfered edge Cement Concrete paver blocks of required colour strength, thickness pattern, surface texture smooth/rough) and size/shape, conforming to 15658-2006 IS marked made by table vibratory method using PU mould, laid in required colour and pattern over 50mm thick compacted bed of				
		stone dust, compacting and proper embedding / laying of inter locking paver blocks into the bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand including locking edges in 0.30 mm with courtyards, porch with M 15 cement concrete in footpath, parks, lawns, drive ways or light traffic parking etc. complete as per manufacturer's specifications and direction of Engineer-in-Charge.				
	11.72.1	80 mm thick C.C. paver block of M-35 grade	1800.00	sqm.	₹ 805.00	₹ 14,49,000.00
12/12.32		Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.				
17	12.32.2	110mm diameter	36	Meter	₹ 238.00	₹ 8,568.00
13.51		Finishing walls by only mechanical or manual means with textured exterior paint of required shade: New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including priming coat of exterior primer applied @ 2.20kg/10 sqm				
18			57.60	Sqm	₹ 132.00	
			TOTAL			7603.2
						5269906.748

ESTIMATE BASED ON :-
GOVERNMENT OF MADHYA PRADESH PUBLIC WORKS DEPARTMENT SCHEDULE
BUILDING WORKS IN FORCE FROM 15th September 2022
ISSUED BY :- PROJECT DIRECTOR M.P. Public Works Department (P.I.U.) BHOPLUR
DEVELOPMENT DEPARTMENT Govt. OF M.P.
AND AMMENDMENT ISSUED TIME TO TIME



DETAILED ESTIMATE

Name of Work :- LANDSCAPE WORK

Name of Project :-DEVELOPMENT OF SHANI MANDIR , UJJAIN

1	2/2.1	Surface dressing of the ground including removing vegetation and inequalities not exceeding 15 cm deep and disposal of rubbish, lead upto 50 m and lift upto 1.5 m.				
			70	100/sq m	₹ 803.00	₹ 56,210.00
			4520	Cum	₹ 186.00	₹ 8,40,720.00
3	2/2.27	Supplying and filling in plinth under floors including watering ramming consolidating in layers not exceeding 20cm in depth and dressing complete.				
	2.26.1	Crusher Stone Dust	350.00	Cum		
			350	Cum	₹ 672.00	₹ 2,35,200.00
5	4/4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
			382	Cum	₹ 3,890.00	₹ 14,85,980.00
	5.1.1	M-20 Grade Concrete				
			44.84	Cum	₹ 6,153.00	₹ 2,75,900.52
7	5.9	Centering and shuttering in cluding strutting, propping etc. and removal of form for:				
			216.80	Sqm	₹ 219.00	₹ 47,479.20
8	6.5	Brick work with well brunt open bhatta, bricks, crushing strength not less than 25kg /cm ² and water absorpt ion not more than 20% in foundation and plinth i/c curing etc complete.				
	6.5.2	Cement mortar 1:6 (1 cement : 6 sand)				
9	13/13.3	20 mm cement plaster of mix :				
	13.3.2	1:6 (1 cement : 6 sand)				
			127.2	Sqm	₹ 225.00	₹ 28,620.00
10	11.22	Providing and fixing 18mm thick gang saw cut mirror polished (premoulded and prepolished) machine cut for kitchen platforms, vanitycounters, window sills , facias and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing moulding and polishing to edge to givehigh gloss finish wherever required etc. complete at all levels. Samples approved by Engineer-in- Charge.				
	11.22.4	Granite grey/pink/brown with various patterns	23.85	sqm		
			23.85	Sqm	₹ 1,808.00	₹ 43,120.80
11	5.16	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding upto floor level including cost of binding wire, wastage and over laps upto 12mm horizontal/ inclined position of reinforcement bars in slab and beams, plinth, chajjas, lintels, upto 4.5m vertical length of reinforcement in wall columns (over laps shall be provided as per requirement of IS : 13920; IS 456 & SP :34) etc. complete.				
	5.16.6	Thermo-Mechanically Treated bars. (Fe 500 D or more)				
		30 KG PER CUM OF CONCRETE	1345.2	Kg	₹ 80.00	₹ 1,07,616.00

13	11.9	40 mm thick marble chips flooring, rubbed and polished to granolithic finish, under layer 28 mm thick cement concrete 1:2:4 (1 cement : 2 sand : 4 graded stone aggregate 12.5mm nominal size) and top layer 12mm thick with white, black, chocolate, grey yellow or green marble chips of sizes from 7mm to 10mm nominal size laid in cement marble powder mix 3:1 (3 cement : 1 marble powder) by weight in proportion of 2:3 (2 cement marble powder mix : 3 marble chips) by volume including cement slurry etc. complete : (Area of panel not to exceed 2.0 sqm) (Mosaic flooring (top layer 12 mm thick)				
	11.9.2	Light shade pigment with white cement.	70.00	Sqm	₹ 677.00	₹ 47,390.00
	11.9.3	Medium shade pigment with 50% white cement and 50% ordinary cement.	70	Sqm	₹ 620.00	₹ 43,400.00
	11.9.4	White cement without any pigment.	70	Sqm	₹ 620.00	₹ 43,400.00
	11.9.6	Ordinary cement without any pigment	70.00	Sqm	₹ 519.00	₹ 36,330.00
14	11.58	Providing and fixing Glass mosaic tiles at finished plain wall surface of size 20 mm x 20 mm x 4 mm in all colour, design, fixing in customize design as per direction of Engineer-in- Charge. The glass mosaic tiles to be fixed on the wall surface with the help of approved adhesive applied at the rate of 2.5 kg per sqm and grouting of the same. The rate is inclusive of all operation, material and required pattern approved by Engineer-in-Charge:				
		RCC WALL TILE	39.00	Sqm	₹ 1,556.00	₹ 60,684.00
15	11.1	Marble chips skirting (upto 30 cm height) 18 mm thick with under layer 12 mm thick in cement plaster 1:3 (1 cement : 3 sand) : rubbed and polished to granolithic finish, top layer 6 mm thick with white, black, chocolate, grey, yellow or green marble chips of sizes from smallest to 4 mm nominal size laid in cement marble powder mix 3:1 (3 cement : 1 marble powder) by weight in proportion of 4:7 (4 cement marble powder mix : 7 marble chips) by volume : (Mosaic skirting)				
		Light shade pigment with white cement.	70	Sqm	₹ 629.00	44030
		Medium shade pigment with 50% white cement and 50% ordinary cement.	70	Sqm	₹ 601.00	42070.00
		White cement without any pigment.	70	Sqm	₹ 602.00	42140
		Light shade pigment with ordinary cement.	70	Sqm	₹ 579.00	40530
16	13.14	Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers.				
16	13.52	Finishing walls by any mechanical or manual means with Acrylic Smooth exterior paint (Economy Exterior) of required shade including all scaffolding. New work (Two or more coat applied @1.67ltr/10sqm over and including one coat undiluted exterior waterproofing coating @ 2.39 litre/10 sqm with crack bridging ability of upto 0.5mm on horizontal surfaces with an elongation of 150% and water proofing of upto 3 bars on vertical surface				
				sqm	₹ 138.00	9660.00
17	4.12	Extra for providing and mixing water proofing material as per IS standard in cement concrete work quantity as prescribed by the manufacturer.				

		Per bag of 50 kg of cement		sqm	₹ 44.00	3080
18	22.6	Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying : a) After surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. b) Laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm. c) Third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30cm on parapet wall and tucked into groove in parapet all around.				
				sqm	₹ 338.00	23660
		proper embedding/ laying of inter locking paver blocks into the bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand including locking with M15 cement concrete in footpath, parks, lawns, drive ways or light traffic parking etc. complete as per manufacturer's specifications and direction of Engineer-in-Charge.				
	11.72.1	80 mm thick C.C. paver block of M-35 grade				
		Area	3500	sqm.		
			3500	sqm	₹ 656.00	2296000
20	11/11.73	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-Charge).				
		GREEN & PAVERS EDGE	9	Cum		
			2.7	Cum		
			11.7	Cum	₹ 6,097.00	71334.9
21	28.2	Supplying and stacking of good earth at site including royalty if any and carriage (earth measured in stacks will be reduced by 20% for payment). (Total area computrised 3000 sqm.x 0.45depth =1350 cumt.)	1575			
	a	Total qty. of soil and Manure=1350 cumt.				
	b	Qty. of soil=70 %=1350*70/100= 945cumt.				
	c	Qty. of manure of 30% =1350 *30/100= 405 cumt	945	Cum		
			945	Cum	₹ 511.00	482895
22	28.4	Supplying and stacking at site dump manure from approved source, including carriage (manure measured in stacks will be reduced by 8% for payment) : Manure qty. as per item no. 28.20(405	Cum		
			405	Cum	₹ 734.00	297270.00
23	28.9	Mixing earth and sludge or manure in the required proportion specified or directed by the Engineer-in-charge.	3500			
			3500	Cum	₹ 11.00	38500.00
24	28.6	Uprooting weeds from the trenched area after 10 to 15 days of its flooding with water including disposal of uprooted vegetation.				
		Total area	3500	sqm.		

			3500	100/sq m	₹ 151.00	5285
25	28.7	Fine dressing the ground				
			3500	sqm.		
			3500	100/sq m	₹ 113.00	3955
26	28.1	Grassing with selected type of grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn, free from weeds and fit for mowing including supplying good earth, if needed (the good earth shall be paid for separately):				
	28.10.4	With grass Turf.				
		(Total area as per computrised calculation 90 sqm)	3500	sqm.		
			3500	100/sq m	₹ 2,856.00	99960
27	28.13	Preparation of beds for hedging and shrubbery by excavating further 30cm deep of already prepared trench, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20% : one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, levelling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and levelling as directed, within a lead of 50m lift upto 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately).				
		(Total area computrised 1500 sqm.x 0.45 depth =675cumt.)	675	Cum		
			675	Cum	₹ 67.00	45225
28	28.15	Providing and planting different variety of plants of approved quality and sizes as mentioned including making pits of requiredsize at site, refilled with B.C. Soil mixture manuring and pesticide etc. complete (to be paid separately) including watering and 90 days maintenance from the date of final bill as per direction of Engineer-in-Charge complete in all respect (B.C. Mixture paid separately).				
(A)	28.15.1	Bahunia Tomentosa, Beloperone Species, Caselpinnia Pulcherima, Bird of Paradise, Callandra Emarginata, Callandra Hybrida, Cassia Bi flora, Cassia Laevigata, Cestrum Nocturnum, Dombeya Mastersii, Euphorbia Caracasana, Euphorbia Pulcherima, Excorea bi color, Excorea tri color, Ficus Blackii, Ficus Reginold, Ficus Panda, Gardenia, Gulphinia, Jasminoides, Hamelia Pattens, Heliconia, Hibiscus Rosasinensis, Hibiscus Verigated, Hibiscus Viceroy, Jatropha Multifida, Largestomia Indica, Malpighia Coccigera, Murraya Exotica, Murraya Koeniggi, Murraya Sambucum, Mussaenda Erythrophylla, Nerium Oleander, Nyctanthus Arbortristis, Plumbego Capensis, Putranjeeva Roxburghii, Tabernaemontana Coronaria, Tabernaemontana Divaricata, Tecoma Gaudi Chaudi, Tecoma Stans, Thevetia Nerifolia, Thuja Compacta and equivalent plants.				
		Qty.	800			
			800	sq.m.	₹ 80.00	64000
(B)	28.15.2	Allamanda Cathartica, Allamanda Grandiflora, Allamanda Violacea, Begnonia Venustha, Boughan Villas (Variety : Butiana, Lady Mary Bearing, Mahaara, Mohan, Scarlet Queen Variagata, Glabra Formosa, Peruviana Odissi, Partha, Shubhra, Thimma, Spectabilis, L.N. Birla, Refulgens), Clerodendrum Splendens, Clerodendrum Thompsonae, Ipomea Purpurea, Jasminum Grandiflorum, Jasminum Humile (Yellow), Passiflora Caerulea (Rakhi Bel), Petrea Volubilis, Quis Qualis Indica, Tecoma Grandiflora, Veronia Elaegnifolia (Curtain Creeper), Mandvella, Garlic Creeper, Callimitis				
		Qty.	300	each		
			300	each	₹ 50.00	15000.00

(C)	28.15.3	Alpinia Verigated, Alternanthera species, Aspyragus Myerri, Aspyragus Springenii, Aspidistra, Canna (regular, Dwarf), Chlorodendron Inermii, Chlorophytum (Green), Chlorophytum verigated, Coffea Chinensis, Dianella Verigated, Durranta (Goldiana, Green, Verigated), Euphorbia Milli hybrid, Ipomea (Golden leaves), Iresine herbstii, Juniper Prostata, Juniper Africana, Ophiopogon plant, Ophiopogon jaburan, Portulacaria Afra (jade Plant), Schefflera Green, Schefflera verigated, Setcreasea Purpurea, Syngonium (Butterfly) species, Syngonium miniature, Syngonium Dwarf, Syngonium variegated, Tradescantia, Wadelia Trilobata, Zebrina Tradescantia, Pandanas, Spider Lily Black, Spider Lily verigated, Aclypha (Red, Green,Mini), Lantana (Red, Yellow, Purple, White, verigated), Haemalia Mini and similar plants.				
		Qty.	250	each		
			250	each	₹ 50.00	12500
(D)	28.15.5	Any of one from Celosia, Caladium Hybrid, Cockscomb, Cosmos, Gaillardia, Gomphorena, Kochchea, Portulacca, Sunflower Hybrid, Sunflower Single, Tapiocca Variegated (Manihot Esculenta), Vinca, Zinnia Hybrids.				
			36	each		
			36	each	₹ 42.00	1512
29	11.10 ROAD 7 BRIDGE SOR	Planting of Trees and their Maintenance for Five Year Planting of various varieties such as Pipal (Ficus religiosa), Bargad (Ficus benghalensis), Neem (Azadirachta indica), Ashok (Saraca Asoca), Kadam (Neolamarckia cadamba), Aam (Mango), Gulmohar (Delonix regia), Amaltass (Hibiscus rosa-sinensis), Bougainvillea (Bougainvillea glabra), Lantana (Lantana camara) etc. of trees as approved by the Engineer-in-charge by the road side (Avenue trees) in 0.60 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, planting the saplings, backfilling the trench, watering, and maintaining the plants excluding tree guard.				
	(iii)	Minimum Plant Height 1.5 M	60	each		
			60	each	₹ 3,750.00	225000.00
	(iii)	Minimum Plant Height 2.00 M	65	each		
			36	each	₹ 4,250.00	153000.00
	(iv)	Minimum Plant Height 2.50 M	80	each		
			80	each	₹ 4,750.00	380000.00
	(v)	Minimum Plant Height 3.00 M	65	each		
			65	each	₹ 5,750.00	373750.00
30	28.18	Filling mixture of earth and sludge or manure in the desired proportion in trenches, flooding with water and levelling (cost of supplying earth and sludge or manure and mixing excluded). (Qty. of item no. 28.20 (a) =405 cumt.)				
			405	Cum		
			405	Cum	₹ 16.00	6480
31	28.2	Flooding the ground with water including making kiaries and dismantling the same. (Total area as per computrised calculation 90 sqm)				
			500	sqm.		
			500	100/sq m	₹ 102.00	510.00
32	28.23	Preparation of mounds of various size and shape by available excavated /supplied earth in layers not exceeding 20 cm in depth, breaking clods, watering of Each layer, dressing etc. lead upto 50 metre and lift upto 1.5 m complete as per direction of Engineer-in-Charge.				
		Preparation of mounds	100			
			100	CUM	₹ 138.00	13800
33	28.31	treatment of trees Providing and applying Anti Termite treatment of infected areas i/c branches/leaves by spraying chemical emulsion 0.5% (Chloropyriphos 20%EC) concentration through power spray machine (@100ml Chloropyriphos per Tree i/c cost of chemical) and as per the direction of Engineer-in-Charge.				

		Anti termite treatment of trees	500			
			500	CUM	₹ 70.00	35000
34	28.37	Providing and fixing of stone table made of 75mm thick stone slab finished by different numbers of ambry stone and two coats of 124 no sealer coat to prevent from weather including fixing on a pedestal (cost of pedestal to be paid separately)etc. complete as per direction of engineer in charge. Size: length1000mm, width 600mm, legs height 750 mm.				
		stone table	35	each	₹ 7,900.00	276500
35	28.32	Anti Termite treatment of Lawn area through premise 30.5%I.P, one liter premise diluted in 499 litres water and applying solution @1.00 liter solution per sq.m lawn or bed area. (Two application) i/c cost of chemical and as per direction of Engineer-in-Charge				
		lawn area	3500	sqm	₹ 10.00	35000
36	28.25	providing Square Cement Concrete pots of specified size, cast with cement concrete of nominal mix 1:2:4 (1 cement: 2 sand: 4 graded stone aggregate 6 mm nominal size), reinforced with 7 Nos. (3 nos. horizontal and 4 nos. vertical "V" shape) M.S. wires of 3.5 mm diaas per design, including required form work, finishing with cement punning on exposed surface, curing for specified period and stacking in required rows and height, allcomplete as per direction of Engineer-in- Charge. Top inner width 35 cm, outer bottom width 25 cm, total height 35 cm and wall thickness 25.4 mm.				
		number of pots	50	each	₹ 165.00	8250.00
34	11.13 (Road and bridge SOR 2025)	Half Brick Circular Tree Guard, in 2nd class Brick, internal diametre 1.25 metres, and height 1.2 metres, above ground and 0.20 metre below ground Half brick circular tree guard, in 2nd class brick, internal diametre 1.25 metres, and height 1.2 metres, above ground and 0.20 metre below ground, bottom two courses laid dry, and top three courses in cement mortar 1:6 (1 cement 6 sand) and the intermediate courses being in dry honey comb masonry, as per design complete.				
			30	each	₹ 2,488.00	74640.00
35	11.19 (Road and bridge SOR 2025)	Tree Guard with MS Angle Iron and Steel Wire (Providing and fixing tree guard 0.60 metre square, 2.00-metre-high fabricated with MS angle iron 30 x 30 x 3 mm, MS iron 25 x 3 mm and steel wire3 mm dia welded and fabricated as per design in two halves bolted together)				
			30	each	₹ 2,619.00	78570

36	11.24 (Road and bridge SOR 2025)	Tree Shifting and their Maintenance for Five Year Transplantation of Trees including trimming the branches of full-grown tree as per the requirement, giving a wax treatment of the trimmed area of branches, uprooting the tree i/c trimming and transporting the uprooted tree to the specified site of transplantation as directed by the engineer-in-Charge up to 12 Kms. lead including all lifts, transplanting, the uprooted tree by digging a required size of pit, filling it with fresh garden soil and manure as per the requirement & maintaining it for a period of 4 months by watering, weeding, Note:- - Payment shall be made First year 30% Second year 10% third year 10 % fourth year 10% and fifth year 40% for DLP Five Years for the plants survive at that time shall be deducted for plants found dead after Five Years. Note:- (ii) Item no 11.23 & 11.24 shall be monitored and checked by GPS photograph this photograph shall be submitted to department and kept upto defect laibility period.				
	A	Trees having trunk girth upto 1.00 M.	5	each	₹ 30,236.00	151180
	B	Trees having trunk girth more than 1.00 M. upto 1.5 M.	10	each	₹ 32,854.00	328540
	C	Trees having trunk girth more than 1.5 M. to 2.00 M.	5	each	₹ 35,472.00	177360.00
	D	Trees having trunk girth more tha 2.00 M.	10	each	₹ 37,566.00	375660
36	NON-SOR	Providing and laying INLAY WORK with 5mm thick semi precious stone (as approved) as per drawing design in Vietnam White Marble / Any Marble floor/ Wall at any Height, including semi precious stones (of any selected colour) adhesive, cleaning of surface, p				
			300	sqm	₹ 47,000.00	14100000
					TOTAL	24631885.42
					SAY	24632000

DETAIL ESTIMATE						
Name Of Project :- DEVELOPMENT WORKS OF SHANI MANDIR, UJJAIN						
Name Of Work :- BOUNDARY WALL, CIVIL WORKS						
S.No	Chapter No. / Item No	Description	Qty	Unit	Rate	Amount
1	2.6	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottom disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed. (No extra lift is payable if work is done by mechanical means) All kinds of soil	126.341875	Cum	147	18572.25563
2	2.24	Filling available excavated earth (excluding hard rock/Ordinary rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	77.90625	Cum	95	7401.09375
3	20.1	Boring, Providing and installing cast in situ single under reamed piles of specified diameter and length below pile cap in M 25 cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring, cement concrete and the length of the pile to be embedded in pile cap etc. all complete. (Length of pile for payment shall be measured upto to the bottom of pile cap) :Note:- The minimum grade of concrete to be used for piling shall be M-20 and the minimum cement content shall be 400 kg/m ³ in all condition.	787.5	Rmt.		
	20.10.2	300 mm dia piles.	787.5	Rmt.	644	507150
4	20.11	Extra for providing bulb for item no.20.10				
	20.11.2	300 mm dia piles.	165	Each		
			165	Each	657	108405
5	2.27	Supplying and filling in plinth under floors including watering ramming consolidating in layers not exceeding 20cm in depth and dressing complete.				
	2.27.1	With hard muram having CBR >12 % at under floors including watering, ramming and compacting (minimum compaction 95% of MDD) in layers not exceeding 20cm in thickness and dressing complete. (Note:- maximum thickness of this layer to be provided shall be 30cm)	100	Cum	393	39300
6	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
	4.1.1	With 20mm nominal size graded stone aggregate				
	4.1.1.4	Nominal Mix -1 Cement : 3 sand : 6 graded stone aggregate (M -10)	16.54125	Cum	3890	64345.4625
7	5.1	Providing and laying in position specified grade of reinforced cement concrete (with 20mm nominal size graded stone aggregate) excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
	5.1.1	M-20 Grade Concrete	48.435625	Cum	6153	298024.4006
8	5.2	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, posts and struts etc. above plinth level and upto floor two level excluding cost of centering, shuttering, finishing and reinforcement:				
	5.2.1	RCC in walls, columns, pillars etc M-20 Grade Concrete	26.73	Cum	6231	166554.63
9	5.3	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in beams, suspended floors, roofs having slope of any degree landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral staircases above plinth level and upto floor two level excluding the cost of centering, shuttering, finishing and reinforcement in concrete grade.				
	5.3.1	M-20 Grade Concrete	14	Cum	6541	91574
10	5.9	Centering and shuttering including strutting, propping etc. and removal of form for :				
	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete up to plinth level.	133.65	Sqm	190.6	25473.69
11	5.9.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.				
	5.9.2.1	Up to Plinth Level	20	Sqm		
			20	Sqm	219	4380
12	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers	474	Sqm	356	168744
13	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts.	659.12	Sqm	471.2	310577.344

DETAILED ESTIMATE STONE CLADDING							
Name of Project : DEVELOPMENT OF SHANI TEMPLE, UJAIN							
Name of Work : Stone Cladding Work on wall Panel of Boundary wall,Shani mandir, Ujain							
S.NO	Item No.	Item Name	Description	AREA	Unit	Rate in Rs. (w/o GST)	Amount
1	7.23	Cramps for wall lining stone	providing and fixing stainless steel cramps of required size and shape for anchoring stone wall lining in cement mortar 1:2 (1 cement : 2 sand) including making the necessary chases in stone and holes in walls wherever required	6	KG		
			1 PIECE - 120GRAMS	6	KG	631	3786
2	7.25	Copper pins for securing adjacent stones	Providing and fixing copper pins 7.5 cm long 6 mm diameter for securing adjacent stones in stone wall lining in cement mortar 1:2 (1 cement : 2 sand) including making the necessary chases.				
			1 KG CRAMPS - 10 CLIPS	60	EACH	35	2100
3	7.21	Stone work for lining	Stone work (machine cut edges)for wall lining etc. (vener work) up to 10 meter height backing filled with a grout of 12mm thick cement mortar 1:3 (1 cement : 3 sand) including pointing in white cement mortar 1:2 (1 white cement : 2 marble dust) with an admixture of pigment matching the stone shade : (To be secured to the backing by means of clamps which shall be paid for separately).				
	7.21.4	White stone machine cut stone	White sand stone - Exposed face machine cut and table rubbed with rough backing.				
	7.21.4.1	70mm		11.092	SQ M	1813	20109.796
4	7.2	Extra for stone work sunk or moulded in cornices	Extra for stone work sunk or moulded in cornices.				
				120	per metre per cm girth	14	1680
5		Wheatheric protection layer on plain stone	Plain stone work should have coated in two or more coat of clear lacquer of pidilite / k2 / Nippon make or similar.The process of coating should be followed : (i) cleaning of stone. (ii) Rubbing and polishing of stone. (iii) first coat of clear lacquer and after drying of this coat second coat of clear lacquer shall be applied.All this coating of clear lacquer shall be done with spray paint machine. All work shall be done in satisfactory manner and as per instructions of engineer in charge and consultant.				
				11.092	SQ M	288	3194.496
6		Hand Carving	Only Carving work as per drawing design and as per instruction of engineer in charge and consultant on Bansl Pahadpur Pink/Red stone (Carving Depth Varies 10 mm to 30 mm) (cost of stone is paid seperately)				
			front and backside	5	SQM	9900	49500
7		Stone Jaali	BANSI PAHADPUR PINK SAND STONE CLADDING WITH BOTH SIDE 3D CARVING WORK AS PER DESIGN ON JALI 70mm (JL) 70 MM Thick Stone Jali work in Bansl Pahadpur pink stone, Best Quality Stone, as approved by Engineer-in-charge and consultant, with specific design and as per drawings upto any height,with necessary scaffolding / centering etc. as per design required. Both side Stone Carving as per design in 3-D carving work. Jointsand grout filled with cement mortar 1:3(1 cement : 3 sand) minimum. including pointing in white cement mortar 1:2 (1 cement : 2 marble dust) with an admixture of pigment matching the stone shade, If needed to be secured by means of Stainless Steel Rod/ cramps/anchors/fastener of required size and shape anchoring stone with adjacent stone/floor etc. including making necessary chases in stone/wall/RCC where ever required including epoxy (Tinex) wherever required. All fixing work should be executed as per instructions of engineer in charge and consultant and the traditional pattern of fixing the stone work. For protection of stone, from weatheric action coat of protection layer shall be apply on whole stone surface area, Stone work should have coated in two or more coat of clear lacquer coat of pidilite / K2 / Nippon make. The process of coating should be as followed: (i) cleaning of stone (ii) rubbing and polishing of stone (iii) first coat of clear lacquer and after drying of this coat, second or more coat of clear lacquer shall be applied. All this coating of				
			STONE JALI ON WALL PANEL OF BOUNDARY WALL	2.7	SQ M		
				2.7	SQ M	14145	38191.5
						SQR	27675.796
						NON SQR	90885.996
							118561.792
						SAY	118600
TOTAL NUMBER OF PANEL				62		NQS	7353200

DETAILED ESTIMATE						
Name Of Project :- DEVELOPMENT WORK AT SHANI MANDIR TEMPLE , UJJAIN						
Name Of Work :- CIVIL WORK OF ENTRY AND EXIT GATES						
S.No	Chapter No. / Item No.	Description	Qty	Unit	Rate	Amount
1	2.1	Surface dressing of the ground including removing vegetation and inequalities not exceeding 15 cm deep and disposal of rubbish, lead up to 50 m and lift up to 1.5 m. in all kinds of soil.				
		All kinds of soil.	1.0759	100/sqm.	803	863.9477
2	2/2.6	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed.				
	2.6	All kinds of soil	121.5	Cum	147	17860.5
3	2.24	Filling available excavated earth (excluding hard rock/Ordinary rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	84.261	Cum	95	8004.795
4	2.25	Extra for every additional lift of 1.5 m or part thereof in.				
	2.25.1	All kind of soil.	60.75	Cum	30	1822.5
5	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level :				
	4.1.1.3	M-15 – Grade concrete	6.555	Cum	4471	29307.405
6	5.1	Providing and laying in position specified grade of reinforced cement concrete (with 20mm nominal size graded stone aggregate) excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level				
	5.1.1	M-20 Grade Concrete	5.04	Cum	6153	31011.12
7	5.3	Providing and laying in position ready mixed concrete (RMC) of M-20 grade for reinforced cement concrete work, using cement content as per approved design mix and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centering, shuttering, finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate / retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. Note: Minimum cement content is @ 320 kg/cum				
a)	5.30.1	All works up to plinth level.	26.652	Cum	6332	168760.464
b)	5.30.2	All works above plinth level and upto floor V level.	113.5194	Cum	6814	773521.1916
c)	5.30.3	Extra for each additional floor for all works above floor five level	113.5194	Cum	72	8173.3968
8	5.28	Extra for providing richer mixes of BMC/RMC design mix as per item no 5.27&5.30 up to plinth level and at all floor levels. (No extra payment for using extra cement as per requirement of mix design.)				
	5.28.2	Providing M-30 grade concrete instead of M 20 grade. (Note : minimum cement content is @ 340 kg/cum)	113.5194	Cum		
			113.5194	Cum	140	15892.716
9	5.5	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in arches, arch ribs, domes, vaults, shells, folded plate above plinth level and upto floor two level excluding the cost of centering, shuttering, finishing and reinforcement in Concrete grade.				
	5.5.1	M-20 Grade Concrete	2	Cum	6906	13812
10	5.9	Centering and shuttering including strutting, propping etc. and removal of form for :				
	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete up to plinth level.	68.04	Sqm	190.6	12968.424
11	5.9.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.				
	5.9.2.1		330	Sqm	219	72270
12	5.9.3	Suspended floors, roofs, landings, balconies and access platform	230.54	Sqm	439.6	101345.384

13	5.9.5	Lintels, beams, girders, bressumers and cantilevers				
			183.78	Sqm	356	65425.68
14	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts.				
			192.096	Sqm	471.2	90515.6352
15	5.9.9	Arches, domes, vaults upto 6m span				
			9	Sqm	1141.6	10274.4
16	5.16	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding including cost of binding wire all wastages and overlaps, couplers (overlaps shall be provided as per requirement of IS 13920 for ductile detailing IS 456 RCC Design & SP 34 Reinforcement detailing) etc. complete . (Note:- 1. Spacer bars (chairs) shall be paid separately as shown in the				
	5.16.6	Thermo-Mechanically Treated bars. (TMT/TMX) FE 500 or more conforming to IS 1786				
		Total Steel in kg.	17665.368	Kg	80	1413229.44
17	6.1	Brick work with well burnt chimney bricks in bulls pattern trench kiln manufactured by ghol process, crushing strength not less than 40kg /cm2 and water absorption not more than 15% in foundation and plinth i/c curing etc. complete.				
	6.1.2	Cement mortar 1:6 (1 cement : 6 sand)	5	Cum	5626	28130
18	6.15	Half brick masonry with fly ash lime Gypsum bricks (FALG bricks) conforming to IS: 12894, in super structure above plinth and upto floor two level.				
	6.15.3	Having 50 kg/cm2 average compressive strength.				
	6.15.3.1	Cement mortar 1:3 (1 cement : 3 sand)	5	sqm	479	2395
19	13.7	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 sand) finished with a top layer 6mm thick cement plaster 1:4 (1 cement : 4 sand).				
			200	sqm	236	47200
20	13.8	6 mm cement plaster of mix : 1:3 (1 cement : 3 sand)				
			100	sqm	144	14400
21	13.13	Providing sand faced plaster upto 10meter hight above ground level concrete or brick masonry surfaces into two coats, base coat of 13 mm thick in cement mortar 1:4 (1 cement: 4 sand), clearing the surface by combing it and finishing coat of 8 mm. thick in cement mortar 1:3 (1 cement: 3 sand) and taking out surface grains by mechanical arrangement or applying second coat by mechanical means including cost of all material, labour, and T and P including all lead, lift and scaffolding etc. complete.				
			50	sqm	314	15700
22	13.16	Extra for plastering on circular work not exceeding 6 m in radius:				
	13.16.2	in two coat	20	sqm		
			20	sqm	18	360
23	13.17	Extra for plastering done on moulding cornices or architraves including neat finish to line and level:				
	13.17.2	in two coat	100			
			100	sqm	260	26000
24	5.24	Providing for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.				
	5.24.1	Preparation of grooves	200			
			200	Rmt	18.5	3700
25	13.27	Providing and fixing mesh in vertical and horizontal junction of RCC and brick/AAC work including scaffolding and all lead and lift etc. complete				
	13.27.1	G.I. chicken mesh as per ISI specification and in the required width with 50mm long Bombay nails before plastering upt 10 meter height.	55	sqm	62	3410
26	12/12.32	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.				
	12.32.2	110mm diameter	25	Meter	238	5950
27	22.6	Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying : a) After surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. b) Laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm. c) Third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 20cm on parapet wall.				
			215.18	sqm	338	72730.84

DETAILED ESTIMATE STONE CLADDING							
Name of Project – DEVELOPMENT WORK AT SHANI MANDIR TEMPLE, UJJAIN							
Name of Work :- STONE WORK OF ENTRY AND EXIT GATES.							
S.NO	Item No.	Item Name	Description	AREA	Unit	Rate in Rs. (w/o GST)	Amount
1	NON-S.O.R	Stone Work in selected Stone	Providing and fixing of Stone work in Banshi Pahadpur pink stone/ White stone/ Red stone/ Jaiselmer Yellow stone/ Teak stone/ basalt black and any type and color Best Quality Stone, as approved by Engineer-in-charge and consultant, with specific design, Size and as per drawings upto any height, thickness, size with necessary scaffolding / centering etc and as per requirement of items and proportion of design. Stone Carving depth 10mm to 50mm varies as per design including 3-D carving work, sunk and moulding works, grooves, cornices etc works as per drawings backing filled with grout of cement mortar 1:3(1 cement : 3 sand) minimum 12mm thick, including pointing in white cement mortar 1:2 (1 cement : 2 marble dust) with an admixture of pigment matching the stone shade, to be secured backing by means of Stainless Steel cramps/ anchor/ Pins/fastner of required size/ strength and shape, to anchoring the stone. Column/wall lining to the backing or securing adjacent stone in cement mortar 1:2(1 cement : 2 sand) including making necessary chases in stone and holes in wall/RCC where ever required including bonding agent/chemicals/epoxy etc. (K2/Tinex/ Roff Make) wherever required. All fixing work should be executed as instructions of engineer in charge with providing facilities and cooperation needed to execute any other counterpart agencies works. The traditional pattern of fixing the stone work. For protection of stone, from weatheric action coat of protection layer shall be				
			PART E				
				1.423488	CUM		
				41.284288	CUM	126098	5205866.148
				20.088	CUM	126098	2538026.674
				0.56	CUM	126098	12810.88
2	NON-S.O.R	Stone Work for sculpture work on panel	Providing and fixing of Stone sculpture work on column/walls/panels etc. in Banshi Pahadpur pink stone/ White stone/ Red stone/ Jaiselmer Yellow stone/ Teak/ basalt black and any type and color Best Quality Stone, as approved by Engineer-in-charge and consultant, with specific design, Size and as per drawings upto any height, thickness, size with necessary scaffolding / centering etc and as per requirement of items and proportion of design. Stone Carving depth up to 300mm (or required to get exact proportion and result) varies as per design including 3-D relief panel work (human body, lion, elephant, horse etc.) backing filled with grout of cement mortar 1:3(1 cement : 3 sand) minimum 12mm thick, including pointing in white cement mortar 1:2 (1 cement : 2 marble dust) with an admixture of pigment matching the stone shade, to be secured to backing by means of Stainless Steel cramps/ anchor/pins/ fastner of required size/strength and shape to anchoring the stone. Column/wall lining to the backing or securing adjacent stone in cement mortar 1:2(1 cement : 2 sand) including making necessary chases in stone and holes in wall/RCC where ever required including bonding agent/ chemicals (epoxy etc. (Tinex/K2/ Roff Make) wherever required. All fixing work should be executed as instructions of engineer in charge with providing facilities and cooperation needed to execute any other counterpart agencies works, and the traditional pattern of fixing the stone work. For protection of stone, from weatheric action coat of protection layer shall be apply on whole stone surface area, Stone work should have coated in two or more coat of clear lacquer coat of pidilite / k2 / Nippon are equivalent. The process of coating should be followed: (i) cleaning of stone (ii) rubbing and polishing of stone (iii) first coat of clear lacquer and after drying of this coat ,second coat of clear lacquer shall be applied. All this coating of clear lacquer shall be done with spray paint machine. All work shall be done in satisfactory manner and as per instruction of engineer in charge and consultant. Note: measurement of sculpture will be as per attached sample drawing.				
				11.859	CUM	170000	2016030
3	NON-S.O.R	Stone Jaali	BANSI PAHADPUR PINK SAND STONE White stone/ Red stone/ Jaiselmer Yellow stone/ Teak stone/ basalt black and any type and color Best Quality CLADDING WITH BOTH SIDE 3D CARVING WORK AS PER DESIGN ON JALI 70mm (J) 70 MM Thick Stone Jali work in Banshi Pahadpur pink stone, Best Quality Stone, as approved by Engineer-in-charge and consultant, with specific design and as per drawings upto any height, with necessary scaffolding / centering etc. as per design required. Both side Stone Carving as per design in 3-D carving work. Jointsand grout filled with cement mortar 1:3(1 cement : 3 sand) minimum. including pointing in white cement mortar 1:2 (1 cement : 2 marble dust) with an admixture of pigment matching the stone shade. If needed to be secured by means of Stainless Steel Rod/ cramps/anchor/ pins/ fastner of required size and shape anchoring stone with adjacent stone/floor etc. including making necessary chases in stone/wall/RCC where ever required including bonding agent/chemicals epoxy etc. (Tinex) wherever required. All fixing work should be executed as per instructions of engineer in charge and consultant and the traditional pattern of fixing the stone work. For protection of stone, from weatheric action coat of protection layer shall be apply on whole stone surface area, Stone work should have coated in two or more coat of clear lacquer coat of pidilite / k2 / Nippon make. The process of coating should be as followed: (i) cleaning of stone (ii) rubbing and polishing of stone (iii) first coat of clear lacquer and after drying of this coat ,second or more coat of clear lacquer shall be applied. All this coating of clear lacquer shall be done with spray paint machine. All work shall be done in satisfactory manner and as per instruction of engineer in charge and consultant. For payment of item the area of stone work will be measured from flat elevation of stone jali				
				30	SQM	14145	424350
4	NON - SOR		Providing & fixing of cast iron & ms fabricated decorative				

		<p>ornamental grill , partition, gates, railing, arches, brackets, customised items & crown etc. as per drawings instructions and Specifications:</p> <p>1 - Cast iron material must follow FG-150 grade(as per isi specification) having hardness 135 to 165 BHN.</p> <p>2 - Colour finishing - all parts must be first sand blasted or shot blasted to expose the metal surface than use epoxy primer for prevent the rust after than use again epoxy top coat for extra metal look in require antique shed with top coating of UV base clear lacquer to protect colour from UV rays i/c. cutting and fixing of members by nut bolts, welding with Co2 / M.I.G, grinding, smooth finishing, transportation, labour, tools and plants etc. complete as per direction of Engineer-in-charge.</p> <p>3 - All cast iron parts must have thickness of 20 to 30 mm (as per drawings), as required as per design & minimum gate's having sliding (if required)arrangements for opening and closing and it must be fitted with crown. & welded with co2/mig welding process & fully grinded for best finish.</p>				
		LOTUS SCULPTURE	4000	sq	218	872000
TOTAL NUMBER OF GATES				2		11374113.65
						22748227.3

DETAILED ESTIMATE											
Name of Work :- 10M WIDE ROAD CIVIL WORKS											
Name of Project :-DEVELOPMENT OF SHANI MANDIR , UJJAIN											
S.No.	Item No.	PARTICULARS OF ITEM	Nos.		Length	Width	D/H	Qty	Unit	Rate	Amount (Rs.)
			N1	N2							
1	PWD Road and Bridge 2.2	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees having girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.									
	(A)	In area of light jungle									
							TOTAL	0.285	Hect.	29409	8381.565
2	PWD Road and Bridge 3.3	Excavation for roadwork in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting suitable earth to the embankment location and disposing off unsuitable earth with all lifts and lead upto 1000m as per relevant clauses of section-300 of specification.									
							Total	1995	Cum	79	157605
4	PWD Road and Bridge 3.14	Construction of Embankment with Material Deposited from Roadway Cutting Construction of embankment with approved materials having CBR>7 deposited at site from roadway cutting and excavation from drain or foundation of structures graded and compacted to meet requirement of table 300-1, 300-2 and as per relevant clauses of section-300.									
							Total	855	Cum	60	51300
6	PWD Road and Bridge 4.2	Crusher Run Macadam Sub Base/Base Course Providing crushed stone aggregate, depositing on a prepared surface by hauling vehicles, spreading and mixing with a motor grader, watering and compacting with a vibratory roller as per clause 410 to form a layer of sub-base/Base in accordance to Table No. 400-14, 400-15 and as per clause of section 407 of specifications.									
	4.2.2	For 37.5 mm maximum size									
							TOTAL	427.5	cum	1198	512145
7	PWD Road and Bridge 6.1	Construction of dry lean cement concrete Sub- base over a prepared sub-grade or drainage layer with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per table 600-1, cement content not to be less than 150 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver finisher with electronic sensor, compacting with 8- 10 tonnes vibratory roller, finishing and curing as per clause 601 of specification complete in all respect.									
							TOTAL	285	cum	2712	772920
8	PWD Road and Bridge 6.3	Cement Concrete Pavement Construction of un-reinforced, dowel jointed, plain cement concrete pavement with M-40 grade concrete over a prepared sub base with cement , coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with electronic sensor slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, admixtures as approved, curing compound, finishing to lines and grades as per drawing as per IRC-15-2011 and as per relevant clauses of section 602 of specifications complete but excluding cost of steel in dowel bar and tie rods etc. including groove cutting for width of 4 mm- 6mm and 1/3rd depth of PQC within 8-10 hrs of placing/ finishing of PQC including cleaning of groove and providing approved sealant filling etc. as per clause 602.2.10 and 600.10 and IRC-57-2006 as per drawing and as per specification.									
							TOTAL	855	cum	5769	4932495

9	MPPWD SOR for Road & Bridge work 2025 item No.6.8	Providing and fixing Steel in dowel bar and tie rod including craddle, laps etc. complete required as per design.											
	(A)	Mild steel Bar for Dowel Bar 32 mm Dia @ 500 C/c AT EVERY 25M LENGTH											
		285/25=11.4 NOS (SAY 12)											
		AT A DISTANCE OF 500MM C/C = 8/0.5 = 16 NOS											
								0.7392	MT	57734		42676.9728	
10	PWD Road and Bridge 6/6.15	Providing and laying reinforced cement concrete pipe 300mm dia NP-4 for service ducts below concrete pavement.											
	a	For 100 Mt length road [Length= Width of Road + Shoulder length]											
		At every 30 Mt interval = 285/30 = 9.5Nos. (SAY =10)	1	10	10			100					
								100	RM	850		85000	
									TOTAL			6562523.538	
			ESTIMATE BASED ON :-										
			SCHEDULE OF RATES FOR ROAD & BRIDGE WORKS										
			IN FORCE FROM APRIL 11th, 2025										

DETAILED ESTIMATE						
Name Of Project :- DEVELOPMENT OF SHANI MANDIR , UJJAIN						
Name Of Work :- RETAINING WALL(NALLAH SIDE) - CIVIL WORKS						
S.No	Chapter No. / Item No.	Description	Qty	Unit	Rate	Amount
1	2/2.6	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottom disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed. (No extra lift is payable if work is done by mechanical means) All kinds of soil				
			880	Cum	147	129360
2	2/2.7	Earth work in excavation/ by mechanical means (Hydraulic Excavator)/ manual means over areas(exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottom disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be levelled and neatly dressed.				
	2.7.3	Hard rock (blasting prohibited)	880	Cum	828	728640
3	2/2.24	Filling available excavated earth (excluding hard rock/Ordinary rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.				
			1656.6	Cum	95	157377
4	2/2.27	Supplying and filling in plinth under floors including watering ramming consolidating in layers not exceeding 20cm in depth and dressing complete.				
	2.27.1	With hard muram having CBR >12 % at under floors including watering,ramming and compacting (minimum compaction 95% of MDD) in layers not exceeding 20cm in thickness and dressing complete. (Note:- maximum thickness of this layer to be provided shall be 30cm)	198	Cum	393	77814
5	2/2.25	Extra for every additional lift of 1.5 m or part thereof in.				
	2.25.1	All kind of soil.				
		50% QTY. OF ITEM No. 2	880	Cum	30	26400
6	4/4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
	4.1.1	With 20mm nominal size graded stone aggregate				
	4.1.1.3	M -15	37.4	Cum	4471	167215.4
7	PWD Road and Bridge In Force From 11.04.2025 S.O.R.-4.19	Soil Stabilization-Stabilization of in-situ (existing pavement crust) or soil or Cum otherwise sub-base course up- to the required depth by cold in-situ recycling using chemical additives/otherwise: Providing pulverizing, spreading ,milling and mixing of chemical additives at the rate of minimum 750 ml/cum require quantity as per job mix design in accordance with IRC37-2018.Cementitious additive @ rate of minimum 4% should be spread on the existing pavement using a mobile truck mounted containerized cement/additive spreader with microprocessor controlled weighing and spreading system. The additive spreader shall, have variable working width sufficient to cover whole pavement lane.				
		The in-situ stabilization process shall be carried out by a mobile and self propelled stabilizer/ reclaimed of working width of 2.4 mt and with minimum engine horse power of 440 km with a variable working depth of nimum 50 cm. The resultant stabilized mix then would be profiled to the required grade level and thickness using motor grader and the mix would be compacted using 20 ton pad foot roller in combination with smooth well roller to achieve desired proctor density as per IRC37-2018 and complete in all respects and curing with water as required including all materials, labour and machinery etc. The entire In-situ process would be carried out in single pass with milling and pulverizing of damaged asphalt pavement/soil/aggregates/soil. Note- The above shall be included in the DPR and executed with prior written permission from the E-IN-C MPPWD	336.6	Cum	3495	1176417

8	4.2	Providing and laying cement concrete in retaining walls , return walls,walls (any thickness) including attached pilasters, columns, piers,abutments, pillars, posts, struts, buttresses, string or lacing courses,parapets, coping, bed blocks, anchor blocks, plain window sills, fillets,sunken floor etc., up to floor five level, excluding the cost of centering,shuttering and finishing:				
	4.2.1.1	With 20mm nominal size graded stone aggregate				
			740.28	Cum	6582	4872522.96
9	20.10	Boring, Providing and installing cast in situ single under reamed piles of specified diameter and length below pile cap in M 25 cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring, cement concrete and the length of the pile to be embedded in pile cap etc. all complete. (Length of pile for payment shall be measured				
	20.10.3	400 mm diameter piles	150			
			150	Rmt	941	141150
	20.10.4	450 mm diameter piles	100			
			100	Rmt	1129	112900
10	5.9	Centering and shuttering including strutting, propping etc. and removal of form for :				
	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete up to plinth level.				
			487.3	Sqm	190	92587
11	5.9.2	Walls (any thickness) including attached pilasters, butteresses,plinth and string courses etc.				
			3966.68	Sqm	219	868702.92
12	5.9.3	Suspended floors, roofs, landings, balconies and access platform.				
			50	Sqm	439.6	21980
13	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers				
			132.18	Sqm	356	47056.08
14	5.9.6	Columns, P i l l a r s , Piers, Abutments, Posts and Struts.				
			14.4	Sqm	471.2	6785.28
15	5/5.16	Steel reinforcement for R.C.C. work including straightening, cutting,bending, placing in position and binding all complete upto plinth level.				
	5.16.6	Thermo-Mechanically Treated bars of grade Fe-500D or more.				
		Total Steel in kg.	79028	Kg	80	6322240
16	6/6.1	Brick work with well burnt chimney bricks in bulls pattern trench kiln manufactured by ghol process, crushing strength not less than 40kg /cm2 and water absorption not more than 15% in foundation and plinth i/c curing etc. complete.				
	6.1.2	Cement mortar 1:6 (1 cement : 6 sand)	5	Cum	5626	28130
17	6/6.13	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level.				
	6.13.2	Cement mortar 1:4 (1 cement : 4 sand)	5	sqm	615	3075
18	6.2	Brick work with well burnt chimney bricks in bulls patent trench kiln manufactured by ghol process ,crushing strength not less than 40kg /cm2 and water absorption not more than 15% in superstructure above plinth level and up to floor two level i/c curing etc. complete.				
	6.2.2	Cement mortar 1:6 (1 cement : 6 sand)	79.2	Cum	5821	461023.2
19	Road and Bridge 13.7	Providing weep holes in Brick masonry/Plain/Reinforced concrete abutment, wing wall/return wall with 100 mm dia AC pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face. Complete as per drawing and Technical specifications				
			50	Meter	174	8700

20	12/12.32	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.				
	12.32.2	110mm diameter				
			10	Meter	238	2380
21	13.7	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 sand) and a top layer 6mm thick cement plaster 1:3 (1 cement : 3 sand) finished rough with sponge.				
			20	Sqm	236	4720
22	13.13	Providing sand faced plaster upto 10meter high above ground level concrete or brick masonry surfaces in two coats, base coat of 13 mm thick in cement mortar 1:4 (1 cement: 4 sand),clearing the surface by combing it and finishing coat of 8 mm. thick in cement mortar 1:3 (1 cement: 3 sand) and taking out surface grains by mechanical arrangement or applying second coat by mechanical means including cost of all material, labour, and T and P including all lead, lift and scaffolding etc. complete.				
			220	Sqm	314	69080
23	7.21	Stone work (machine cut edges)for wall lining etc. (vener work) up to 10 meter height backing filled with a grout of 12mm thick cement mortar 1:3 (1 cement : 3 sand) including pointing in white cement mortar 1:2 (1 white cement : 2 marble dust) with an admixture of pigment matching the stone shade : (To be secured tothe backing by means of clamps which shall be paid for separately):				
	7.21.1	Red sand stone - exposed face fine dressed with rough backing	330	Sqm		
	7.21.1.3	50 mm thick	330	Sqm	1276	421080
24	5.36	Providing and sealing the retaining wall expansion Joints with anodized aluminum extruded section of 135 mm × 3.1 mm confirm to alloy of 6063 T5/T6including fixing of an imported EPDM moisture Barrierconform to (American Society for Testing and Materials) 2240 & ASTM - G53 & 84 fixing with Epoxy adhesive confirm to ASTM C-881 complete in all respect as per manufacturer Drawing and specifications. With 5 year guarantee.				
			5	Meter	3234	16170
25	5.18	Providing and fixing in position copper plate as per design for expansion joints.				
			10	kg	472	4720
26	5.35	Providing and fixing in position pre moulded compressible filler board made from polymer base in black color approved make conforming to the specifications having minimum density of 95 kg / cum, non- staining, with less than 1 percent water absorption and compression recovery of 93 percent minimum including cost of double sided adhesive tape, sealant etc. in expansion joints.				
	5.35.3	50mm thick	5	sqm	1194	5970
27	13/13.54	Finishing walls with Deluxe Mulf surface paint system for interiors and exterior using primer as per manufacturers specifications :				
(i)	13.54.3	Two or more coats applied @1.25 ltr/10 sqm. Over and including one coat of Special primer applied @0.75 ltr/10 sqm.				
			220	Sqm	81	17820
				TOTAL		15992015.84
TOTAL AMOUNT - ONE CRORE FIFTY NINE LACS NINETY TWO THOUSAND ONLY.						
ESTIMATE BASED ON :-						
GOVERNMENT OF MADHYA PRADESH PUBLIC WORKS DEPARTMENT SCHEDULE OF RATES (SOR) For BUILDING WORKS (VOLUME-I & VOLUME-II) In force from 01 January 2024						

DETAILED ESTIMATE						
Name Of Project :- DEVELOPMENT OF SHANI MANDIR , UJJAIN						
Name Of Work :- RETAINING WALL - CIVIL WORKS						
S.No	Chapter No. / Item No.	Description	Qty	Unit	Rate	Amount
1	2/2.6	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottom disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed. (No extra lift is payable if work is done by mechanical means) All kinds of soil				
			860	Cum	147	126420
2	2/2.7	Earth work in excavation/ by mechanical means (Hydraulic Excavator)/ manual means over areas(exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottom disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be levelled and neatly dressed.				
	2.7.3	Hard rock (blasting prohibited)	860	Cum	828	712080
3	2/2.24	Filling available excavated earth (excluding hard rock/Ordinary rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.				
			1618.95	Cum	95	153800.25
4	2/2.27	Supplying and filling in plinth under floors including watering ramming consolidating in layers not exceeding 20cm in depth and dressing complete.				
	2.27.1	With hard muram having CBR >12 % at under floors including watering,ramming and compacting (minimum compaction 95% of MDD) in layers not exceeding 20cm in thickness and dressing complete. (Note:- maximum thickness of this layer to be provided shall be 30cm)	193.5	Cum	393	76045.5
5	2/2.25	Extra for every additional lift of 1.5 m or part thereof in.				
	2.25.1	All kind of soil.	860	Cum	30	25800
6	4/4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
	4.1.1	With 20mm nominal size graded stone aggregate				
	4.1.1.3	M -15	36.55	Cum	4471	163415.05
7	PWD Road and Bridge In Force From 11.04.2025 S.O.R.-4.19	Soil Stabilization-Stabilization of in-situ (existing pavement crust) or soil or Cum otherwise sub-base course up- to the required depth by cold in-situ recycling using chemical additives/otherwise: Providing pulverizing, spreading ,milling and mixing of chemical additives at the rate of minimum 750 ml/cum require quantity as per job mix design in accordance with IRC37-2018.Cementitious additive @ rate of minimum 4% should be spread on the existing pavement using a mobile truck mounted containerized cement/additive spreader with microprocessor controlled weighing and spreading system. The additive spreader shall, have variable working width sufficient to cover whole pavement lane.				
		The in-situ stabilization process shall be carried out by a mobile and self propelled stabilizer/ reclaimed of working width of 2.4 mt and with minimum engine horse power of 440 km with a variable working depth of nimum 50 cm. The resultant stabilized mix then would be profiled to the required grade level and thickness using motor grader and the mix would be compacted using 20 ton pad foot roller in combination with smooth well roller to achieve desired proctor density as per IRC37-2018 and complete in all respects and curing with water as required including all materials, labour and machinery etc. The entire In-situ process would be carried out in single pass with milling and pulverizing of damaged asphalt pavement/soil/aggregates/soil. Note- The above shall be included in the DPR and executed with prior written permission from the E-IN-C MPPWD	328.95	Cum	3495	1149680.25

8	4.2	Providing and laying cement concrete in retaining walls , return walls,walls (any thickness) including attached pilasters, columns, piers,abutments, pillars, posts, struts, buttresses, string or lacing courses,parapets, coping, bed blocks, anchor blocks, plain window sills, fillets,sunken floor etc., up to floor five level, excluding the cost of centering,shuttering and finishing:				
	4.2.1.1	With 20mm nominal size graded stone aggregate				
		M 25 – Grade concrete				
			723.48	Cum	6582	4761945.36
9	20.10	Boring, Providing and installing cast in situ single under reamed piles of specified diameter and length below pile cap in M 25 cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring, cement concrete and the length of the pile to be embedded in pile cap etc. all complete. (Length of pile for payment shall be measured				
	20.10.3	400 mm diameter piles	150			
		R.C.C.Qty.= 80.51cumt.	150	Rmt	941	141150
	20.10.4	450 mm diameter piles	100			
		R.C.C.Qty.= 101.89cumt.	100	Rmt	1129	112900
10	5.9	Centering and shuttering including strutting, propping etc. and removal of form for :				
	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete up to plinth level.				
			476.3	Sqm	190	90497
11	5.9.2	Walls (any thickness) including attached pilasters, butteresses,plinth and string courses etc.				
			3876.68	Sqm	219	848992.92
12	5.9.3	Suspended floors, roofs, landings, balconies and access platform.				
			50	Sqm	439.6	21980
13	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers				
			129.18	Sqm	356	45988.08
14	5.9.6	Columns, P i l l a r s , Piers, Abutments, Posts and Struts.				
			14.4	Sqm	471.2	6785.28
15	5/5.16	Steel reinforcement for R.C.C. work including straightening, cutting,bending, placing in position and binding all complete upto plinth level.				
	5.16.6	Thermo-Mechanically Treated bars of grade Fe-500D or more.				
		Total Steel in kg.	77348	Kg	80	6187840
16	6/6.1	Brick work with well burnt chimney bricks in bulls pattern trench kiln manufactured by ghol process, crushing strength not less than 40kg /cm2 and water absorption not more than 15% in foundation and plinth i/c curing etc. complete.				
	6.1.2	Cement mortar 1:6 (1 cement : 6 sand)				
			5	Cum	5626	28130
17	6/6.13	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level.				
	6.13.2	Cement mortar 1:4 (1 cement : 4 sand)				
			5	sqm	615	3075
18	6.2	Brick work with well burnt chimney bricks in bulls patent trench kiln manufactured by ghol process ,crushing strength not less than 40kg /cm2 and water absorption not more than 15% in superstructure above plinth level and up to floor two level i/c curing etc. complete.				
	6.2.2	Cement mortar 1:6 (1 cement : 6 sand)				
			77.4	Cum	5821	450545.4
19	Road and Bridge 13.7	Providing weep holes in Brick masonry/Plain/Reinforced concrete abutment, wing wall/return wall with 100 mm dia AC pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face. Complete as per drawing and Technical specifications				
			50	Meter	174	8700

20	12/12.32	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.				
	12.32.2	110mm diameter				
			10	Meter	238	2380
21	13.7	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 sand) and a top layer 6mm thick cement plaster 1:3 (1 cement : 3 sand) finished rough with sponge.				
			20	Sqm	236	4720
22	13.13	Providing sand faced plaster upto 10meter high above ground level concrete or brick masonry surfaces in two coats, base coat of 13 mm thick in cement mortar 1:4 (1 cement: 4 sand),clearing the surface by combing it and finishing coat of 8 mm. thick in cement mortar 1:3 (1 cement: 3 sand) and taking out surface grains by mechanical arrangement or applying second coat by mechanical means including cost of all material, labour, and T and P including all lead, lift and scaffolding etc. complete.				
			215	Sqm	314	67510
23	7.21	Stone work (machine cut edges)for wall lining etc. (vener work) up to 10 meter height backing filled with a grout of 12mm thick cement mortar 1:3 (1 cement : 3 sand) including pointing in white cement mortar 1:2 (1 white cement : 2 marble dust) with an admixture of pigment matching the stone shade : (To be secured tothe backing by means of clamps which shall be paid for separately):				
	7.21.1	Red sand stone - exposed face fine dressed with rough backing	322.5	Sqm		
	7.21.1.3	50 mm thick	322.5	Sqm	1276	411510
24	5.36	Providing and sealing the retaining wall expansion Joints with anodized aluminum extruded section of 135 mm × 3.1 mm confirm to alloy of 6063 T5/T6including fixing of an imported EPDM moisture Barrierconform to (American Society for Testing and Materials) 2240 & ASTM - G53 & 84 fixing with Epoxy adhesive confirm to ASTM C-881 complete in all respect as per manufacturer Drawing and specifications. With 5 year guarantee.				
			5	Meter	3234	16170
25	5.18	Providing and fixing in position copper plate as per design for expansion joints.				
			10	kg	472	4720
26	5.35	Providing and fixing in position pre moulded compressible filler board made from polymer base in black color approved make conforming to the specifications having minimum density of 95 kg / cum, non- staining, with less than 1 percent water absorption and compression recovery of 93 percent minimum including cost of double sided adhesive tape, sealant etc. in expansion joints.				
	5.35.3	50mm thick	5	sqm	1194	5970
27	13/13.54	Finishing walls with Deluxe Mulf surface paint system for interiors and exterior using primer as per manufacturers specifications :				
(i)	13.54.3	Two or more coats applied @1.25 ltr/10 sqm. Over and including one coat of Special primer applied @0.75 ltr/10 sqm.				
			215	Sqm	81	17415
				TOTAL		15646165.09
			ESTIMATE BASED ON :-			
			GOVERNMENT OF MADHYA PRADESH PUBLIC WORKS DEPARTMENT SCHEDULE OF RATES (SOR) For BUILDING WORKS (VOLUME-I & VOLUME-II) In force from 01 January 2024			

Name of Project :- DEVELOPMENT OF SHANI TEMPLE , UJJAIN							
Name of Work:-STP & ETP (SITE DEVELOPMENT WORK)							
S.No	SOR	ITEM NO.	Description of Item	Unit	Qty	Rate(Rs)	Amount (Rs.)
1	UADD/ Vol-I	22.6/295	STP PLANT MOVING MEDIA BIO REACTOR TECHNOLOGY				
			Designing, Providing and construction, hydraulic testing, commissioning and giving satisfactorily trials of STP consisting of Inlet Chamber, Screen Chamber, Grit Separator, MMBR/FAB (Based on technologies providing attached growth on plastic meddi kept suspended in the waste water due to low density of plastic and provided with compressed air for aeration with very high MLSS of greater than 15,000 Mg/l) tank. Secondary Clari settler, sludge sump, sludge Thickener, chlorine contact Tank, Chlorinator room/shed, Sludge Centrifuge, Associated Piping work with required valves, Gates, drains, pathways, Administration block cum Laboratory, Laboratory Equipments, Spares parts for 2 years of operation, etc. complete as tumkey jo with all involved civil, as per detailed specification for civil electrical and mechanical components with all duties and taxes etc. complete to achieve BOD<10 PPM, COD<100 PPM, TSS<10 PPM, NH3N<5 PPM, TP<1 PPM, Treated sewage can be used for irrigation, horticulture purposes.				
			Following Units are Included				
			1. Inlet Chamber Designing, Providing and construction RCC (M-30) inlet chamber designed for the peak flow including necessary excavation in all types of strata including walkway all around the periphery, Each compartment will have CI gates with extension rod, Head stock, operating wheels, GI Pipe railing etc. The work includes providing and making necessary arrangements to connect the flow to screen chamber by approach channel as directed and as per specification.				
			2. Screen Chamber Designing, Providing and construction testing and commissioning of screen chamber, designed for peak flow in RCC (M-30), Including walkway 1.2 M wide with GI pipe.				
			3. Grit Separator Designing, Providing and constructing detritor type grit removal mechanism in RCC (M-30) capable of removing 100% 0.2 mm size particle and above having specific gravity 2.30 designed for peak flow with suitable arrangement of separation of grit from putrescible solids including providing & making necessary arrangements of JB-1 inlet & outlet channels of required sizes as make be required to connect the flow to connecting unit etc. Complete including hydraulic testing for water tightness of structure having minimum FB of 0.3 m wash out arrangement to grit chamber & platform 1.2 m wide RCC walkway with GI pipe handling shall be provided, A pit for collecting grit conveyed by conveyor shall be provided. It should be suitable to handle the grit for carting, All arrangements shall be as detailed specifications and as directed.				
			4. MMBR/FAB Tank Designing, providing & constructing in RCC (M-30) biological reactor tank for removal of BOD along with nutrient removal to handle the average flow & having hydraulic suitable to handle peak flow conditions with suitable 1.2 M wide walkway, Expansion joints as required, including foundation etc. as per specification. The tank shall be equipped with inlet & outlet arrangement, air blowers for supply of air coarse bubble diffusers & aeration grid in SS 304, PP carrier bio media etc. FB of 0.5 M & SWD as required should be complete as per detailed specification.				
			5. Secondary Clarissetler Designing, providing & constructing in RCC (M-30) water tight secondary Clarissetler having SWD of 3.75 m + 0.5 m FB & has tube media in the clarification zone to provide additional surface area for settling. The settler shall be provided with a scraper mechanism in MS with epoxy painting for collecting the settled solids at the bottom (bottom slope 1:12). The central feed well shall be made of MS with epoxy painting form both faces & well stiffened. The sewage will be admitted in the feed well & then will move outwards towards periphery slowly & continuously over a weir & will be collected in a launder.				
			6. Chlorine Contact Tank Designing, providing & constructing chlorine contact tank of adequate capacity to deal with average flow. The contact time provided is 30 min. to achieve 99.99% reduction in coli form during average flow condition, Chlorine dosage will be as per standard provisions including designing, providing & construction water supply provision for chlorination, including providing dewatering & by pas arrangement for jointing to final effluent mains & outlet weir etc. complete. The effluent quality should match with the standards laid down by Madhya Pradesh Pollution Control Board & as per obligatory provision & as detailed specification & as directed by Engineer-In-Charge.				
			7. Chlorinator & Chlorinator Room/Tonner Room Designing, Providing & construction of vacuum type Chlorinators having adequate capacity for dosage of adequate chlorine to ensure 99.99% coli form reduction as per obligatory provisions detailed specifications with necessary provision of having chlorinator room of adequate size. The chlorinator equipment shall include chlorine cylinders tonners, piping, valves, measuring, controlling equipments, safety devises, lifting equipment etc., complete as per IS-10553 (Part-II) 1982. The tonner room should have min. 3 MT capacity crane for loading & unloading facility. Tonner storage should be distinctly isolated and should have min.storage space as per the detailed specifications & as per gas law 1981 & factory act shall be provided. All other matching amenities shall be provided, 5 MT gantry rail shall be provided for full length of tonner room with outlet.				
			8. Sludge Sump Designing Providing & construction of sludge sump and pump for discharging sludge to sludge thickener using M.S. Pipe complete as per detailed specification.				
			9. Sludge Thickener Designing, Providing and construction water tight of sludge thickener gravity type in RCC (M-30) with inlet & outlet pipes, central feed well, sludge pit & sludge removal arrangement, grouting wherever necessary with walkway all around of 1.30 m with GI pipe railing interconnecting CI pipes all complete as per specifications, having bottom slope 1:8 & 3 m SWD with necessary fixed bridge scraper arrangement as per detailed specification & necessary inlet & outlet arrangement. All other arrangement as per detailed specifications.				
			10. Sludge centrifuge platform with centrifuge Designing , providing, constructing and installing including foundation etc. sludge centrifuge to handle the sludge flow of 1 day in 18 hours per unit with sludge dewatering unit drain etc. complete as per specification . Sludge centrifuge with necessary arrangements as per detailed specification mentioned in tender and obligatory provisions to be provided with satisfactory functioning.				
			11. Outfall Sewer Designing, Providing and constructing appropriate outfall sewer of RCC NP2 pipe to discharge treated effluent, untreated effluent from outlet chamber (after basin/chlorination tank) to the local Nallah at the point shown on the drawing including necessary chambers for inspection & cleaning including excavation, dewatering, refilling, concrete encasing I bedding concrete.				
			12. Pining work in CI - LA class including sluice valves, reflux valves, MS Pipe PGates, roviding, laying & Jointing pipes other than those already included in the above items for interconnection by pass drain etc. of all units including adequate numbers of manhole chambers, The item includes excavations, refilling & hydraulic testing of pipes, valves, gates, accessories & cost of jointing materials. The item includes required channels with gates or interconnection of units, by pass drains etc. for all units as directed etc complete as per detailed specifications.				

		13. Administrative Building cum Laboratory (CH)				
		Designing, Providing and constructing administrative building, office cum laboratory including stores. This shall be building having appropriate carpet area & ground floor and at first floor complete as per specifications including necessary excavation, foundation in RCC M-20 framed structure, BB masonry (II class in CM 1:6) 20 mm cement plaster in CM 1:3 inside & outside painting, aluminum door window with glass panels, Mosaic tile flooring & skirting & all other allied items, fixtures, fastening, electrification arrangement, water supply arrangement etc complete, The building will have laboratory on upper floor of administrative building & should have complete control of every unit as per laboratory equipment, beautification. Telephone and intercom arrangement and wireless system.				
		Cost of plant with capacity				
	22.6.2/297	Add per MLD above 1 MLD upto 3 MLD	MLD	1	7500000	7500000
Total of SOR ITEMS						7500000

Name of Project :- DEVELOPMENT OF SHANI MANDIR TEMPLE , UJJAIN

Name of Work:-DRAINAGE AND WATER SUPPLY (SITE DEVELOPMENT WORK) SHANI MANDIR

S.No	SOR	ITEM NO.	Description of Item	Qty	Unit	Rate(Rs)	Amount (Rs.)
			EXTERNAL WATER SUPPLY				
1	UADD/ Vol-I	7.1/103	Providing, laying, Jointing & field testing of High Density Polyethylene pipes, (HDPE) confirming to IS 4984/ 14151/ 12786/ 13488 with necessary jointing material like mechanical connector or jointing pipes by heating to the ends of pipes with the help of Teflon coated electric mirror/ heater to the required temperature and then pressing the ends together against each other, to form a monolithic & leak proof joint by thermosetting process. It may be required to be done with Jacks/Hydraulic Jacks/ But fusion machine. (50mm & above fusion jointed & below 50mm mechanical jointed) 6KG/CM2				
		7.1.1	20mm dia	30	Meter	38	1140
		7.1.2	25 mm dia	20	Meter	45	900
		7.1.3	32 mm dia	10	Meter	56	560
		7.1.4	40 mm dia	15	Meter	70	1050
		7.1.5	50 mm dia	18	Meter	83	1494
		7.1.6	63 mm dia	18	Meter	127	2286
		7.1.7	75 mm dia	50	Meter	181	9050
		7.1.8	90 mm dia.	265	Meter	247	65455
		7.1.11	140 mm dia.	12	Meter	572	6864
		7.1.19	355 mm dia	176	Meter	3579	629904
		7.1.20	400 mm	200	Meter	4619	923800
2	UADD/ Vol-I	7.2/104	Providing and laying Bend 90 confirming to IS specifications. 6KG/CM2				
		7.2.1	20mm dia	20	Each	37	740
		7.2.2	25 mm dia	15	Each	41	615
		7.2.3	32 mm dia	15	Each	50	750
		7.2.4	40 mm dia	15	Each	55	825
		7.2.5	50 mm dia	10	Each	72	720
		7.2.6	63 mm dia	10	Each	101	1010
		7.2.7	75 mm dia	9	Each	154	1386
		7.2.8	90 mm dia.	9	Each	229	2061
		7.2.11	140 mm dia.	8	Each	558	4464
		7.2.19	355 mm dia	8	Each	7528	60224
		7.2.20	400 mm	8	Each	10877	87016
3	UADD/ Vol-I	7.3/104	Providing and laying Bend 45 confirming to IS specifications. 6KG/CM2				
		7.3.1	20mm dia	5	Each	37	185
		7.3.2	25 mm dia	5	Each	39	195
		7.3.3	32 mm dia	5	Each	40	200
		7.3.4	40 mm dia	3	Each	47	141
		7.3.5	50 mm dia	3	Each	66	198
		7.3.6	63 mm dia	3	Each	113	339
		7.3.7	75 mm dia	3	Each	172	516
		7.3.8	90 mm dia.	3	Each	242	726
		7.3.11	140 mm dia.	2	Each	679	1358
		7.3.19	355 mm dia	2	Each	9721	19442
		7.3.20	400 mm	2	Each	12633	25266
4	UADD/ Vol-I	7.4/105	Providing and laying Equal Tee confirming to IS specifications. 6KG/CM2				
		7.4.1	20mm dia	18	Each	39	702
		7.4.2	25 mm dia	15	Each	48	720
		7.4.3	32 mm dia	12	Each	50	600
		7.4.4	40 mm dia	12	Each	54	648
		7.4.5	50 mm dia	12	Each	74	888
		7.4.6	63 mm dia	12	Each	120	1440
		7.4.7	75 mm dia	12	Each	196	2352
		7.4.8	90 mm dia.	12	Each	334	4008
		7.4.11	140 mm dia.	10	Each	708	7080
		7.4.19	355 mm dia	5	Each	9937	49685
		7.4.20	400 mm	5	Each	14382	71910
5	UADD/ Vol-I	7.6/106	Providing and laying Reducer 6 kg/sq.cm : confirming to IS specifications..				
		7.6.2	25 mm dia	18	Each	56	1008
		7.6.3	32 mm dia	18	Each	62	1116
		7.6.4	40 mm dia	18	Each	69	1242
		7.6.5	50 mm dia	15	Each	85	1275
		7.6.6	63 mm dia	15	Each	107	1605
		7.6.7	75 mm dia	15	Each	147	2205
6	UADD/ Vol-I	7.10/109	Providing and laying End Cap confirming to IS specifications. 6KG/CM2		Each		
		7.5.1	20mm dia	23	Each	51	1173
		7.5.2	25 mm dia	19	Each	52	988
		7.5.3	32 mm dia	19	Each	53	1007
		7.5.4	40 mm dia	19	Each	56	1064
		7.5.5	50 mm dia	19	Each	67	1273
		7.5.6	63 mm dia	15	Each	91	1365
		7.5.7	75 mm dia	12	Each	116	1392
		7.5.8	90 mm dia.	10	Each	132	1320
		7.5.11	140 mm dia.	5	Each	222	1110
		7.5.19	355 mm dia	2	Each	1293	2586
		7.5.20	400 mm	5	Each	1998	9990
7	UADD/ Vol-I	14.2/174	Providing & fixing of Cast iron double flanged sluice valves as per I.S.:14846-2000 fitted with cast iron cap including jointing & testing with cost of jointing material such as bolts, nuts, rubber insertions etc. all complete				
		14.2.9	300 mm dia	2	Each	22072	44144
		14.2.10	350 mm dia	2	Each	45400	90800

		14.2.11	400 mm dia	2	Each	58000	116000
							0
8	MPSOR/ Vol-II	18.12/545	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end):				
		18.12.1	With C.I. wheel of approved quality (screwed end)				
		18.12.1.2	32 mm nominal bore.	2	Each	558	1116
		18.12.1.3	40 mm nominal bore	1	Each	677	677
		18.12.1.4	50 mm nominal bore	2	Each	976	1952
		18.12.1.5	65 mm nominal bore	2	Each	1339	2678
		18.12.1.6	80 mm nominal bore	1	Each	2302	2302
		18.12.2/545	With brass lever handle of approved quality.				0
			32 mm nominal bore.	2	Each	419	838
			40 mm nominal bore	2	Each	491	982
			50 mm nominal bore	2	Each	639	1278
9	MPSOR/EM	55.5/237	Supply, installation, testing and commissioning of gun metal gate valve with brass lever handle ISI inclusive of all necessary required material, labor for mentioned below size.				
			15 mm nominal bore	15	Each	1102	16530
			20 mm nominal bore	22	Each	1308	28776
			25mm nominal bore	4	Each	2043	8172
10	MPSOR/ Vol-II	18.15/546	Providing and fixing gun metal non- return valve of approved quality				
		18.15.6	80 mm nominal bore				
		18.15.6.1	Horizontal	1	Each	2886	2886
		18.15.6.2	Vertical	1	Each	3699	3699
11	UADD/ Vol-I	14.12/179	Providing & fixing cast iron double flanged single door reflux (non return) valves including jointing & testing with cost of jointing material such as bolts, nuts and rubber insertion all complete.				
		14.12.5	150 mm dia	1	Each	4913	4913
		14.12.6	200 mm dia	2	Each	8801	17602
12	MPSOR/ Vol-II	26.9/694	Providing, installation, testing and commissioning stainless steel strainer fabricated out of 1.6 mm thick stainless steel sheet with 3 mm dia holes with stainless steel flange.				
		26.9.1	80 mm nominal bore	5	Each	4570	22850
13	UADD/ Vol-I	19.17/246	Dirt Box with S. S. Strainer as per specifications				
		19.17.6	150 mm dia	5	Each	14107	70535
		19.17.7	200 mm dia	5	Each	21154	105770
14	UADD/ Vol-I	6.1/88	Providing laying and jointing of galvanised Iron Pipes with specials (such as bends, elbows, tees etc) class light, medium & heavy including testing of joints, cost of pipes, specials and jointing materials all complete.				
		6.1.8	80 mm dia	10	RM	758	7580
		6.1.11	150 mm dia	15	RM	1618	24270
15	MPSOR/ Vol-II	26.6/693	Providing, fixing, testing and commissioning of butterfly valve PN 1.6, with Bronze/Gunmetal seat duly ISI marked complete with Nuts, Bolts, washers, gaskets, confirming to IS 13095, of following sizes as required.				
		26.6.1	200 mm dia	2	RM	8530	17060
		26.6.2	150 mm dia	2	RM	6815	13630
16	UADD/ Vol-II	21.49/229	Providing and fixing enclosed type water meter (bulk type) conforming to IS 2373 and tested by Engineer in charge complete with bolts & nuts rubber insertions etc.(the tail pieces if required will be paid separately)				
		21.49.1	80 mm dia nominal bore	5	Each	2904	14520
17	MPSOR/Vol-I	2.9/14	Excavating trenches of required width for pipes, cables, etc. including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m : (No extra lift is payable if work is done by mechanical means) in all kinds of soil				
			Pipes, cables etc., not exceeding 80 mm dia.	267	Meter	96	25632
			Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia.	320	Meter	156	49920
			Pipes, cables etc. exceeding 300 mm dia but not exceeding 600 mm.	350	Meter	244	85400
Total							2805144
EXTERNAL SEWER & STORM WATER							
1	MPSOR/Vol-II	19.7/567	Providing and fixing square-mouth S.W. gully trap class SP1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design :				
		19.7.2	150 x 100 mm size P type.				
		19.7.2.1	With well burnt bricks	5	Each	1803	9015
2	MPSOR/Vol-I	11.2/147	Providing, laying and jointing of (double wall corrugated) PE pipes of renowned duly tested inclusive of all cost of inspection charges, transportation charges, transit insurance, loading/unloading and stacking at site/store etc, complete.				
		11.2.4	150 mm /180 mm	94	Meter	320	30080
		11.2.6	200 mm / 238 mm	140	Meter	528	73920
		11.2.7	250 mm / 295 mm	225	Meter	882	198450
		11.2.8	300 mm / 345 mm	300	Meter	1260	378000
		11.2.9	400 mm / 480 mm	125	Meter	1753	219125

3	MPSOR/Vol-I	2.9/14	Excavating trenches of required width for pipes, cables, etc. including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m : (No extra lift is payable if work is done by mechanical means) in all kinds of soil				
			Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia.	550	Meter	156	85800
			Pipes, cables etc. exceeding 300 mm dia but not exceeding 600 mm.	340	Meter	244	82960
4	UADD/ Vol-I	7.1/103	Providing, laying, Jointing & field testing of High Density Polyethylene pipes, (HDPE) conforming to IS 4984/ 14151/ 12786/ 13488 with necessary jointing material like mechanical connector or jointing pipes by heating to the ends of pipes with the help of Teflon coated electric mirror/ heater to the required temperature and then pressing the ends together against each other, to form a monolithic & leak proof joint by thermosetting process. It may be required to be done with Jacks/Hydraulic Jacks/ But fusion machine. (50mm & above fusion jointed & below 50mm mechanical jointed) 6KG/CM2				
		7.1.11	140 mm dia.	250	Meter	572	143000
	UADD/ Vol-I	7.2/104	Providing and laying Bend 90 conforming to IS specifications. 6KG/CM2				
		7.2.11	140 mm dia.	100	EACH	558	55800
	MPSOR/EM	7.3/104	Providing and laying Bend 45 conforming to IS specifications. 6KG/CM2				
		7.3.11	140 mm dia.	100	EACH	679	67900
	MPSOR/ Vol-II	7.4/105	Providing and laying Equal Tee conforming to IS specifications. 6KG/CM2				
		7.4.11	140 mm dia.	100	EACH	708	70800
	UADD/ Vol-I	7.10/109	Providing and laying End Cap conforming to IS specifications. 6KG/CM2				
5	MPSOR/Vol-II	19.9/630	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 sand) R.C.C. top slab with Cement Concrete 1:2:4mix(1cement:2 sand :4graded stone aggregate 20mm nominal size), foundation concrete1:4:8mix(1cement: 4 sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 sand : 4 graded stone aggregate 20mm nominal size) finished witha floatingcoat ofneat cement complete as per standard design :				
		19.9.1	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) :				
		19.9.1.1	With well burnt bricks	58	Each	7997	463826
6	MPSOR/Vol-II	19.9.2/631	Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight offrame 58 kg) :				
		19.2.1	With well burnt bricks	20	Each	18086	361720
7	MPSOR/Vol-II	19.9.3/631	Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (heavy duty) 560 mm internal diameter, total weight of cover and frame to be not less than 208 kg (weight of cover 108 kg and weight of frame 100 kg) :				
		19.3.1	With well burnt bricks	4	Each	21816	87264
9	MPSOR/Vol-II	19.10/631	Extra for depth for manholes				
		19.10.1	Size 90x80 cm				
		19.10.1.1	With well burnt bricks	15	metre	6176	92640
		19.10.2	Size 120x90 cm				
		19.10.2.1	With well burnt bricks	15	metre	7380	110700
10	UADD/ Vol-I	17.2	Constructing Brick masonry rectangular manhole in cement mortar 1:4 (1cement:4 fine sand) common Burnt Clay Brick or fly ash bricks, of compressive strength not less than 75 Kg/ cm2 RCC top slab Cement Concrete 1:2:4 (Nominal Mix) with stone aggregate 20mm nominal size, 20 cm thick foundation in cement concrete 1:3:6 (Nominal Mix) with stone aggregate 40mm nominal size, inside & outside plastering minimum 12 mm thick with cement mortar 1:3 (1 cement:3 coarse sand) finished with a floating coat of neat cement and making channels in Cement Concrete 1:2:4 (Nominal Mix) with stone aggregate 20mm nominal size including finishing the channel to shape, including providing and fixing footrest, manhole cover and frame etc. complete. (only excavation as per actual shall be paid separately), Depth of manhole shall be considered as the vertical distance from top of the manhole cover to the outgoing invert of main drain channel. (for reference purpose use Drawing No. 11)				
		17.2.2	Man hole with above specifications having inside size 90x80 cm and 60 cm deep including C.I. cover with frame (light duty) 450x600 mm clear opening as per IS : 1726 : 1991.	25	Each	9563	239075
		17.2.6	Man hole for property connection (House connection) in narrow lanes.				
		17.2.6.1	Man hole with above specifications having inside size 450x450mm and 900mm deep including SFRC square Man hole Cover and frame (medium Duty) 450mmx 450mm complete.	25	Each	5813	145325

		17.2.6.2	Man hole with above specifications having inside size 600x450mm and 900mm deep including SFRC rectangular Man hole Cover and frame (medium Duty) 600mm x 450mm complete.	32	Each	5854	187328
11	UADD/ Vol-I	17.18/219	Providing MS/CI foot rests and fixing in manhole with CC blocks of Cement concrete grade 1:2:4 (Nominal Mix) with stone aggregate 20 mm nominal size of size 30cm x 20cm x 15cm				
		17.18.1/219	With 20mm square bar/ casting one foot rest	300	Kg.	90	27000
		17.18.2/219	With 20mm round bar foot rest	55	Kg.	100	5500
12	UADD/ Vol-II	22.10/233	Providing and laying below ground unplasticised PVC pipe to with stand working pressure of 4 kg/cm2 soild waste pipes confirming to IS:13592 and IS:4985 including jointing with seal ring confirming to IS :5282 leaving 10mm gap for thermal expansion all necessary fittings etc. complete. Excavation to be paid seperately.				
		22.10.1/233	110 mm diameter OD	47	Meter	217	10199
13	MPSOR/Vol-II	10.1/116	Structural steel work in single section fixed with or without connecting plate including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	1140	KG	91	103740
14	MPSOR/Vol-II	19.27/577	Constructing brick masonry road gully chamber 50x45x60cm with bricks in cement mortar 1:4 (1 cement : 4 sand) including 500x450 mm precast R.C.C. horizontal grating with frame complete as per standard design :				
		19.27.1	With well burnt bricks	5	metre	3941	19705
15	MPSOR/Vol-II	19.28/577	Constructing brick masonry road gully chamber 45x45x77.5cm with bricks in cement mortar 1:4 (1 cement : 4 sand) with precast R.C.C. vertical grating complete as per standard design :				
		19.28.1	With well burnt bricks	5	metre	4910	24550
16	MPSOR/Vol-II	19.29/577	Constructing brick masonry road gully chamber 110x50x77.5cm with bricks in cement mortar 1:4 (1 cement : 4 sand) including 500x450 mm precast R.C.C. horizontal grating with frame and vertical grating complete as per standard design :				
		19.29.1	With well burnt bricks	2	metre	6285	12570
17	MPSOR/Vol-II	19.36/579	Providing & Fixing of Precast RCC drain cover of size 600x 450 x70mm (thickness) with 4 holes, manufactured by using M- 30 grade of concrete reinforced with 8mm dia Tor Steel @100mm c/c both ways, manufactured by vibro compaction process using joint less FRP moulds, so at to achieve shuttering finish on five faces @top face will have broom finish etc complete.	28	Each	350	9800
18	MPSOR/Vol-II	19.37/580	Providing & Fixing of Precast RCC drain cover of size 750x600 x70mm (thickness) with 6 holes, manufactured by using M-30 grade of concrete reinforced with 8mm dia Tor Steel @100mm c/c both ways, manufactured by vibro compaction process using joint less FRP moulds, so at to achieve shuttering finish on five faces @top face will have broom finish etc complete.	28	Each	550	15400
19	MPSOR/Vol-II	19.38/580	Providing & Fixing of Precast RCC drain cover of size 900x450 x90mm (thickness) with 8 holes, manufactured by using M-30 grade of concrete reinforced with two layers of 8mm dia Tor Steel @100mm c/c both ways, manufactured by vibro compaction process using joint less FRP moulds, so at to achieve shuttering finish on five faces @ top face will have broom finish etc complete.	28	Each	900	25200
Total							3356392
PUMPS							
1	MPSOR/EM	39.10/109	Supplying & installation of approved make required capacity 3 phase, 50 Hz, 415V, open well submersible pump, with control panel starter with dry run protection, single phase preventer, connections, etc. as required as per specifications but excluding pipe and connection cable. (LOCATION- STP TREATED WATER TANK FOR GARDNING)				
		39.10.4/109	10.0 HP head metre 18-40, discharge LPM 1620-570	1	Each	75781	75781
Centrifugal Monoblock Pump set							
2	MPSOR/EM	39.3/107	Supplying and laying of submersible flat cable ISI marked 3 core copper wire of suitable size with proper clamping of approved make.				
		39.3.1	2.5 sq.mm multi strand	50.4	Meter	139	7005.6
3	MPSOR/EM	41.1	Supply of XLPE insulated power cable (conforming IS-7098 Part-I) 1100 Volt grade, 1 core/2 core/3½ core/4 core ISI marked with alu. stranded /solid conductor				
		41.1.5	Unarmoured 3 core				
		41.1.5.3	16 sq. mm	100.8	Meter	116	11692.8
4	MPSOR/Vol-II	19.18/573	Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12mm dia steel bar conforming to IS : 1786 having minimum cross section as 23 mmx25mm and over all minimum length 263 mm and width as 165mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to withstand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	60	Each	266	15960
5	UADD SOR (Vol_I)	6.24/94	Providing and fixing C.I. double acting air valve of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces, tapers etc if required will be paid separately) :	5	Each	2462	12310

6	MPSOR/EM	39.22/115	Supplying & installation of pressure gauges with 15 mm dia brass check nut & capable of showing pressure reading from 0. to 30 kg.	3	Each	2500	7500
7	UADD SOR (Vol. I)	16.13/204	Providing, erecting C.I. foot valve having single leather flap and gunmetal seating. Valve shall be fixed on suction side of pump as per requirement including jointing material and hardware.				
			Flanged Type				
		16.13.3	80 mm	2	Each	793	1586
		16.13.6	150 mm	2	Each	2540	5080
8	MPSOR/EM	25.13/40	Supply of ISI Marked Automatic Star-Delta Starters conforming to IS : 13947-4 with suitable over load relay range and contactor size & timer 415 V , 3 -Phase with two earthing terminals				
		25.13.5	30.0 HP	2	Each	11324	22648
9	MPSOR/EM	52.16.1	Supply, installation, testing and commissioning of 230V AC operated water level control relay should be able to connect three level sensors to detect the water level in the tank. The relay should be Ip 20 rated with 1 no, 16 A, AgCdO contact material. It shall have an ambient temperature range of -20 to +60 Deg C and have led indicator. The reinforced insulation level must be 6 KV - 1.2/50µs between: supply and contacts, electrodes and supply and contacts and electrodes. It should be able to control about a single level or between min./max. limits with adjustable sensitivity range. The float switch float switch of 8 ampere contact rating should be with 2 watertight chambers, counterweight (300gm) with TUV approved cable length of 10 meters including grip.	5	Each	31945	159725
10	MPSOR/EM	22.1	Wiring for sub-mains with PVC insulated cable FRLS with copper multi strand conductor ISI marked in surface rigid PVC conduit (MMS) FRLS ISI marked of suitable size (conduit included) including 2mm thick accessories, connection etc, as required as per specification. (Refer General Notes for Classification of Conduit Wiring Point No.11)				
		22.1.1	2 Wire sub main				
		22.1.1.1	2.5 sq. mm. cable	50.4	Meter	136	6854.4
Total							326142.8
RAIN WATER HARVESTING & TUBE WELLS							
1	MPSOR/ Vol-II	16.1	Boring/drilling bore well of required dia perfectly vertical to receive casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/bore log, including hire and running charges of all equipments, tools, plants and machineries required for the job, all complete as per direction of Engineer-in-Charge, upto 90 metre depth below ground level.				
		0.667372685	All types of soil upto 90 metre depth.				
		16.1.1.3	200 mm nominal size dia.	90	Meter	451	40590
		0.667384259	Rocky strata including Boulders.Upto 90 metre depth.				
		16.1.2.2	150 mm nominal size dia.	230	Meter	625	143750
		0.667395833	All types of soil beyond 90 metre depth.				
		16.1.3.2	150 mm nominal size dia.	175	Meter	428	74900
2	MPSOR/ Vol-II	16.2/476	Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings and accessories etc. all complete, for all depths, as per direction of Engineer-in-Charge.				
		16.2.3	200 mm nominal dia(minimum wall thickness 10mm).	65	Meter	559	36335
3	UADD/ Vol-II	20.5/215	Providing PVC pipe slotted as per direction of Engineer-in-Charge and fixing in Rain water recharge pit/Percolation pit or Soakway with jute coir wrapping pipe.				
		20.5.1	150 mm nominal size dia.	26	Meter	316	8216
4	MPSOR/ Vol-II	16.6/477	Gravel packing in tubewell construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading and sizes as per actual requirement, all complete as per direction of Engineer-in-charge.	50	Cum	947	47350
5	MPSOR/ Vol-II	16.7/478	Development of tube well in accordance with IS : 2800 (part I) and IS: 11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level and draw down etc. by step draw down method, collecting water samples and getting tested in approved laboratory, i/c disinfection of tubewell, all complete, including hire and labour charges of air compressor, tools and accessories etc., all as per requirement and direction of Engineer-in-Charge.	5	hour	478	2390
6	MPSOR/ Vol-II	16.8/478	Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for borewell of:				
		16.8.3/478	200 mm dia	3	Each	488	1464
7	MPSOR/ Vol-II	16.9/478	Providing and fixing M.S. clamp of required dia made of 100 x10 mm flat to the top of casing/ housing pipe of tubewell as per IS: 2800 (part I), including necessary bolts and nuts of required size complete.				
		16.9.3/478	200 mm dia	110	Each	1281	140910
8	UADD/ Vol-II	20.6/215	Providing and laying filter material as given below in recharge pit/ percolation pit or soak pit/ waste water treatment system.				
		20.6.1/215	Course Sand (1.5 mm to 2.00 mm)	15	Cum	1585	23775

		20.6.2/215	Gravel/Pebbles (5 to 25 mm)	15	Cum	1331	19965
9	UADD/ Vol-II	20.7/215	Brick batsCum	15	Cum	948	14220
10	MPSOR/ Vol-II	16.1/475	Boring/drilling bore well of required dia perfectly vertical to receive casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/bore log, including hire and running charges of all equipments, tools, plants and machineries required for the job, all complete as per direction of Engineer-in-Charge, upto 90 metre depth below ground level.				
		16.1.1/475	All types of soil upto 90 metre depth.				
		16.1.1.3/475	200 mm nominal size dia.	20	Meter	451	9020
		16.1.2/475	Rocky strata including Boulders.Upto 90 metre depth.				
		16.1.2.2/475	150 mm nominal size dia.	70	Meter	625	43750
11	MPSOR/ EM	39.2/107	Supplying & installation of required capacity of three phase, 50 Hz,415V, deep well submersible pump steel body, as per IS of approved make, suitable upto 6 " tube well with control panel starter suitable for submersible pump with dry run protection, single phase preventer, connections, including clamp, bore cap etc. as required as per specifications but excluding pipe and connection cable.				
			10 HP with 20 stages, head metre 184-80, discharge LPM 60-270	1	Each	98847	98847
12	MPSOR/ EM	39.3/07	Supplying and laying of submersible flat cable ISI marked 3 core copper wire of suitable size with proper clamping of approved make.				
		39.3.1	2.5 sq.mm multi strand	160	Metre	139	22240
13	MPSOR/ EM	39.5/108	Supplying and laying of approved make nylon rope 12 mm thick complete with binding for support of pump and motor.	100	Metre	76	7600
Total							735322
OTHER STATE SOR ITEMS							
1	GUJRAT Electro Mechanical 2022-23	12	End Suction (Back Pull Out) Pump				
		B	Supply, installation, testing & commissioning of End Suction Back Pull Out centrifugal pump motor set with base frame of specified duty parameters & guaranteed efficiency of following MOC with specified capacity horizontal foot mounted TEFC squirrel cage induction motor (with minimum IE-3 efficiency class), working on three phase AC supply with 50 Hz ± 3%, 415 V ± 10%, rated speed 1450 RPM along with fabricated MS base frame, coupling, coupling guard, foundation bolts etc. as per relevant IS. M.O.C.: Impeller & Wearing Rings: CF8M, Casing: Cast Steel WCB, Shaft: SS 410, Shaft Sleeve: SS 410, Mechanical Seal (above 30 kw), Base Frame: MS.				
			Rating				
		1	Upto 30.0 KW				
			23 KW	1	Each	283245	283245
2	MH-SOR 2018-19 (12-4-28)		Supplying & erecting Float sensor switch for water level controller working on 250V & rated current 8A, with 2 mtr. wire & High quality of wire & plastic body.	2	Each	426	852
Total							284097
MARKET RATE ITEMS							
1	MR1		Supply, fixing and jointing of heavy class GI puddle flange pipes epoxy coated, of minimum 400 mm long clear ends outside the RCC surface, and fixed in underground sumps, water tanks etc. complete, with end joints either screwed / flanged as required with endcaps / plugs complete as per the requirement of E-I-C				
			450 mm dia	1	Each	7000	7000
			350 mm dia	1	Each	6500	6500
			300 mm dia	1	Each	6000	6000
			200 mm dia	2	Each	5500	11000
			150 mm dia	2	Each	5000	10000
			100 mm dia	1	Each	4500	4500
			80 mm dia	4	Each	4000	16000
2	MR2		Providing laying and jointing of galvanised Iron Pipes with specials (such as bends, elbows, tees etc) class light, medium & heavy including testing of joints, cost of pipes, specials and jointing materials all complete.				
			200 mm dia	12	RM	2150	25800
3	MR3		Providing laying and jointing of CI vertical grating in rain water chamber including testing of joints as per standard design.	300	KG	150	45000
4	MR4		Providing, erecting C.I. foot valve having single leather flap and gunmetal seating. Valve shall be fixed on suction side of pump as per requirement including jointing material and hardware.				
			200 mm dia	5	Each	3600	18000
Total							149800
GRAND TOTAL							7656897.8

DETAILED ESTIMATE						
Name of Project :-DEVELOPMENT OF SHANI TEMPLE , UJJAIN						
Name of Work :- ESTIMATE OF UNDER GROUND TANK						
S.NO	Chapter No./Item No.	Description	Qty	Unit	Rate	Amount
1	2/2.1	Surface dressing of the ground including removing vegetation and in-equalities not exceeding 15 cm deep and disposal of rubbish, lead upto 50 m and lift upto 1.5 m.				
		All kinds of soil.	100			
			100	100/sq m.	803	803
2	2/2.6	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottom disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed. (No extra lift is payable if work is done by mechanical means)				
		All kind of soil.				
		F1	670	Cum		
			670	Cum	147	98490
3	2/2.23	Extra rates for quantities of works, executed:				
	2.23.1	In or under water and/or liquid mud, including pumping out water as required.				
		FOOTING	670	Meter depth 20%		
			670	Meter depth 20%	25.8	17286
4	2.23.2	In or under foul position, including pumping out water as required.		Meter depth 25%		
			670	Meter depth	36.75	24622.5
5	2/2.25	Extra for every additional lift of 1.5 m or part thereof in excavation. (No extra lift is payable if work is done by mechanical means)				
	2.25.1	All kinds of soil.				
		F1	964.8	Cum		
			964.8	Cum	30	28944
6	4/4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
	4.1.1	With 20mm nominal size graded stone aggregate				
	4.1.1.3	Nominal Mix -1 Cement : 3 sand : 6 graded stone aggregate (M -15)				
		P.C.C.	25.992	Cum		
			25.992	Cum	4471	116210.232
7	2/2.24	Filling available excavated earth (excluding hard rock/Ordinary rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.				
		QTY.	670	Cum		
		Deduction-P.C.C.	-25.992	Cum		
		R.C.C. Raft	-96.8	Cum		
		R.C.C.Wall	-114	Cum		
			433.208	Cum	95	41154.76
8	5/5.9	Centering and shuttering including strutting,propping etc. and removal of form for :				
A)	5.9.1	Foundations, footings, bases of columns, etc.for concrete up to plinth level.				
		Raft Sides	35.2	Sqm		
			35.2	Sqm	190.6	6709.12
B)	5.9.2	Walls (any thickness) including attached pilasters butteresses, plinth beams and string courses etc.up to plinth level.				
	5.9.2.1	Upto plinth level.				
		Ground wall				
		Outside	240	Sqm		

		Inside	216	Sqm		
		C2	105.6	Sqm		
			561.6	Sqm	219	122990.4
C)	5.9.20	Suspended floors, roof, landings, balconies and access platform with water proof ply 12mm thick,(item to be executed with prior permission of S.E. in case of B & R works and from Additional Projected Directed in case of PIU works)				
		Plinth Slab	100	Sqm		
		Deduction of opening	-5.76	Sqm		
		Slab side	8	Sqm		
		Column	24	Sqm		
			126.24	Sqm	575.35	72632.184
9	5.1	Extra for additional height in shuttering and centering where ever required (over a height of 3.6m.)				
	5.10.1	Suspended floors, roofs,Landing, Beams and balconies				
		Slab shuttering	100			
			100	Sqm	212	21200
10	5.3	Providing and laying in position ready mixed concrete (RMC) of M-25 grade for reinforced cement concrete work, using cement content as per approved design mix and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying,				
		excluding the cost of centering, shuttering, finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate / retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. Note: Minimum cement content is @ 330 kg/cum. (No extra payment for using extra cement as per requirement of mix design.)				
	5.30.1	All works up to plinth level				
		Raft	96.8	Cum		
		Column	12	Cum		
		Plinth Slab	20	Cum		
			128.8	Cum	6332	815561.6
	5.30.2	All works above plinth level and upto floor five level.				
		Deduction of opening	-1.152	Cum		
		Under Ground Water Tank - Long Wall includes Column size	54	Cum		
		Short Wall includes Column size	60	Cum		
			112.848	Cum	6814	768946.272
11	5.28	Extra for providing richer mixes at all floor levels. Note : If Excess/ less cement over the specified cement content used is payable/ recoverable separately)				

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Name of Work :- ELECTRICAL WORK		
Name of Project :-DEVELOPMENT OF SHANI MANDIR , UJJAIN		
ELECTRICAL WORK		
Sr No	Item Description	AMOUNT SOR
1	INTERNAL ELECTRICAL WORK	9019788
2	EXTERNAL ELECTRICAL WORK	47022709
3	Façade Lighting	25984048
4	HVAC	3174081
5	CCTV	5088879
6	Access Control System	3478000
7	Fire Fighting System	5567710
8	Fire Alarm System	2338195
9	PA SYSTEMS	2987932
	GRAND TOTAL	104661341
		1046.61
<p>AMOUNT IN WORDS : - TEN CRORE FOURTY SIX LACS SIXTY ONE THOUSAND THREE HUNDRED FOURTY ONE ONLY</p>		

Internal Electrical Work Of Shani Mandir						
Item No.	Sub item no.	Description of Items	Unit	Quantity	Rates (in Rs.)	Amount
1.2		Point Wiring in surface rigid P.V.C. conduit system with Modular Accessories				
		Point wiring including switches, sockets, lamp holders/ceiling roses etc but excluding metallic switch box and Face Plate with 1.5 Sq. mm. PVC FRLSH insulated cable with copper multi strand conductor ISI marked in Surface rigid P.V.C. conduit (MMS) ISI Marked of suitable size and 1.5 Sq. mm. PVC FRLSH insulated copper earth continuity conductor of green colour inside conduit including painting and making the surface good as required as per specification for :-				
	1.2.1	Light Point/Fan Points.				
		a) Short point	Each	60	354.00	21240
		b) Medium point	Each	120	642.00	77040
		c) Long point	Each	90	981.00	88290
	1.2.2	(Light point/fan points) looping point				
		a) Secondary short point	Each	160	177.00	28320
		b) Secondary medium point	Each	80	321.00	25680
		c) Secondary long point	Each	150	491.00	73650
	1.2.3	3 Pin 6 Amp socket outlet on Separate Board				
		a) Short point	Each	75	388.00	29100
		b) Medium point	Each	90	676.00	60840
		c) Long point	Each	60	1015.00	60900
	1.2.4	Call Bell / Buzzer Points				
		a) Short point	Each	8	372.00	2976
		b) Medium point	Each	10	666.00	6660
		c) Long point	Each	15	1009.00	15135
	1.2.5	Twin Control light points				
		a) Short point	Each	15	377.00	5655
		b) Medium point	Each	20	737.00	14740
		c) Long point	Each	30	1167.00	35010
	1.2.6	Point wiring excluding metallic switch box, sheet but including switches, sockets for 3 pin 6 Amp. Socket outlet point with 1.5 Sq. mm. PVC FRLSH insulated cable with copper multi strand conductor ISI marked in Surface rigid P.V.C. conduit (MMS) ISI marked of suitable size and 1.5 Sq. mm. PVC FRLSH insulated copper earth continuity conductor of green colour inside conduit with required materials as per specification on same board.	Each	130	254.00	33020
	1.3.7	Circuit Wiring (For Flush and Modular)				
		Wiring for circuit wiring with PVC FRLSH insulated cable with copper multi strand conductor ISI marked in concealed rigid P.V.C. conduit (HMS) of ISI marked suitable size including painting and making the surface good as required etc. as required as per specification				
		a) 2x2.5 Sq.mm.	meter	2500	133.00	332500
		b) 4x2.5 Sq.mm.	meter	3000	209.00	627000
	1.6.3	POWER WIRING IN CONCEALED RIGID P.V.C. CONDUIT SYSTEM WITH MODULAR ACCESSORIES				
		Point wiring (excluding metallic switch box & sheet) for 3 Pin 16 Amp. Socket Outlet Point With 4 Sq. mm. PVC FRLSH insulated cable with copper multi strand conductor ISI marked in Concealed rigid P.V.C. Conduit (HMS) ISI Marked of suitable size including painting and making the surface good as required with 16/20 Amp.				
		Modular. Switch & Socket / S.S. Combined 6/16/20 Amp. of ISI Marked and 4 Sq. mm. PVC FRLSH insulated copper earth continuity conductor of green colour inside conduit as per specification for:-				
		On Separate Board				
		A. Short Point	Each	25	777.00	19425
		B. Medium Point	Each	20	1366.00	27320
		C. Long Point	Each	25	2072.00	51800
		D. Extra Long -I	Each	25	2601.00	65025
		E. Extra Long -II	Each	25	3121.00	78025
		F. Extra Long -III	Each	30	3646.00	109380
	1.6.4	Same board switch-socket 6/16 Amp	Each	25	374.00	9350
1.7		Supplying and fixing PVC conduit as required conforming to IS 9537 (Part-3), ISI marked along with accessories on surface etc. as required.				
	1	PVC. conduit 20 mm (MMS)	Metre	500	27.00	13500
	2	PVC conduit 25 mm. (MMS)	Metre	1000	34.00	34000
	3	PVC conduit 32 mm. (MMS)	Metre	500	48.00	24000
1.8		Supply and fixing PVC conduits required conforming to IS 9537 (Part-3), ISI marked along with the accessories in concealed system etc. as required.				
	1	PVC. conduit 20 mm (HMS)	Metre	1000	39.00	39000
	2	PVC. conduit 25 mm (HMS)	Metre	2500	52.00	130000
	3	PVC. conduit 32 mm (HMS)	Metre	1000	72.00	72000
4.3		CIRCUIT WIRING IN EXISTING CONDUIT / PVC CASING CAPPING				
		Supplying and drawing single core PVC FRLSH insulated cable with copper multi strand conductor ISI marked in existing rigid conduit/PVC casing capping in surface or concealed as per specification.				
	4.3.1	1.5 Sq mm wire				
	3	3 X 1.5 sq mm	meter	500	68.00	34000
	4	4 X 1.5 sq mm	meter	500	91.00	45500
	4.3.2	2.5 Sq mm wire				
	3	3 X 2.5 sq mm	meter	1000	110.00	110000
	4	4 X 2.5 sq mm	meter	500	146.00	73000
	4.3.3	4.00 Sq mm wire				
	3	3 X 4.00 sq mm	meter	250	164.00	41000

	4	4 X 4.00 sq mm		meter	250	219.00	54750
5.2		SUB-MAIN IN CONCEALED RIGID PVC CONDUIT IN COPPER CONDUCTOR					
		Wiring for sub-mains with PVC FRLSH insulated cable with copper multi strand conductor ISI marked in recessed / concealed rigid PVC ISI marked conduit of suitable size (Conduit included) including connection painting and making the surface good as required as per specification					
	5.2.1	2 WIRE SUB-MAIN					
	2	4.0 sq. mm.		meter	250	272.00	68000
	3	6.0 sq. mm.		meter	500	349.00	174500
	5.2.4	4 WIRE SUB-MAIN					
	2	4.0 sq mm cable in 20 mm conduit		meter	500	408.00	204000
	3	6.0 sq mm cable in 25 mm conduit		meter	350	551.00	192850
8		Supplying of ISI Marked of Moulded Case Circuit Breaker (MCCB) suitable for 3 phases, 3 pole, 50 Hz, 415 Volts , AC supply with respective interrupting capacity (KA) at 415 Volts cited against their range standard conforming to IS - 8828					
8.2	8.2	MCCB with Breaking Capacity 25 KA at 415 V					
	1	Current Rating -25 to 100 Amps & 80% -100% adjustable		Each	20	5482.00	109640
8.6	8.6	Supplying of ISI Marked and accepted standard of Miniature Circuit Breaker (MCB) of ' C' series suitable for 240/415 Volts, 50 Cycle, 10 kA Value AC supply conforming to IS : 8828 : 1996, IEC : 60898 :2002 but without enclosures :-					
	8.6.1	SINGLE POLE (SP)					
	2	6 Amp to 32 Amp, 10kA Rating		Each	120	180.00	21600
	3	For 40 Amps. only, 10kA Rating		Each	10	436.00	4360
	8.6.3	DOUBLE POLE (DP)					
	2	6 Amp to 32 Amp, 10kA Rating		Each	20	639.00	12780
	8.6.6	FOUR POLES(FP)					
	2	6 Amp to 32 Amp, 10kA Rating		Each	25	1423.00	35575
	3	For 40 Amps, 10kA Rating		Each	10	1951.00	19510
	4	50 Amp to 63 Amp, 10kA Rating		Each	10	2021.00	20210
8.9	8.9	Supply of powder coated sheet steel encloser SPN MCB DB inclusive of Busbar, Neutral bar, Earth bar & two earth terminals etc. complete as per IS:13032 (exclusive of MCB & isolator)-					
	2	4 way single door		Each	30	430.00	12900
	5	8 way double door IP 43 protection		Each	20	923.00	18460
8.10	8.10	Supplying of approved make TPN MCB DB Metal Double Door IP 43 Protection with provision for FP MCB/isolator/RCCB/RCBO as incomer and SP MCBs as outgoing inclusive of Busbar, Neutral bar, Earth bar, connection copper wire not less than 16 sq. mm & two earth terminals etc. complete as per IS:13032(exclusive of MCB & isolator):-					
	2	4 Way (8+12)		Each	6	3978.00	23868
	3	6 Way (8+18)		Each	5	1545.00	7725
	4	8 way (8+24)		Each	20	6336.00	126720
	5	12 way (8+36)		Each	8	9019.00	72152
8.12	8.12	Supplying of powder coated Vertical TPN MCB DB Metal Double Door with IP 43 protection with MCCB 100A TP 10kA as incomer and space for SP/TP MCBs as outgoing (without MCCB/MCBs) inclusive of busbar &connections etc without MCCB:-					
	2	8 way with MCCB		Each	6	11627.00	69762
	3	12 way with MCCB		Each	3	15733.00	47199
8.16		Supplying and installing of RCBOs (Residual current circuit breaker with overload and short circuit protection) ISI marked complete as per I.S. standard conforming to IEC:61009-2-1 & IS:12640-2:2001,240/415V 50 Hz with 10 kA short circuit withstand capacity for earth leakage, overload & short circuit protection including connection in existing enclosure in approved manner as per specification.					
	8.16.2	FP (8 module)					
	2	4 pole 25-32 Amps, 30 mA sensitivity		Each	10	4133.00	41330
	3	4 pole 40 Amps, 30 mA sensitivity		Each	15	4199.00	62985
	4	4 pole 63 Amps, 30 mA sensitivity		Each	30	5030.00	150900
8.17		FIXING OF SFUs, DBs, BUSBAR, MCCBs, MCBs, ISOLATORS & RCBOs					
		Fixing of metal clad enclosure on 25 X 5 mm flat iron clamps including supplying and fixing of clamps as required duly embedded in masonry including cable connection and other required material as per specification :-					
	1	16 Amps SP/DP Switch /SPN DB up to 4 way		Each	250	202.00	50500
	2	32 Amps DP switch /SPN DB up to 8 way /16 Amp TPN DB up to 3 way per pole or 16 Amps TP or TPN switch / 16 Amps 415 V Isolator		Each	100	223.00	22300
	3	32 Amps TP or TPN switch/ 32 Amps 415 V Isolator / 16 Amps TPN DB up to 6 way per pole /32 Amps 415 Volt busbar 4 way		Each	80	245.00	19600
8.18		Fixing of metal clad enclosure on 25X 25 X 5 mm angle iron clamps including supplying and fixing of clamps as required duly embedded in masonry including cable connection and other required material as per specification :-					
	1	Fixing of 63 Amps TP or TPN main switches/ DB 63 Amps. 240/415 Volt 4 to 8 way or 63 Amps change over switch /63 Amps 415 Volt Isolator /30 Amps 415V TPN DB up to 6 way per pole and busbar 4 way		Each	40	396.00	15840
	2	Fixing of 100 Amps TP or TPN main switch or 100 Amps change over switch /100 Amps 415 Volt Isolators and busbar 4 way		Each	40	580.00	23200

	3	Fixing of 200 Amps TP or TPN main switch or 200 Amps change over switch /200 Amps 415 Volt Isolators and busbar 4 way	Each	35	809.00	28315
8.20		Fixing of MCB /MCCB/ Isolator				
	1	Fixing of MCB / Isolator SP/DP in sheet steel enclosure as required as per accepted practice, including mounting on busbar and cable connection etc. complete (Labour only)	Each	120	33.00	3960
	2	Fixing of MCB /MCCB Isolator TP /TPN/FP in sheet steel enclosure as required as per accepted practice, including mounting on busbar and cable connection etc. complete.	Each	80	66.00	5280
8.23		Labour charges for fixing sheet steel enclosures, MCB DB flush mounting type , as per accepted practice, duly embedded and end plate completely flushed in wall, cable connection etc. Complete :				
		FOR S. No :-				
	1	8.5(1) to 8.5(5), 8.6(1) to 8.6 (5) & 8.7(1)	Each	90	518.00	46620
	2	8.5(6) & 8.5(7), 8.6(6) to 8.6(7), 8.7(2) to 8.7(3) & 8.8(1) to 8.8(3)	Each	80	737.00	58960
9.4		Supplying and fixing as per specification Call bell / buzzer with necessary materials complete.				
	1	Buzzer	Each		90.00	0
	2	Ding Dong bell	Each	10	155.00	1550
	3	Musical bell	Each	10	327.00	3270
	4	Remote/cordless bell	Each	10	915.00	9150
9.6(b)		Supplying and laying of submersible flat cable ISI marked 3 core copper wire of suitable size with proper clamping of approved make.				
	2	4.0 sq.mm multi strand	Metre	450	153.00	68850
	3	6.0 sq.mm multi strand	Metre	250	220.00	55000
9.8		Supplying and fixing 3 pin plug top ISI marked				
	1	6 Amp 250 Volt 3 Pin	Each	35	61.00	2135
	2	16 Amp 250 Volt 3 Pin	Each	40	112.00	4480
9.10		Supplying and fixing as per specification Caution / Danger Board as required & design with necessary material complete.				
	1	Small Size	Each	25	85.00	2125
	2	Large Size	Each	15	165.00	2475
9.11		Supplying and fixing as per specification polycarbonate Ceiling rose 3 Plate of approved make ISI marked with necessary material complete.	Each	500	24.00	12000
9.17		Supply and fixing of mixed die-electric ultra-heavy duty APP capacitor 440Volt, 3 Ph., peak inrush current up to 500 x In, over current up to 3 x In(normal current), operating losses total not more than 0.35 W/kVAR, operating life not less than 300000 hrs, switching 20000 operation/year, as per IS:13340-1993, IS:13341-1992, IS:13585-1994, of approved make as required as per specification				
	1	5 to 25 kVAR bank	Per kVAR	120	759.00	91080
9.18		Supply and fixing of MPP - H heavy duty capacitor 415 Volt, 3 Ph., peak inrush current up to 250 x In, over current up to 1.8 x In(normal current), operating losses total not more than 0.35 W/kVAR, switching 8000 operation/year, as per IS:13340-1993, IS:13341-1992 of approved make as required as per specification				
	2	5 to 25 kVAR bank	Per kVAR	80	308.00	24640
9.19		Supplying and fixing of capacitor duty contactor of approved make in existing power factor/LT panel including connections etc.as required as per specification.				
	1	Upto 3 kVAR 440V,3Ph,50Hz, Aux contact-1NO	Each	3	1469.00	4407
	2	For 5 kVAR 440V,3Ph,50Hz, Aux contact-1NO	Each	3	1538.00	4614
	3	For 8.5 kVAR 440V,3Ph,50Hz, Aux contact-1NO	Each	3	1781.00	5343
	4	For 10 kVAR 440V,3Ph,50Hz, Aux contact-1NO	Each	3	1900.00	5700
	5	For 12.5 kVAR 440V,3Ph,50Hz, Aux contact-1NO	Each	3	1988.00	5964
	6	For 15 kVAR 440V,3Ph,50Hz, Aux contact-1NO	Each	6	2588.00	15528
	7	For 20 kVAR 440V,3Ph,50Hz, Aux contact-1NO	Each	4	3031.00	12124
	8	For 25 kVAR 440V,3Ph,50Hz, Aux contact-1NO	Each	4	3400.00	13600
9.20		Supplying and fixing of APFC relay 1A/5 A site selectable, measurement of individual current and voltage harmonic (THD), capacitor failure indication, In-built temperature sensor of approved make in existing power factor Panel including connections etc. as required as per specification as mentioned below :				
	1	8 Step APFC relay (144 x144mm)	Each	1	10717.00	10717
	2	Automatic power factor relay 12 Steps 230V 144 x 144mm	Each	1	17079.00	17079
9.25		Supplying and drawing following pair,0.5 Sq mm PVC Insulated copper conductor unarmoured telephone cable in existing surface / concealed, steel / PVC Conduit as required.				
	4	10 Pair	meter	500	97.00	48500
9.26		supplying and drawing Co-axial T.V. Cable RG-6 Grade , 0.7 mm Solid Copper conductor PE Insulated , Shielded with fine tined copper braid and protected with PVC Sheath in the existing surface / concealed ,steel / PVC. Conduit as required.	meter	500	24.00	12000
9.28		Supply, installation testing and commissioning of telephone tag block krone connector with enclosure complete as mentioned below:-				
	1	10 Pair	each	5	780.00	3900
	2	20 Pair	each	5	1040.00	5200
	3	30 Pair	each	10	1300.00	13000
9.30		Supply, fixing and testing of RJ 11 telephone jack modular (1 Module)	each	30	195.00	5850
9.32		Supply, fixing and testing of T.V. outlet modular (1Module)	each	20	149.00	2980

9.33		Supply, installation testing and commissioning RJ - 45 computer jack cat 6 with shutter modular (1Module)				
	1	RJ - 45 computer socket cat 6 with shutter modular (1Module)	each	20	337.00	6740
9.45		Supplying and fixing step type Modular electronic, Fan regulator single/double module including connection etc. as required on existing board				
	1	450 Watt	Each	120	242.00	29040
9.46		Supplying, erection and testing electric Ceiling fan of double ball bearing complete with standard down rod, canopy, hanging shackle, Aluminium blades, without regulator, A.C. 230-250 volts including connections with all necessary material complete as required confirming to IS :374/1979 with up-to-date amendments.				
	1	Ceiling Fan (Energy Saver)-1200 mm Sweep with minimum air delivery 210 m ³ /min	Each	120	2231.00	267720
9.47		Supplying, erection and testing Wall Mounting fan complete with Wall Bracket, canopy, blades, speed Regulator etc. A.C 230-250 volts with connections and including raw bolt/Anchor hole fastener etc. complete finished and as required.				
	1	300 sweep	Each	10	2704.00	27040
	2	400 sweep	Each	5	2974.00	14870
9.48		Supplying, erection and testing Cabin fan oscillating type with base, blades, guard, speed regulator etc. AC 230-250 volts with connections and including raw bolt/Anchor hole fastener etc. complete finished and as required.				
	1	300 sweep	Each	5	2569.00	12845
9.50		Supplying, erecting and testing Exhaust Fan heavy duty with mounting frame, blades AC 230-250 complete connection and including, frame bolt/ Anchor hole fasteners etc. complete finished and as required.				
	1	300mm sweep 900 RPM	Each	10	2569.00	25690
	3	450mm sweep 900 RPM	Each	5	4597.00	22985
11.1		Earthing with G.I. Earth pipe 4.5 meter long and 40 mm dia with masonry enclosure in cement mortar, cover plate having locking arrangement on the top etc.(but without charcoal or coke and salt) complete as required.	Each	10	7745.00	77450
11.2		Add Extra for using salt and charcoal / coke for pipe earth electrode as required including excavation & refilling.				
	1	Excavation 4.5m by manual labour	Each	10	1457.00	14570
	2	Excavation by making hole with Auger	Each	10	1403.00	14030
11.3		Earthing with G.I. Earth plate 600mm X 600mm X 6mm thick including accessories and providing masonry enclosure in cement mortar, cover plate having locking arrangement on the top and G.I. watering pipe 20mm dia 2.7 meter long etc. (but without charcoal or coke and salt) complete as required.	Each	10	4755.00	47550
11.5		Add Extra for using salt and charcoal / coke for G.I. Plate or Copper plate earth electrode as required including excavation & refilling the pit in all type of soilure.	Each	10	1005.00	10050
11.6		Supplying and laying 4.0mm (8 SWG) copper wire at 0.5 meter below ground level as conductor earth electrode including soldering etc. as required.	meter	250	88.00	22000
17.6		Supplying and fixing of approved make modular type G.I. metal box 1.2mm minimum thick and depth 50mm for single row boxes and 60mm depth for two/three row boxes earth terminal stud with nut and washer with modular base and cover plate including fixing in concealed etc. as required for:-				
	1	1Or 2 Module metal box	Each	40	146	5840
	2	3 Module metal box	Each	30	189	5670
	3	4 Module metal box	Each	40	208	8320
	4	6 Module metal box	Each	40	274	10960
	5	8/9 Module metal box	Each	60	334	20040
	6	12 Module metal box	Each	40	421	16840
19.1		Supply and fixing of LED tube rod comprising of LED tube with non-integral / integral driver, upto 6500K color temp having 40000 burning hrs life with minimum @ L 70, system lumen output should be minimum with efficacy > 100 lm/W. LED driver PF > 0.95 & THD < 20%. The colour rendering index of LED light should be more than 70. Submission of LM 79-08/IS16106 (2012), IEC60598, IEC61347 i/c connection wire, testing etc.to complete the job. 2 Yrs Guarantee certificate from manufacturer.				
	19.1.1	Tube light LED 1 X 5/8/10Watt Integral i/c batten aluminium body, Polycarbonate diffuser	Each	30	268.00	8040
	19.1.3	Tube light LED 1 X 18/20/22Watt, Integral i/c batten aluminium body, Polycarbonate diffuser.	Each	120	463.00	55560
19.4		Supply of recessed mounting type Led light fixture , LED of 1 to 3 W each assembled on single MCPCB, having colour temp upto 6500K & having 50000 burning hrs life with minimum @ L 70, system lumen output should be minimum with efficacy> 100 lm/W. LED driver, PF 0.95 & THD < 20% & Surge protection minimum 5KV. The colour rendering index of LED light should be more than 70. Housing made of CRCA powder coated frame with glare free diffused polycarbonate cover. Submission of LM 79- 08/IS16106 (2012), IEC60598, IEC61347 i/c connection wire, testing etc.to complete the job. 2 Yrs Guarantee certificate from manufacturer.				
	19.4.1	Led luminaire 2' X 2', 36W, 4-6.5K	Each	30	3474.00	104220
	19.4.2	Led luminaire 2' X 2', 45W, 4-6.5K	Each	40	3901.00	156040

19.5		Supply of surface mounting type Led light fixture , LED of 1 to 3 W each assembled on single MCPCB, having colour temp upto 6500K & having 50000 burning hrs life with minimum @ L 70, system lumen output should be minimum with efficacy>120 lm/W. LED driver, PF 0.95 & THD < 20% & Surge Protection minimum 5 KV. The colour rendering index of LED light should be more than 70. Housing made of CRCA powder coated frame with glare free diffused polycarbonate cover. Submission of LM 79-08/IS16106 (2012), IEC60598, IEC61347 i/c connection wire, testing etc.to complete the job. 2 Yrs Guarantee certificate from manufacturer.				
	19.5.1	Led luminaire 2' X 2', 36W	Each	25	4023.00	100575
	19.5.2	Led luminaire 2' X 2', 42/45W	Each	20	4510.00	90200
19.6		Supplying and fixing surface mounting LED down lighter , LED of 1 to 3 W each assembled on single MCPCB, having colormap up to 6500K & having 50000 burning hrs life with minimum@ L 70, system lumen output should be minimum with efficacy>120 lm/W. LED driver PF 0.95 & THD < 20% & surge protection minimum 5KV. The colour rendering index of LED light should be more than 70. Housing made of CRCA powder coated frame with glare free diffused polycarbonate cover. Submission of LM 79- 08/IS16106 (2012), IEC60598, IEC61347 connection wire, testing etc. to complete the job. 2 Yrs Guarantee certificate from manufacturer.				
	19.6.3	7/8W	Each	30	670.00	20100
	19.6.5	14W /15 W	Each	60	975.00	58500
	19.6.7	22/24W	Each	50	1829.00	91450
	19.6.13	14/15 W COB Lights	Each	50	1615.00	80750

19.7		Supplying and fixing recessed mounting LED down lighter , LED of 1 to 3 W each assembled on single MCPCB, having colour temp up to 6500K & having 50000 burning hrs life with minimum @ L 70, system lumen output should be minimum with efficacy>120 lm/W. LED driver PF 0.95 & THD < 20% & surge protection minimum 5KV. The colour rendering index of LED light should be more than 70. Housing made of CRCA powder coated frame with glare free diffused polycarbonate cover. Submission of LM 79-08/IS16106 (2012), IEC60598, IEC61347 connection wire, testing etc. to complete the job. 2 Yrs. guarantee certificate from manufacturer.				
	19.7.5	14/15 Watt	Each	70	853.00	59710
	19.7.13	14/15 W COB Lights	Each	50	1560.00	78000
19.16		Supplying, fixing & testing of approved make flexible LED strip comprising of 60 LED per meter W/O driver for direct mounting complete with all accessories including connection lead, fixing, connection as required. Submission LM 79-08/IS16106 (2012), IEC60598, IEC61347i/c connection wire, testing etc. to complete the job.				
	19.16.4	Flexible LED strip 72Watt/75Watt - 5 M outdoor light W/O driver IP65	Each	200	1719.00	343800
19.17		Supplying, fixing & testing of approved make Power supply for LED strip				
	19.17.6	Power supply 72Watt/75Watt for LED strip IP65	Each	100	1609.00	160900
	(PWD-2024)41.24	Supply and erection of hot dip G.I. cable tray perforation not more than 17.5% for specific dimensions along with tees, bends. The cable tray shall be hang from ceiling/ fixed to wall with necessary angle/flat iron/hanging rod, for ceiling suspensions, clamp, anchor fastener, nuts, bolts, washers, not more than 1.0 mtr. apart complete as per specification to complete the job. The tray shall be as follows :-				
	41.24.1	100x50x1.6mm thick	Metre	1000	586.00	586000
	41.24.2	150x50x1.6mm thick	Metre	1500	699.00	1048500
	41.24.3	300x50x1.6mm thick	Metre	500	1027.00	513500
Total Internal Electrical Amount						9019788

External Electrical Estimate						
Item No.	Sub item no.	Description of Items	Unit	Rates (in Rs.)	QTY.	Amount
UADD-2025	14.2	Supply of approved High Tension XLPE cable (conforming IS-7098/II/85) 11kV grade as per ISI standard single/three core Armoured with Alu. Solid/stranded conductor ISI Marked as required				
	14.2.3	3 Core XLPE CABLE 11 KV GRADE				
	6	300 Sq.mm	meter	2775.00	1000	2775000
UADD-2025 14.1		Supply of XLPE Insulated power cable (conforming IS- 7098 Part-I) 1100 Volt grade/Heavy duty power cable conforming to IS 1554-1100 Volts grade , 2 core /3½ core/4 core ISI MARKED with Alu. Stranded /solid conductor				
	14.1.8	ARMOURED 3½ CORE				
	1	25 Sq.mm(XLPE)	meter	251.00	1500	376500
	2	35 Sq.mm(XLPE)	meter	305.00	350	106750
	3	50 Sq.mm(XLPE)	meter	413.00	250	103250
	4	70 Sq.mm(XLPE)	meter	556.00	320	177920
	7	150 Sq.mm.(XLPE)	meter	1035.00	1200	1242000
	10	300 Sq.mm.(XLPE)	meter	2024.00	1100	2226400
	14.1.10	ARMOURED 4 CORE				
	1	6 Sq.mm.(XLPE)	meter	139.00	1500	208500
	2	10 Sq.mm.(XLPE)	meter	191.00	2000	382000
	3	16 Sq.mm.(XLPE)	meter	204.00	1000	204000
	14.6	BRASS COMPRESSION GLAND				
	14.6.1	Supplying and fixing heavy duty cable gland for P.V.C. insulated armoured cable with brass washer, Rubber ring complete erected with cable and lead connection etc. as per specification complete.				
	1	Gland Size 22mm suitable for cable 2,3,3½ & 4 x up to 6 Sq.mm	Each	66.00	40	2640
	2	Gland Size 22mm suitable for cable 2,3, 3½, 4 x 10 Sq.mm or 2x 16 Sq.mm	Each	76.00	30	2280
	3	Gland size 28mm suitable for cable 3,4 x 16 Sq.mm	Each	116.00	30	3480
	4	Gland size 32mm suitable for cable 2,3, 3½, 4 x 25 Sq.mm OR 2,3, 3½ x 35 Sq.mm OR 2,3 x 50 Sq.mm.	Each	134.00	35	4690
	5	Gland size 38mm suitable for cable 3½ x 70 Sq.mm, 3x95 Sq.mm	Each	209.00	30	6270
	7	Gland Size 50 mm suitable for cable 3½ x 150 Sq.mm OR 3 x 185 Sq.mm	Each	335.00	20	6700
	9	Gland Size 70mm suitable for cable 3 x 240 Sq.mm OR 3½ x 300 Sq.mm	Each	620.00	20	12400
14.7		Supplying and fixing ferrules . (Aluminium in Line connector) As per IS - specification suitable for following size of cable with Aluminium stranded/solid conductor evenly cramped with high pressure tool including connection as required complete				
	14.7.1	For Conductor Size-				
	1	2.5 to 6.00 Sq.mm	Each	4.00	252	1008
	2	10.00 Sq.mm	Each	4.00	150	600
	3	16.00 Sq.mm	Each	6.00	80	480
14.8		LUGS: -				
		Supplying and fixing cramping type Alum. lugs as per I.S.S. Specification suitable for following size of cable with Alu. /Copper solid/stranded conductor evenly cramped with high/pressure tool and connected to switch gear/Bus/M.C.C.B./ M.C.B. etc. as required complete. For Conductor Size-				
	1	6mm to 16 Sq.mm	Each	6.00	150	900
	2	25 Sq.mm	Each	9.00	100	900
	3	35 Sq.mm	Each	11.00	0	0
	4	50 Sq.mm	Each	16.00	40	640
	5	70 Sq.mm	Each	22.00	40	880
	6	95 Sq.mm.	Each	26.00	40	1040
	8	150 Sq.mm.	Each	46.00	40	1840
	11	300 Sq.mm.	Each	144.00	40	5760
14.9		Supplying & fixing pin terminal lugs as per ISS specification suitable for cable evenly cramped with high pressure tool & connection to switch gear terminal.				
	1	Aluminium Lugs Pin Type a. Up to 16 Sq.mm Conductor Size	Each	5.00	350	1750
	2	Copper Lugs Pin Type a. Up to 16 Sq.mm Conductor Size	Each	15.00	150	2250
14.10		CABLE LAYING				
	7	Laying of one number power cable of 1:1 kV grade of size not exceeding 25 Sq.mm in the existing RCC Hume/Stone/Ware/G.I./DWC/Surface pipe as required.	meter	38.00	6000	228000
	8	Laying of one number power cable of 1.1 kV grade of size exceeding 25 Sq.mm but not exceeding 400 Sq mm in the existing RCC/Hume Stoneware/G.I. Pipe /DWC/Surface as required.	meter	61.00	3220	196420
	15	Laying of one number power cable of grade exceeding 1.1kV but not exceeding 11kV of size not exceeding 400 Sq.mm in the existing RCC / Hume / Stoneware / G.I. Pipe in existing trench as required.	meter	61.00	1000	61000

	14.11	Excavation of the trenches in Hard Rock not exceeding 1.5 meter in width and lift upto 1.5 meter including getting out the excavated soil and disposal of surplus excavated soil as directed within the lead of 50 meter (without blasting)	Cu. Mtr.	348.00	500	174000
	14.14	Supplying Route Marker with 10cm x 10cm G.I. Plate 5mm. Thick with Inspection thereon bolted/welded to 35mm x 35mm x 6mm angle iron 60cm long and fixing the same in ground as required.	Each	342.00	10	3420
7.5		Supplying of ISI Marked Automatic Transfer Switches (ATS) conforming to IEC : 60947-1 & IEC : 60947-6-1 with automatic inbuilt time delay 4 pole, 415 V with two earthing terminals if required.				
	11	400 Amp (with enclosure)	Each	83525.00	1	83525
	12	630 Amp (with enclosure)	Each	101465.00	1	101465
11.1		Earthing with G.I. Earth pipe 4.5 meter long and 40 mm dia with masonry enclosure in cement mortar, cover plate having locking arrangement on the top etc.(but without charcoal or coke and salt) complete as required.	Each	7745.00	15	116175
11.2		Add Extra for using salt and charcoal / coke for pipe earth electrode as required including excavation & refilling.				
	1	Excavation 4.5m by manual labour	Each	1457.00	15	21855
	2	Excavation by making hole with Auger	Each	1403.00	15	21045
11.3		Earthing with G.I. Earth plate 600mm X 600mm X 6mm thick including accessories and providing masonry encloser in cement mortar, cover plate having locking arrangement on the top and G.I. watering pipe 20mm dia 2.7 meter long etc. (but without charcoal or coke and salt) complete as required.	Each	4755.00	30	142650
11.4		Earthing with Copper Earth plate 600mm X 600mm X 3mm thick including accessories and providing masonry encloser in cement mortar, cover plate having locking arrangement on the top and G.I. watering pipe 20mm dia 2.7 meter long etc. (but without charcoal or coke and salt) complete as required.	Each	14327.00	5	71635
11.5		Add Extra for using salt and charcoal / coke for G.I. Plate or Copper plate earth electrode as required including excavation & refilling the pit in all type of soilure.	Each	1005.00	45	45225
11.6		Supplying and laying 4.0mm (8 SWG) copper wire at 0.5 meter below ground level as conductor earth electrode including soldering etc. as required.	meter	88.00	1500	132000
11.8		Supplying and laying 25mm X 5mm G.I. strip at 0.5 meter below ground level as strip earth electrode including jointing etc. as required.	meter	107.00	450	48150
11.10		Providing & fixing 25mm X 5mm copper strip in 40mm dia G.I. pipe from earth electrode as required.	meter	1525.00	150	228750
		LIGHTNING CONDUCTOR				
11.20	11.20	Providing and fixing of lightning conductor finial made of 25mm dia 300mm long copper tube having single prong at top with 85 mm dia 3 mm thick copper base plate including holes complete as required.	Each	2762.00	3	8286
11.24	11.24	Providing and fixing copper tape 20mm X 3mm thick on parapet and surface of wall of lightening conductor as required (for Vertical runs)	meter	649.00	150	97350
11.28	11.28	Fixing of copper / G.I. Tape 20mm X 3mm thick on parapet and surface of wall for lightening conductor as required (for Vertical runs)	meter	34.00	150	5100
11.29	11.29	Providing and fixing " Testing Joint " made by 20mm X 3mm thick copper strip 125mm long with 4 Nos of tinned Brass bolts, Nut, check nuts and spring washers etc. complete as required.	Each	315.00	40	12600
	4.3	CIRCUIT WIRING IN EXISTING CONDUIT / PVC CASING CAPPING				
		Supplying and drawing single core PVC insulated cable FR with copper multi strand conductor ISI marked in existing rigid conduit in surface or concealed as per specification.				
	4.3.2	2.5 Sq mm cable				
	4	4 X 2.5 sq mm	meter	146.00	2700	394200
	9.14	Supplying, fixing, testing & commissioning wall / floor mounted LT Panel primer coated with two coat of enamel paint & provided with required gasket for dust/ vermin proof with degree of protection IP42 suitable for 415V 3 phase ,50 Hz ,4 wire system fabricated out of CRCA sheet up to 2 mm thick (1.6 mm for doors) with frame work of angle iron/ channel/ bolted type construction duly compartmentalised for incomer, bus section , outgoing ,cable alleys & CT,PT Ampere Meter ,Volt Meter , selector switches, Frequency Meter ,phase indicating lamps , energy Meter complete including cost of busbar supports, detachable cable gland plates,2 earthing terminals, internal wiring & fixing of separately supplied MCBs, MCCBs ,panel mounted Changeover switch/SFUs, etc. as required but excluding cost of busbar strips, Ampere Meter, Volt Meter, Selector switch as per approved design & specification	Kg	247.00	1500	370500
	9.15	Supplying and fixing of LT Panel accessories in existing LT Panel including connections etc.as required as per speechification				

	1	Digital Ampere Meter with CTs with selector switch	per set	2414.00	5	12070
	2	Digital Volt Meter with selector switch & HRC fuse	per set	2499.00	5	12495
	3	Frequency Meter	Each	1524.00	5	7620
	4	Multifunction Meter	Each	2865.00	5	14325
	5	Copper Bus bar strips with PVC sleeves	Kg	1036.00	50	51800
	6	Aluminium bus bar strips with PVC sleeves	Kg	317.00	150	47550
	7	LED lamps	each	256.00	30	7680
	20.3	Astro Time Switch-For lights On – Off based on Sunrise & Sunset timing Supply, installation, testing and commissioning of Astro - Time Switch based on Astro program i.e. calculation of sunrise and sunset times through date, time and Indian PIN Codes. It shall have an option of Astro ON period override by time switch and Offset function which allows programming of switching times Offset from the astronomic time. The 230 V AC operated Astro Time Witch shall have an operating range of 96...253V AC with 1 NO, 16 A, AgSn02 Contact material with Starting current of 120A and 1 CO cadmium Free contacts, it shall have LCD status indication with back light display along with internal easily replaceable battery on the front side for set-up and programming. The electrical life at rated load AC1 shall be 1 Lakh cycles and shall work at an ambient temperature of -20 to +50 deg C. It shall have a dielectric strength between supply and open contacts of 4000V AC, between open contacts 1000V AC respectively and rated impulse voltage (between supply and contacts) of 6kV and rated impulse voltage (between open contacts) of 1.5kV. The mounting shall be on 35 mm DIN rail (EN 60715) and shall have necessary approvals like CE, IMQ and EAC.	Each	3408.00	5	17040
8		Supplying of ISI Marked of Moulded Case Circuit Breaker (MCCB) suitable for 3 phases, 3 pole, 50 Hz, 415 Volts , AC supply with respective interrupting capacity (KA) at 415 Volts cited against their range standard conforming to IS - 8828				
8.3		MCCB with Breaking Capacity 36 KA at 415 V				
	1	Current Rating -160 Amps & Adjustable: 80% -100% thermal & 5-10 times magnetic setting	Each	11348.00	5	56740
	2	Current Rating -200 Amps & Adjustable: 80% -100% thermal & 5-10 times magnetic setting	Each	13781.00	5	68905
	3	Current Rating -250 Amps & Adjustable: 80% -100% thermal & 5-10 times magnetic setting	Each	16685.00	5	83425
8.6	8.6	Supplying of ISI Marked and accepted standard of Miniature Circuit Breaker (MCB) of 'C' series suitable for 240/415 Volts, 50 Cycle, 10 kA Value AC supply conforming to IS : 8828 : 1996, IEC : 60898 :2002 but without enclosures :-				
	8.6.1	SINGLE POLE (SP)				
	2	6 Amp to 32 Amp, 10kA Rating	Each	180.00	300	54000
	8.6.3	DOUBLE POLE (DP)				
	2	6 Amp to 32 Amp, 10kA Rating	Each	639.00	40	25560
	8.6.6	FOUR POLES(FP)				
	2	6 Amp to 32 Amp, 10kA Rating	Each	1423.00	30	42690
	3	For 40 Amps, 10kA Rating	Each	1951.00	25	48775
	4	50 Amp to 63 Amp, 10kA Rating	Each	2021.00	30	60630
8.17		FIXING OF SFUs, DBs, BUSBAR, MCCBs, MCBs, ISOLATORS & RCBOs				
8.20		Fixing of MCB /MCCB/ Isolator				
	1	Fixing of MCB / Isolator SP/DP in sheet steel enclosure as required as per accepted practice, including mounting on busbar and cable connection etc. complete (Labour only)	Each	33.00	350	11550
	2	Fixing of MCB /MCCB Isolator TP /TPN/FP in sheet steel enclosure as required as per accepted practice, including mounting on busbar and cable connection etc. complete.	Each	66.00	60	3960
17.4	17.4	Supplying and installing Double wall corrugated pipes (DWC) of HDPE (IS 14930 Part II -marked) for cable laid underground with necessary connecting sockets/ couplings, tees of same material and at required depth up to 90cm. below road/ground surface excluding excavation, back filling with excavated material with ramming and making the surface good.				
	1	50.00mm outside dia.	meter	130.00	3500	455000
	5	110.00mm outside dia.	meter	241.00	1500	361500
	10	200.00/210.00 mm outside dia.	meter	510.00	500	255000
16.1	16.1	Providing and erection of hot dipped galvanized octagonal poles in single section made from 3mm thick sheet having lockable weather proof flush door junction box, suitable size & type of foundation bolts 4 nos. 'J' type (EN8 grade) complete, erected in an approved manner on provided foundation.				
	7	9 meter height, 155 X 70mm A/F, 250x250x16mm base plate having weight 87 kg ± 3%. 4 nos. X 24 x 750mm bolt having weight 12 kg ± 3%.	Eac h	12260	25	306500
	16.1	Providing and fixing of bakelite sheet 10mm thick, one MCB 6Amp-32Amp SP & 16sq.mm stud type 4 way epoxy connector for decorative designer poles /octagonal pole box.	Eac h	326.00	25	8150
	16.1	Providing and fixing of sword canopy type single arm GI bracket upto 2 meter Long for 90mm A/F top octagonal pole	Eac h	2441.00	15	36615
	16.1	Providing and fixing of sword canopy type double arm GI bracket upto 2 meter Long for 90mm A/F top octagonal pole	Eac h	3791.00	25	94775

	16.1 9	Providing and fixing of ring carriage dia. not less than 750mm made of 50mm dia. GI pipe Light 'A' class for 70mm A/F top octagonal pole with required clamps, nut, bolt etc as required.	Eac h	2903.00	5	14515
	16.2 3	Designing and construction of footing foundation for octagonal/decorative designer pole of desired size including excavation in soil/soft rock, base concrete M-7.5 (1:4:8), 15mm thick and pedestal of RCC M-20 (1:1.5:3), required tar steel reinforcement for required size from base concrete, shuttering, curing etc. with existing foundation bolts complete as per specifications in an approved manner as per manufacturer drawing or engineer-in-charge.	Cu. Mt.	7785.00	25	194625
		Surge Overvoltage Protection Device				
	20.7	Supply, installation, testing and commissioning of SOVP Device should have Single High Capacity Varistor in the L- N Plug and Encapsulated Spark Gap for N-PE, L-N SOVP should have a Rated Voltage of Minimum 320V AC to handle Indian Power Supply conditions. SOVP Should have Visual indication on replaceable varistor and spark gap modules as well as a potential free contact on the socket for remote indication. SOVP device should be wired up as per TT configuration of wiring in accordance with EN 61643-11 Standards. Both the L-N and N-PE, SPDs should be rated for handling 30KA of nominal 8/20 μ s surge current.				
	(a)	SOVP for High Mast Light- Type 1+2 Pluggable SPD 3+1, Rating L-N/N-PE Uc 275/ 255 V AC, Iimp 12.5/50 KA, Imax 60/100 KA, Up 1.2/1.5 KV	Each	16771.00	4	67084
	(b)	SOVP for Pole Light Sub Feeder Panels - Type 2 Pluggable SPD 3+1, Rating L-N/N-PE Uc 255/320 V In 30/60KA KA, Imax 30Ka/60 KA, Up 1.5KV	Each	6311.00	5	31555
	17	Supping & installing G.I. Pipe for protection of underground cable fixed on wall/support/in trench/fixed between two rigid existing support of wall/beam for erection of ceiling Fan/down rod for stiff pendent for light luminaries /fan/protective for earthing, lightening conductor down strip/ever head service line/for summer cable or centrifugal pump for water supply with necessary iron clamp coupler, bend, te, elbow, nuts and bolts etc. complete in an approved manner as required to complete the job excluding cost of excavation/dismantling & other finished masonry Item complete.				
	17.1	For 'B' Class G.I. pipe ISI Marked (IS-1161-68)				
	9	100.00mm	meter	1102.00	200	220400
	11	150.00mm	meter	2017.00	150	302550
	16.1	Providing and erection of 12.5 meter high mast lighting system suitable to install 8 No. 150 w LED flood light fitting and control gear with integral Power tool, weight 340 kg. comprising of 2 section of hot dipped galvanized materials as per BSEN ISO 1461 thickness 3 mm, dia 100mm & 360mm for top and bottom respectively, stress fitting arrangement on site with 350mm overlap dynamic loading to withstand max wind pressure as per -IS 875 part III, parameters for structural & foundation design must be taken from wind tunnel test. Lightning protection of GI single spike 800mm at top and at base inside compartment with double internal lock with adequate size of MCB erected on PVC board complete with base plate of 25mm thick 520mm dia. and foundation bolts having 4 nos. bolts of 24mm dia, 750mm long (EN8 grade), Anchor plate 445 PCD, including accessories viz. (1) Lantern carriage of 50 NB ERW class-B,MS pipe covered with PVC sleeve suitable to carry 250kg. load and upto 6 fittingsymmetrically. (2) Trailing copper cable 5x2.5 sq.mm,EPR insulated PCP sheathed. (3) Double drum/350kg winch having gear 53:1, oil bath (SAE90/140) arrangement. (4) 2 nos. stainless steel wire ropes 5mm dia (7/19) breaking load capacity 1450 kg.x2. (5) Integral power tool 3-phase, 0.75 HP2m/min single speed. (6) Feeder pillar fabricated out of 14 SWGCRCA sheet and comprise of incoming MCB 32 A TPN switch, HRC fuses, singledial timer, suitable size of contactors for lighting and power tool, 2 nos. outgoing,reversing switch for motor. (7) Foundation drawing, test certificate and guarantee certificate shall be provided by manufacturer. (without fixture and lamp)	eac h	159958	2	319916
	16.6	Designing & casting of Open raft shallow footing foundation with M-20 cement concrete suitable for 12.5mtrs. High Mast considering the safe soil bearing cacapcity at site as 10 T/sqm at 2mtrs. Depth including excavation, foundation nut bolts in an approved manner.	eac h	40250	2	80500

16.2		Providing and erection of 16 meter high mast lighting system suitable to install upto 10 No. 150 w LED flood light and control gear with integral power tool, weight 450 kg. comprising of 2 sections of hot dipped galvanized materials as per BSEN ISO 1461 thickness 3 mm & 4 mm, dia 150mm & 360mm for top and bottom respectively, stress fitting arrangement on site with 500 mm overlap dynamic loading to withstand max wind pressure as per -IS 875 part III, parameters for structural & foundation design must be taken from wind tunnel test. Lightning protection of GI single spike 1200 mm at top and at base inside compartment having double internal lock with adequate size of MCB erected on PVC board complete with base plate of 25mm thick 520 mm dia. and foundation bolts having 6 nos. bolts of 24mm dia 750 mm long (EN.8 grade) anchor plate 445 PCD, including accessories viz. (1) Lantern carriage of 50 NB ERW class-B, MS pipe covered with PVC sleeve suitable to carry 500kg. load and upto 8 fittings symmetrically. (2) Trailing copper cable 5x2.5 sq.mm, PVC insulated PVC Sheathed (3) Double drum 350Kg Winch having gear 53:1, oil bath (SAE90/140) arrangement (4) 2 nos. Stainless steel wire ropes 5 mm dia (7/19) breaking load capacity 1450 kg x 2, (5) Integral power tool 3-phase, 0.75HP 2m/min single speed torque limiter upto 500 kg adjustable (6) Single LED 300 Nos. aviation light (7) Feeder pillar fabricated out of 14 SWG CRCA sheet and comprise of incoming MCB 32 A TPN switch, HRC fuses, single dial timer, suitable size of contactors for lighting and power tool. 2 nos. outgoing, reversing switch for motor. (8) Foundation drawing, test certificate and guarantee certificate shall be provided by manufacturer. (without fixture and lamp)	eac h	250219	2	500438
16.7		Designing & casting of Open raft shallow footing foundation with M-20 cement concrete suitable for 16mtrs. High Mast considering the safe soil bearing capacity at site as 10 T/sqm at 2mtrs. Depth including excavation, foundation nut bolts in an approved manner.	eac h	51750	2	103500
	PWD-2025 21.270	Supply & Fixing of ARCHITECTURAL POLE made in combination of mild steel pipe sections (3mm). The pole to be provided with a suitable size steel base plate. This mounting steel base plate along with foundation bolts of suitable size to be used for ensuring firm grouting into the specially designed RCC foundation. After Fabrication, Entire Pole is hot dip galvanized (60 microns Minimum) for the effective corrosion resistance. The hot dip Galvanized pole should be provided with an inbuilt junction box to fix 32A connectors and 6A MCB, at the bottom - the inbuilt box should have a flush door of suitable size. Wind pressure calculation as per IS 875 (part-3) & structural calculation report as per EN40 should be submitted to verify the pole strength. Pole & it's parts are painted in 3 layer coating (coating thickness-100 microns minimum) in which 1st layer with etch primer, 2nd layer with epoxy primer & 3rd final layer with PU paint. Entire pole shall be made to provide pleasing aesthetics.				
	21.270.2	9 Meter Height (Bottom Dia 140mm) X (Middle Dia 114mm) x (Top Dia 60mm), 400x400x26mm Base Plate, 4 Nos X 24 x 750mm bolt.	Each	41750	50	2087500
	21.270.4	Single Arm bracket made in combination of MS pipe section of 60mm dia. (vertical) & gradually bent 60mm dia. & 27mm dia. - horizontal, to get pleasing aesthetics & arm length of 1000mm.	Each	3500	20	70000
	21.270.5	Double Arm bracket made in combination of MS pipe section of 60mm dia. (vertical) & Gradually bent 60mm dia. & 27mm dia. - horizontal, to get pleasing aesthetics & arm length of 1000mm (Each Side).	Each	6500	30	195000
	21.270.1	6 Meter Height (Bottom Dia 114mm) X (Middle Dia 89mm) x (Top Dia 60mm), 250x250x18mm Base Plate, 4 Nos X 16 x 600mm bolt.	Each	35480.00	0	0
19.8		Supplying of integral post top lantern LED fitting comprises of copper dust finish cast aluminium spigot and spun aluminium canopy fixed with opal polycarbonate, pipe arrangement for vertical mounting, open construction driver and accessories are wired up to terminal block. LED of 1 to 3W each assembled on single MCPCB, having colour temp up to 6500K & having 50000 burning hrs life with minimum @ L70, system lumen output should be minimum with efficacy>100lm/W. LED driver PF 0.95 & surge protection 10 2KV. The colour rendering index of LED light should be more than 70. Submission of LM-79-08/IS16106 (2012), IEC60598, IEC61347 connection wire, testing etc. to complete the job. 2 Yrs. Guarantee certificate from manufacturer.				
	19.8.1	40 watt.	Each	7314.00	50	365700
19.9		Supplying of street light with high power LED of 3 to 6 W each assembled on single MCPCB, system lumens output with efficacy> 120 lm/W. luminaire having colour temp up to 6500 K & 50000 burning hrs life with minimum @ L 70, The colour rendering index of LED light should be more than 70. Luminaire comprises of driver, PF 0.95 & surge protection 4-10 KV. Housing made of pressure die cast aluminium with heat resistant flat glass / Lens type, IP66 protection. Submission of LM 79-08/IS16106 (2012), IEC60598, IEC61347 i/c connection lead, testing etc to complete the job. 2 Yrs. Guarantee certificate from manufacturer.				
	19.9.7	150W	Each	12434.00	50	621700

19.10		Supplying of flood light with high power LED of 3 to 6 W each assembled on single MCPCB, system lumens output with efficacy>120 lm/W. luminaire having colour temp up to 6500K & 50000 burning hrs life with minimum @ L 70. The colour rendering index of LED light should be more than 70. Luminaire comprises of driver, PF 0.95 & surge protection 10 KV. Housing made of pressure die cast aluminium with heat resistant flat glass, IP66 protection. Submission of LM 79-08/IS16106 (2012), IEC60598, IEC61347 i/c connection lead, testing etc to complete the job. 2 Yrs. Guarantee certificate from manufacturer i/c connection lead, testing etc to complete the job. 2 Yrs. Guarantee certificate from manufacturer.				
	19.10.7	200W	Each	13165.00	80	1053200
21.1	21.1	Supply, installation, testing and commissioning of ' Silent Type' diesel generating set comprising with diesel engine water cooled, Synchronous alternator, AMF control panel single/three phase, acoustic enclosure, battery with charger and related accessories including incoming cable 10 mtr, exhaust pipe 'B' class with insulation as per CPWD specification and CPCC - IV Norms.				
		Note:- 1. Two No Cu plate (600mmx600mmx3mm) earthing and Two No GI plate (600mmx600mmx6mm) earthing with GI/Cu Strip to be done for each installation as per specification and will be separately paid. 2. Suitable size of PCC/RCC platform to be made separately as per requirement and instruction of Engineer-in-charge				
	21.1.18	Water Cooled Supply, installation, testing and commissioning of diesel generating set three phase, water cooled with AMF control panel, 500 KVA, 415V. With electronic governor.	Each	5797072.00	1	5797072
MPEB SOR	MPEB(M0201661)	KV, 630A, 21 KA for 3 sec SF6 insulated, (Two Incomers + Two Outgoing) consisting of 2 nos remote operated motorised load break	Each	1101696	1	1101696
MPEB SOR	MPEB(E0201661)	Supply, installation, testing and commissioning of RMU 11 KV, 630A, 21 KA for 3 sec SF6 insulated, (Two Incomers + Two Outgoing) consisting of 2 nos remote operated motorised load break	Each	100495.5	1	100495.5
PWD-2024	(PWD-2024)41.1	Providing & Making cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for 33 KV/11 KV 3 core XLPE alum. conductor cable as required as per specification and as per accepted standard including connection testing complete.				
PWD-2024	(PWD-2024)51775	Heat shrinkable joint, kit 11 KV XLPE, 3 core				
PWD-2024	(PWD-2024)41.10.1.1	Heat shrinkable Jointing kit 11 KV XLPE cable O.D. termination				
PWD-2024	(PWD-2024)41.10.1.1.4	3 x 240-400 sq. mm.	Each	11389	12	136668
PWD-2024	(PWD-2024)41.10.1.2	Heat shrinkable jointing kit 11 KV XLPE cable I.D. termination				
PWD-2024	(PWD-2024)41.10.1.2.4	3 x 240-400 sq. mm.	Each	9470	12	113640
PWD-2024	(PWD-2024)41.10.1.3	Heat shrinkable jointing kit 11 KV XLPE cable straight joint				
PWD-2024	(PWD-2024)41.10.1.3.4	3 x 240-300 sq. mm.	Each	23710	2	47420
PWD-2025	21.271	Supply & Fixing of Decorative LED Suspended Street Light with Overall Luminaire Efficiency->=130lm/W(@4000k), it's Upper cover in aluminium with quick coupling threaded G 3/4" for support, bottom Frame with company logo engraved/embossed in mould made from two die-cast aluminium rings made of pressure diecasting process. joined together by a hidden hinge inside. with quick-shut system to two stainless steel spring latches. Silicon Gasket is provided between upper & bottom frame. IP Rating - IP66. Area Exposed to Wind (S) - 0.112 m2 Power LED Module with the metal core plate, in compliance with IBC 62031 (Supporting Test Report from UL Authorised Laboratory should be submitted. SMD type LED Chips shall be used- same should be supported by LED manufacturer's tech sheet Colour Rendering Index: Ra > 70. Electronic Power Supply for LED Module. which offers Protection against Short Circuit, Over-Voltage & Over- Current, with in-built surge protection up-to 4kv (an additional surge protection device of 10kV also provided in-built the fixture). Modular (2 X 2) refractive lens in PMMA with type- 11/III/IV photometric distribution options. Protection screen in clear tempered glass with impact resistance IK 08. LM80 reported Lifetime is L90@ 100,000 hours(Ts: 85° C) minimum. LM 80 report from LED manufacturer should be submitted to support the same. The Light fixture shall be in compliance with IEC 60598-2-3: IEC 60598-1/ IS 10322(Supporting Test Report from 3rd party NABL/ UL /UL Authorized/Intertek Laboratory should be submitted). LM79 report should be submitted from 3rd party NABL / UL /UL Authorized/Intertek Laboratory				
PWD-2025	21.271.1	40Watt, Color Temp 3000-6500k as required, Minimum Dimensions : Height - 225mm, Diameter - 420mm	Each	48000.00	30	1440000
	21.271.2	60Watt, Color Temp 3000-6500k as required, Minimum Dimensions :Height - 225mm, Diameter - 420mm	Each	58200.00	50	2910000
PWD-2025	21.296	Supply & Fixing of LED SQUARE BOLLARD- 10-15W, LED Module, 3000K or 4000k as required. The Bollard suitable for on ground installation, is made of 3mm thick (minimum) extruded aluminium Square section of 100mmx100mm. Top cover (100mmx100mm) with made of aluminium in single piece. Pure polyester powder coating in grey Colour. IP Rating - IP 65. LED Module on Printed Circuit Board with metal core plate. Colour Rendering Index: Ra > 80. Electronic Power Supply for LED Module, which offers Protection against Short Circuit, Over- Voltage & Over- Current. A surge protection device of 10kV also provided in-built the fixture. Estimated LED Lifetime L70 @50,000 hours minimum.				

21.296.1	Height 800mm	10-15Watt, Colour Temp 3000 or 4000K, Minimum Dimension : 100mm x 100mm.	Each	38600.00	30	1158000
21.296.2	Height 1000mm	10-15Watt, Colour Temp 3000 or 4000K, Minimum Dimension : 100mm x 100mm.	Each	42500.00	30	1275000
21.296.3	Height 2200mm	30-35Watt, Colour Temp 3000 or 4000K, Minimum Dimension : 150mm x 150mm.	Each	54500.00	20	1090000
		NSR Items				
NSR	NSR	Supply, Installation, Testing and Commissioning 11kV, 315 KVA, Outdoor Package / compact Sub-Station (in compliance IEC 62271-202) shall beconsisting of following :	Each	2700000	2	5400000
		HT SWITCHGEAR				
		11kV 200Amps 21kA for 3 sec. SF6 insulated Copper Busbar Non- Extensible Ring Main Unit (Type CVC) consisting of Two Nos. of remote operated motorised Load Break Switches and One No. of Fixed remotely motorised operated vacuum Circuit Breaker unit with robotically welded having IP67 in SF 6 encapsulated stainless steel enclosure of thickness minimum 2.0. with series trip, self powered microprocessor based 3 Ph numerical over current relay (DMTL + Inst.) protection. 1 no., Protection CT of ratio-25/1A 2.5VA 5P10... 3 nos, gas pressure gauge etc. It should have metering unit complete with CTs, PTs. The SCADA system should communicate all faults, and electrical parameters like voltage, current, KW, Kvar, kwh, kvarh, pf etc.				
		TRANSFORMER				
		Three Phase, 50 Hz, Core type, two winding, 315 KVA 11KV/433V DYn11 cast resin dry type, AN type transformer. The transformer be copper wound and class F insulated. The off ckt tap changer should be +5 % to 5 % in step of 2.5% each. The transformer shall be suitable for operation at full rated power on all tapings without exceeding the applicable temperature rise. It should be possible to operate the transformer satisfactorily, with the loading guide specified in IS-6600. There shall be no limitations imposed by bushings, tap changers, auxiliary equipment to meet this requirement.				
		LT PANEL				
		433V LT Indoor panel with 630 Amps Al Busbars 100% for Phase and 50% for Neutral . Current Density of AL- 0.8 Amp/sqmm , Fabrication using 1.5/2mm CRCA sheet steel , Ingress protection IP4X , complete with internal wiring consisting of following.				
		INCOMER FROM TRANSFORMER				
		630 Amps 433V 4P 50Hz 50KA remote wireless signal based electrically operated Type Moulded Case Circuit Breaker (MCCB) with microprocessor based overcurrent, short circuit Fault & earth fault Release, Digital Load Manager meter having SCADA communication facility and accuracy class 0.5, complete with required CTs and protection.				
		OUTGOINGS				
		250 Amps 433V 3P 50Hz 36KA, TPN Moulded Case Circuit Breaker (MCCB) with microprocessor based release release for over current and magnetic short circuit. Multi function meter of accuracy class				
		100 Amps 433V 3P 50Hz 36KA, TPN Moulded Case Circuit Breaker (MCCB) with thermal magnetic release for over current and magnetic short circuit. Multi function meter of accuracy class				
		OUTDOOR ENCLOSURE				
		Outdoor type enclosure having construction of Galvanised Sheet Steel of thickness minimum 2mm & . Base plate should be 4mm thick. The Enclosure shall have IP54 degree of protection for HT & LT switchgear compartment & IP23 degree of protection for Transformer compartment. The enclosure exterior shall be Powder coated. Each compartment will be provided with the door and pad locking arrangement. The Compartment illumination lamp with door operated switch shall be provided for each compartment. It should be internal arc test compliant for 20KA for 1 sec.				
		Interconnection & Earthing				
		Interconnection Between HT switchgear & Transformer using 40x 10 Cu busbar or 1Cx3x95Sq.mm XLPE Single core cable & Interconnection between Transformer & LT switchgear using Al Busbars. Internal earthing connections by using 50x6mm GI Strips.				
		The entire packaged / compact substation should be equipped with state of art SCADA system which will communicate with central command and control centre of mppkvcl and smart city Ujjain's control centre and should also communicate event / fault alerts on mobile application. . The SCADA system should have all hardware like RTU, power supply, analog and digital I/O devices, battery, charger, software, modems, antenna, sensors, transducers, control wiring, PC/laptop etc.				
NSR	Fedder Panel	Supply, installation, testing and commissioning of outdoor type feeder pillar panels suitable for AC 440v, 50HZ supply, fabricated with 14 gauge galvanised steel sheet duly pre-treated and pure polyester thick powder coated and pure polyester thick powder coated 80 micron thickness using siemens grey colour shade no.RAL-7032/any other colour shade no.RAL- 7032/Any other colour if required by cubical formation, compartmentalized in form with front open able doors. The door shall be provided with concealed hinges and with brazing wherever required to avoid deformation and shall be earthed. All the door shall have heavy duty door locks, and shall be sealed with neoprene gaskets. the feeder pillar shall be IP 55, outdoor type weather, dust and vermin proof having canopy type tapered roof self-standing type as per approved GA Diagram. Panels shall have lifting hooks and base channel of size 50x40x6 mm The feeder pillar shall be complete with bus bars, wiring cabling of proper ratings (not less than 1.5 times the rating of respective switchgears, control gear etc.) for inter connection between switch gear, control gear, metering, safety relays, indicators etc. as per the approved single line diagram. the feeder pillar shall have proper arrangement for termination of all incoming and outgoing cables. all the bus bars shall be supported on epoxy supports and shall be insulated with colour coded heat shrinkable sleeves. Feeder pillar shall be as per the space available at site. It shall have earthing bolts at both sides inter connected with 50x5 mm al earthing bus along width of feeder pillar. NOTE :- The GA drawing for panel should be approved by consultant/ engineer in charge before fabrication. The feeder pillar shall have space and proper arrangements for installation of incoming and outgoing MCCBs with R,Y,B LED type indicating lamps.HRC fuse bases, MCBs etc. Complete with interconnection provisions with providing wiring and bus bars with required hardware,sleeves,ferrules,supporters,locks etc. Panel shall have proper space and arrangements for termination of incomer loop in loop out cables, outgoing service cables, with proper offsets in bus bars for cable terminations. The feeder pillar should have anti theft tamper proof feature to automatically send SMS alert if door opening is attempted by unauthorised person. Feeder pillar shall be comprising of following items:				
		TYPE - A				

NSR	NSR	Rating of incomer MCCB TPN 63A, 25 KA (Adjustable thermal O/L with Ics=100% Icu).Outgoings 32A 25KA SP MCCB 12Nos. & 25A 25KA SP MCCB 18Nos.Note: The width of feeder pillar should be as minimum as possible,preferably not more than 800mm.	EACH	112000	4	448000
NSR	NSR	Rating of incomer MCCB TPN 100A, 25 KA (Adjustable thermal O/L with Ics=100% Icu).Outgoings 32A 25KA SP MCCB 24Nos. & 25A 25KA SP MCCB 24Nos.Note: The width of feeder pillar should be as minimum as possible,preferably not more than 800mm.	EACH	165000	4	660000
NSR	NSR	HT Line Work as per MPEB Estimate	LM	2500000	1	2500000
NSR	NSR	Fountain Work	LM	1350000	3	4050000
Total External Electrical Amount						47022708.5

Façade Lighting of Shani Mandir						
Item No.	Sub Item No.	Description of Item	Unit	Rate (in Rs)	Qty.	Amount
30.1		Supply and fixing of IP 65, Surface wall mounted 9W LED up/downlighter decorative wall light fixture with anti glare beam angles 24deg - 36 deg as required. Fixture should be Aluminium with light reflectance surface, SS clamps, screws as required. CRI80+ NON DIM with led power supply built in colour tolerance: <MacAdam 4 SDCM LED.	Each	11887.00	40	475480
30.2		Supply and fixing of surface/recessed ceiling mounted LED downlighter fixture. Fixture should be Aluminium die cast, ADC 12, cable gland, SS clamps, screws as required. Glare quotient to be minimum & black body surface for glare control, should have honeycomb louvers for anti-glare, minimum 100 lm/watt, 8deg-15deg as required. working temperature-20°C +45°C IP Rating IP65 (not for permanent immersion) insulation class III. Choice of three colour temperatures as standard 2700K-5700K and delivers 90CRI for excellent colour rendering, and with binning-free LEDs carefully selected from two-step Macadam's ellipse. Fittings smart shield protected against polarity inversion, Protection class IP 65, safety class III. Safety glass, clear. Reflector made of pure anodised aluminium.				
	30.2.1	20W LED Downlighter with honeycomb louvers	Each	17942.00	25	448550
	30.2.2	30W LED Downlighter with honeycomb louvers	Each	22432.00	35	785120
30.3		Supply and fixing of IP65 of surface/recessed ceiling mounted 15W deep LED downlighter fixture. Fixture should be Aluminium die cast, ADC 12, cable gland, SS clamps, screws as required. Glare quotient to be minimum & black body surface for glare control, should have honeycomb louvers for anti-glare, 24deg-48 deg as required. working temperature-20°C +45°C IP rating IP65 (not for permanent immersion) insulation class III. Choice of three colour temperatures as standard 2700K-5700K and delivers 90CRI for excellent colour rendering, and with binning-free LEDs carefully selected from two-step Macadam's ellipse. fittings smart shield protected against polarity inversion, Protection class IP 65, safety class III. Safety glass, clear. Reflector made of pure anodised aluminium.	Each	11553.00	60	693180
30.4		Supply and fixing of IP 65 surface ground mounted 3-6W small LED projector fixture with snoot & Honeycomb louver, product fitted with 700ma 8deg-24deg as required. 3000K-4000K CRI80+ NON DIM with led power supply built in colour tolerance: <MacAdam 4 SDCM LED mounting AR111 similar optics PC lens. Fixture should be Aluminium die cast, SS clamps, screws as required. The finish should be stainless steel.	Each	9792.00	25	244800
30.5		Supply and fixing of recessed ground mounted deep LED uplighter fixture with Honeycomb Louver. protected Uno PATHFINDER IP66 2700K-5500K 8deg-24deg as required. stainless steel body hard anodized aluminium finishes stainless steel & IK rating 08. Installation housing box power supply cables 35 cm NS20N PCP 2x0,5 mm2 power supply 24V DC power consumption max 9 Watt lumen output 240-680lm working temperature-20°C +45°C IP rating IP66 (not for permanent immersion) insulation class III Weight upto 500gm. and delivers 90CRI for excellent colour rendering, and with binning-free LEDs carefully selected from two-step Macadam's ellipse. PATHFINDER is smart shield protected against polarity inversion, an integrated super fast diode prevents accidental damage to the luminaire during installation on due to reverse polarity. Smart shield protects against 'hot-plugging'. Fully integrated spike-reduce on protects the constant-current driver and prevents damage to the LED die surface. With housing box included and LED driver in IP66 casing box included.				
	30.5.1	3W recess deep uplight	Each	11789.00	25	294725
	30.5.2	6W recess deep uplight	Each	13040.00	40	521600
	30.5.3	9W recess deep uplight	Each	14556.00	60	873360
30.6		Supply and fixing of IP66 protected aluminium instant outline direct view diffuse 3000K-5000K with back profile with integrated cable alley for cable management with integrated IP rated cable connectors hidden within profile for additional protection from weather. Cross section of profile Silver anodized surface mounted aluminum profile 25 mm (W) x 20 mm (D) (minimum), with opal semi translucent sealed encapsulation, protection grade IP66, Minimum 85 lm/watt, DC 24 V, CRI>80Ra, standard length 2000 mm. excl. converter and end caps. The support is made of an anodized extruded aluminium frame which makes it possible to first fix SS the wall/ceiling.				
	30.6.3	15W per meter	Meter	5783.00	500	2891500

30.8		Supply and fixing of recessed/surface ground mounted 3000K-5500K, 10deg-15deg as required 1m long linear LED uplighter extrusion fixture with VISOR & Honeycomb Louver with & IK rating 06, IP 65 cable gland, SS Clamps, screws as required with swivel mounting.				
30.8.3		30W	Each	22861.00	40	914440
30.9		Supply and fixing of decorative recessed wall mounted 6W Asymmetric LED step light 4"x4" 15-18 deg luminary Aluminium die cast, ADC 12, IP 65 cable gland, SS clamps, screws as required	Each	8788.00	60	527280
30.10		Supply and fixing of IP 65 surface ground mounted product fitted with 700ma 20W LED with snoot 8deg-24deg 3000K-4000K CRI80+ non dimmable led power supply built in Colour tolerance: <MacAdam 4 SDCM LED similar optics PC lens. Fixture should be IK rating 07, Aluminium die cast, SS clamps, screws as required. The finish should be stainless steel.	Each	18684.00	30	560520
30.11		Supply and fixing IP65 surface wall mounted 6W 4 way grazer 3"x3" LED fixture fitted with 700ma 8deg-15 deg 3000K-4000K . Luminaire should be Aluminium die cast, CRI 80+ non-dimmable with led power supply , < 4 Macadam SDCM LED.	Each	13817.00	40	552680
30.12		Supply and fixing of recessed ground mounted deep LED marker fixture with diffused light 3000K-5000K, CRI>80, 45deg-60deg stainless steel 1W-3W, bodyhard anodized aluminium finish, stainless steel & IK rating 08. working temperature -20°C +45°C IP rating IP66 (not for permanent immersion) insulation class III weight upto 100gm, protected against polarity inversion, fully integrated spike-reduce on protects the constant current driver and prevents damage to the LED die surface, with housing box included and LED driver in IP66 casing box included.	Each	7774.00	35	272090
30.13		Supply and fixing of decorative surface wall mounted LED 3"X3" fixture fitted with 700ma LED, 10deg-15deg 3000K-4000K . Fixture should be Aluminium die cast, CRI 80+, IP65, non-dimmable led power supply , < 4 Macadam SDCM LED with 10 deg/15 deg optics PMMA.				
30.13.2		6W LED	Each	7661.00	25	191525
30.13.3		9W LED	Each	9527.00	40	381080
30.14		Supply and fixing of IP 65 surface ground mounted luminary fitted with 700ma 11W LED bollard with 8deg- 24deg 3000K-4000K CRI80+ nondimmable LED power supply built in Colour tolerance <MacAdam 4 SDCM LED similar Optics PC lens. Fixture should be IK rating 07, Aluminium die cast, SS clamps, screws as required. The finish should be stainless steel.	Each	17453.00	30	523590
30.15		Supply and fixing of IP 65 surface ground mounted product fitted with 700ma 100W LED pole light with 36deg- 60deg 3000K-4000K CRI80+ nondimmable LED power supply built in Colour tolerance: <MacAdam 4 SDCM LED similar optics PC lens. Fixture should be IK rating 07, Aluminium die cast, SS clamps, screws as required. pole length as per site requirement.	Each	36364.00	20	727280
30.16		Supply and fixing of LED RGB/RGBW flood lighting luminaire for facade lighting with Die-cast aluminium housing, powder-coated finish, of following wattage. Luminaire shall be capable of producing dynamic colour changing light for with 16 million colours by DMX/Ethernet based control. The beam angle of the fitting shall be narrow, medium, wide or asymmetric as per the requirement. Luminaire shall be complete with driver and capable of operating at line voltage without any separate power supply from 100-270 V AC, 50 Hz with power factor > 0.9 . Fixture shall be suitable to operate at an ambient temperature range of - 10°C to +50°C and shall be IP 65 and IK 06 rated. Lifetime shall be at least L70:50000 burning hours at 50°C. Luminaire shall be conforming to BIS (IS 10322) and shall be complete with all necessary accessories required for proper working of fixture including weather proof connection cables, water proof connectors etc. as required.				
30.16.8		75W	Each	36600.00	120	4392000

Internal Electrical Work Of Shani Mandir						
Item No.	Sub item no.	Description of Items	Unit	Quantity	Rates (in Rs.)	Amount
	28.1.00	SPLIT AC (inverter model) :- Supply, installation, testing and commissioning of Split type wall mounted air conditioning unit of following capacity including indoor, outdoor unit fitted with inverter based rotary compressor, copper condenser and first charge refrigerant R410A. The condensing unit working range should be capable for providing cooling between +/-5 deg. C to 50 deg. C & heating within 0 deg. C to 15 deg. C including connection of copper pipe of required size upto 3 mtr., insulation, cordless remote control, auto air swing louvers, wall stand for outdoor unit, connection copper lead wire, condensed water outlet pipe 2 mtr. complete etc as required. Outdoor/indoor units should be of same make (brand).				
	28.11.2.6	1.8/2 TR star rating 5 star	Each	25	63195.00	1579875
28.13		Cassette AC :- Supply installation testing and commissioning of split type ceiling cassette Slim line/floor standing air conditioning unit of capacity including indoor, outdoor unit fitted with rotary compressor, copper condenser and first charge refrigerant R410A/ecofriendly green gas only, cordless remote control, auto air swing louvers, connection copper lead wire between outdoor and indoor unit, connection copper lead wire upto 1.5 mtr., excluding connection copper pipe of required size, insulation, floor stand for outdoor unit, condense water outlet complete etc as required. Outdoor/indoor units should be of same make (brand).				
	28.13.2	Floor standing/slim line				
	28.13.2.3	3.8TR/4.0 TR three phase	Each	4	128689.00	514756
28.3		Supply, installation, testing & commissioning of suction/discharge copper pipe line in split air conditioning unit 1.0/1.5 TR/2 TR/3 TR capacity including brazing, nitrile rubber insulation 6/9mm thick class 'O', etc complete as required.				
	28.3.1	Copper tube 1/4"	Meter	100	473.00	47300
	28.3.2	Copper tube 3/8"	Meter	150	594.00	89100
	28.3.3	Copper tube 1/2"	Meter	150	709.00	106350
	28.3.4	Copper tube 5/8"	Meter	100	880.00	88000
	28.31	Drain piping :- Providing and fixing of CPVC, 6Kg/cm2 drain water piping with fittings, support and insulated with 6 mm thick closed cell elastomeric nitrile rubber insulation complete as per specification.				
	28.31.4	40 mm dia ID	Rmt	100	382	38200
	28.33.6	VRF/VRV indoor AC unit installation charges: - Installation of cassette unit 4/2/1 way flow ceiling suspended/mounted cassette type unit & decorative panels including labour for internal wiring, controls with wireless remote controller. (Single phase/three phase)	Each	29	3000	87000
28.41		Control cable : - Supply and laying, testing & commissioning of following sizes of copper conductor control cables on existing tray including fixing clamps & proper connections to equipment etc. complete as required.				
	28.41.3	4Cx 2.5 sq.mm	Rmt	500	231.00	115500
	28.41.4	4Cx 4 sq.mm	Rmt	500	377.00	188500
28.42		Communication Cable :-Control cable: - Supply and laying, testing & commissioning of following sizes of shielded copper conductor Communication cables on existing tray including fixing clamps & proper connections to equipment etc. complete as required.				
	28.42.1	2Cx1.5 sq.mm	Rmt	1500	186.00	279000
28.43		Outdoor stand fabrication :- Supply, fabrication and erection of angle/channel/flat iron stand, hanging arrangement for air conditioning machines & ducts etc, back /support clamps or other similar work etc. including nut bolts of required size, making holes, fabrication, welding, cutting, etc. and painting with one coat of red oxide paint & two coat of enamel paint as required as per specification.	Kg	500	81.00	40500
Total Amount						3174081

CCTV WORK SHANI MANDIR						
Sub Item.No.	Item Name	Description.	Unit	Qty	Rate.	Amount.
25.7		4MP IP fixed rugged dome camera Supply, installation testing and commissioning of the IP rugged dome camera shall be equipped with a 1/3" 4 MP progressive scan CMOS imager to capture full HD 1080p (25/30 fps)/2688 x 1520 images, a 2.8 mm fixed lens, and a waterproof (IP66) IK10 impact-resistant camera housing, as a true day/night solution, the camera shall use smart IR technology and provide up to 98 ft (30 m) of IR illumination. The camera shall accept PoE (802.3af) or 12 V DC power input. min. illumination:-0.08 lux colour @ F2.0 (colour, 1/3s, 30 IRE),0 lux B/W with IR LEDs on @ F2.0) video compression :- H.265 +, noise reduction: 3DNR,backlight compensation :- True WDR 120 DB, angle of view 104°/87° (H), 57°/48° (V),UL listed	Each	10	12008.00	120080
25.8		4MP IP fixed IR bullet camera Supply, installation testing and commissioning of the IP bullet camera shall be equipped with a 1/3" 4MP progressive scan CMOS imager to capture full HD 1080p (25/30 fps)/2688 x 1520 (20fps) images, a 3.6 mm fixed lens, and a waterproof (IP66) IK10 impact-resistant camera housing, As a true day/night solution, the camera shall use Smart IR technology and provide up to 98 ft (30 m) of IR illumination. The camera shall accept PoE (802.3af) or 12 V DC power input. min. illumination:-0.08 lux colour @ F2.0 (Colour, 1/3s, 30 IRE),0 lux B/W with IR LEDs on @ F2.0) video compression :- H.265 +, noise reduction: 3DNR,backlight compensation :- True WDR 120DB, angle of view :-104°/87° (H), 57°/48° (V),UL listed	Each	10	11586.00	115860
25.16	2 MP IP 30X zoom PTZ camera	Supply, installation testing and commissioning of outdoor PTZ IR ultra low light IP cameras with full HD 1080p resolution, 25/30 fps image with a 1/1.9 in. 2 MP sensor, true WDR 120 dB ensures glare-free images, 6.0-180 mm, F1.6-F4.8, 30x optical zoom lens with 360° continuous rotation for the flexibility to clearly view the target area with desired width and depth, H.264 and MJPEG codec, triple stream support, IR LEDs provide up to 200 m, waterproof (IP67) and IK10 vandal resistant camera housing, ONVIF profile S compliant supports up to 128 GB micro SDHC (Class 10) card for local video storage when network is interrupted.	Each	4	124660.00	498640
25.14	4MP IP varifocal MFZ dome camera IP67	Supply, installation testing and commissioning of outdoor WDR IR rugged IP dome cameras shall be equipped with 1/2.7" or 1/2.8" 2 MP progressive scan imager or 1/3" 4 MP progressive scan imager to capture 1080p resolution at 25/30 fps or 4 MP at 20 fps images, 2.7–12 mm or 7–22 mm, F1.4, motorized focus/zoom len, H.264 and MJPEG codec, triple stream support, 50 m (150') IR distance, depending on scene reflectance, waterproof (IP67) and IK10 vandal resistant camera housing, ONVIF profile S and G compliant, built-in PoE (Power over Ethernet) eliminates, separate power supply and associated wiring, 24 V AC/12 V DC inputs where PoE power is unavailable, supports up to 128 GB micro SDHC (class 10) card for local video storage when network is interrupted. Card not included.	Each	25	26818.00	670450
25.15	4MP IP varifocal MFZ bullet camera IP67	Supply, installation testing and commissioning of Outdoor WDR IR rugged IP bullet cameras shall be equipped with : 1/2.7" 2 MP progressive CMOS imager to capture 1080p resolution at 25/30 fps or 4 MP at 20 fps images, 1: 2.7-12 mm, MFZ, F1.4, H.264 and MJPEG codec, triple stream support, 60 m (150') IR distance, depending on scene reflectance, waterproof (IP67) and IK10 vandal resistant camera housing, ONVIF profile S and G compliant,, built-in PoE (Power over Ethernet) eliminates, separate power supply and associated wiring, 24 V AC/12 V DC inputs where PoE power is unavailable, Supports up to 128 GB micro SDHC (class 10) card for local video storage when network is interrupted. Card not included, True WDR: up to 140 dB	Each	35	29866.00	1045310
9.36		Supplying and drawing 4 pair shielded twisted pair (STP) , 0.5 mm PVC insulated copper conductor un-armoured Cat-6 computer cable FR in existing surface/concealed, steel/PVC. conduit/ casing-n-capping as required.	Metre		76.00	
9.37		Supply, installation testing and commissioning of patch cord as mentioned below :-				
	2	CAT 6 RJ45 patch cord UTP 2 metre	each	35	403.00	14105
	3	CAT 6 RJ45 patch cord UTP 3 metre	each	35	537.00	18795
9.38		Supply, installation testing and commissioning of High-Speed HDMI corrosion-resistant connector & braided cable, Supports Ethernet, 3D, 4K video, computers and other HDMI-enabled devices Black as required to complete the job as mentioned below:-				
	2	2 Metre, HDMI cord	each	5	2019.00	10095
	3	5 Metre, HDMI cord	each	10	4037.00	40370
	4	10 Metre, HDMI cord	each	5	6728.00	33640
25.23	32 channel NVR with 4 SATA	32 channel NVR with 4 SATA				

25.23	32 channel NVR with 1080p	Supply, installation testing and commissioning of 32 channel NVR with 1080p real-time live view H.265/H.264 MJPEG dual codec decoding Up to 12 MP resolution preview & playback max 320 MBPS incoming bandwidth support 4 SATA HDDs up to 32TB, supports fisheye video de-warping in local and web user interface, supports visual or auditory notifications(a flashing light, bell, or siren) complete with UL certification	EACH	3	112148	336444
	Workstation with client license	Workstation with client license				
25.29	Workstation	The work station shall have the following specifications:- Processor Intel @ i5 (latest) min 2.66 GHz with internal memory of 4 GB RAM. Operating system window 10 professional 64-bit or better (WOW 64mode) or window 10 professional or better 32-bit NVIDIA 1 GB independent graphic card. Resolution support for cameras 2560x1600 display resolution capable and direct X true colour 32 bit. Dual link VDI outputs. Client software shall support Dual monitors each displaying 16 cameras simultaneously. A maximum of 32 cameras viewing per workstation at a time. Programmable to sequence.	Each	4	120681	482724
	Hard Disk	Hard Disk				
25.30.2	4 TB	Providing & fixing of 4 TB hard disk	Each	4	9721	38884
29.2		Supply, installation, testing & commissioning of L.E.D. Television (4K L.E.D. Display O.S. Webos /Android or equivalent, minimum 50 Hz refresh rate Min. 20 W speaker, Wifi/bluetooth enabled, minimum 2 HDMI & 1USB Port, i/c remote and wall/table top accessories)				
	29.2.1	32"	Each	2	21333.00	42666
	29.2.3	49"/50"	Each	2	49979.00	99958
9.36	cctv cable	Supplying and drawing 4+1 core shielded, 0.5 mm PVC insulated copper conductor un-armoured CCTV cable FRLS in existing surface/concealed, steel/PVC. conduit/ casing-n-capping as required.	Mtr	2500	76	190000
	Concealed PVC conduit HMS	Supply and fixing PVC conduit ISI marked FRLS along with the accessories in concealed system etc. as required				
1.8	25 mm. HMS	PVC. conduit 25 mm (HMS)	mtr	2500	52	130000
(PWD-2024)3 8.19.5. 2	12 Core OS-2 SM Cable	SITC of 12 Core OFC Cable with Armored Uni-Tube, 9/125µm, OS 2 Type, . Complying to ISO/IEC 11801, EN50173, ANSI/TIA 568-C.3, Telcordia GR-20, Uni-tube construction, Water Blocking Thixotropic Gel (Tube) Petroleum Jelly (Interstices) in indoor / outdoor ducts, direct burial and backbone cabling	Metre	500	148.00	74000
38.19.6 .2	2 Mtr OFC Patch Cord	SITC of 2Mtr OFC SM Patch Cord with 9/125 µm, OS2 , Duplex Zipcord , SC-LC/LC-LC / SC-SC connector , 900µ tight buffer, ISO/IEC 1108:2008, ANSI/TIA/ EIA 568.C.3, ANSI/TIA/EIA-492, TELECORDIA GR-409, ICEA-597	Each	20	3140.00	62800
38.19.7 .2	12 Port LIU	SITC, Splicing, Termination of 12 Port Full loaded LIU with SC-LC/LC-LC / SC-SC adpoter, Splicing tray, Pigtails, Termination, 1U 19" / ETSI versions available, Sliding Drawer for easy access of back side of connector, Fiber guides, radius controls & secure tie downs provided	Each	2	28141.00	56282
22.3		UPS (3 phase input & 3 phase output)				

		Supply, installation, testing and commissioning of UPS with isolation transformer & battery for backup, having three phases input three phase output. Online double conversion VFI-SS-111 technology, with sinusoidal wave form, architecture (standalone of distributed parallel up to 8 units), having input characteristics i.e. input voltage (380v, 400v, 415v, 3Ph+N+PE), input frequency (45 -65 Hz), input voltage range (Ph - Ph) : (half load 208v - 467v/full load 312v - 467v), total harmonic distortion of input current < 3% (at full linear load), compatibility with diesel generators configurable for synchronization between the input and output frequencies even for high frequency variations, input power factor > 0.99, having output characteristics i.e. output voltage (380v, 400v, 415v, 3Ph+N (adjustable from front panel), efficiency up to 96%, efficiency in ECO mode up to 98.5%, output frequency (nominal) 50 /60 Hz 0.01% free run (adjustable from front panel), crest factor 3 : 1, total harmonic distortion of output voltage < 2 % (at full linear load), output power factor 0.9, output voltage tolerance ± 1%, built in automatic and maintenance bypass, inbuilt isolation transformer, battery type (VRLA - AGM maintenance free). Communication & management i.e. LCD display (touch screen, LED bar status, live synoptic view for real time), communication ports (RS 222, genset, programmable 4 relay contacts, modbus), Audible alarm (acoustic alarms and warnings), Net interface slot (SNMP card (optional)), having emergency power off (EPO) & remote management. Ambient conditions i.e. operating temperature °C (0°C - 40°C), relative humidity % (20% - 95% not condensing), protection index (IP20), noise at 1 m dBA < 55. UPS installation with all required material arrangements as required as per IS specification.				
	22.3.1	10 KVA (3 phase input & 3 phase output)				
	22.1.2.1	For 60 minute backup, min. 16000 VAH	Each	2	361063.00	722126
25.27		8 port PoE switch with 2 SFP ports				
		Supply, installation testing and commissioning of 8 port PoE switch with 2 SFP ports, having security features like port security supports 64 MACs per port, auto surveillance VLAN, loopback detection automatically disables a port when a loop is detected, cable diagnostics allows administrators to determine cable status, UTP cat. 5, cat. 5e (100 m max.), full/half-duplex for 10/100 MBPS, full-duplex for 1000 MBPS, auto MDI/MDIX adjustment for all twisted-pair ports, switching capacity, 40 GBPS, maximum 64 bytes packet forwarding rate, 14.88 MBPS, ports 1 to 8 compliant with 802.3at	Each	2	20480.00	40960
25.28		24 port PoE switch with 4 SFP ports				
		Supply, installation testing and commissioning of 24 port PoE switch with 4 SFP ports, having security features like port security supports 64 MACs per port, auto surveillance VLAN, loopback detection automatically disables a port when a loop is detected, cable diagnostics allows administrators to determine cable status, UTP Cat. 5, Cat. 5e (100 m max.), full/half-duplex for 10/100 MBPS, full-duplex for 1000 MBPS, auto MDI/MDIX adjustment for all twisted-pair ports, switching capacity, 56 GBPS, maximum 64 bytes packet forwarding rate, 41.7mbps, Ports 1 to 24 compliant with 802.3 at	Each	2	46322.00	92644
9.41		Supply, installation testing and commissioning of wall mounting rack , for computer switches/Patch Panel etc complete as mentioned below :-				
	1	6U cabinet with min. Dimensions 366X600X600, wall mounting with 6-point 5 Amp. socket power supply strip, and fan, cable manager, tray as per Site requirement	each	4	6055.00	24220
	2	9U cabinet with min. Dimension 488X600X600, wall mounting with 6 point 5 Amp. socket power supply strip, and fan, cable manager, tray as per Site requirement	each	4	8746.00	34984
	3	12U cabinet with min. Dimension 590X600X600, wall mounting with 6 point 5 Amp. socket power supply strip, and fan, cable manager, tray as per Site requirement	each	2	12783.00	25566
9.42		Supply installation, testing and commissioning of floor mounting rack , base frame, top & bottom, front glass door with perforation, rear vented door, lockable & detachable side panels, 2 pairs 19" rail with depth members. fixed shelf, complete as mentioned below:-				
	1	22U cabinet with min. Dimensions 1150X600X600, floor mounting with power supply and fan, tray. Equipment support angle, vertical cable manager, 12-point 5Amp. vertical power strip, earthing continuity kit, castors (1 set of 4 nos.), captive H/W set of 10, fan tray with 4 fan, for computer .	each	2	33638.00	67276
Total of Carried over to summary.						5088879

Access Control System of Shani Mandir, Ujjain								
Category	Installation	SOR Details	Item	Description	Unit	Quantity	Unit Cost	Amount
Security	General	NON-SOR	BAGGAGE SCANNER	Supply, Installation, Testing & Commissioning of X-ray Baggage Inspection System(X-BIS) equipment including control table as per technical specification.Tunnel Size: 640(W)×500(H) mm, Conveyor Speed: 0.22m/s, Conveyor Max Load:170 kg, Leakage radiation: <0.1µGy/h, Single inspection dosage: < 1.0Gy/h, Wire Resolution 40AWG, Steel Penetration: 36mm, Film Safety: For ISO 1600. X-Ray having following details: Beam Direction: Upward; Tube Current: 0.6mA; Anode voltage: 160KV; X-ray divergence angle: 80 °; Cooling: Sealed oil bath with forced air; Sealed oil bath with forced air/100%; Detector: L-shaped Array. Operating environment: Power Requirement: 220V AC (±10%) 0±3Hz, Power consumption: 1.0KW(Max), Noise level: <58dB, Spatial Resolution: 1.0mm Horizontal and, Vertical Operating temperature/humidity: 0 deg.C - 45 deg.C /20% - 95% (Non-condensing); Storage temperature/humidity: -20degC - 60degC/20% - 95% (Non-condensing)	Nos.	1	₹ 17,38,000	₹ 17,38,000
Security	General	NON-SOR	DFMD	Supply, Installation, Testing & Commissioning of 9-Zone Door Frame Metal Detector (DFMD) equipment of external size 870x2165x278mm (WxHxD) and internal size 720x2017x278mm (WxHxD), working on electromagnetic principles, made of ABS raw materials, frequency 0-100 Hz, Working humidity : 99%, non-condensing, Working temperature : - 20°C- 65°C, Input : AC 100 V-240 V/ Frequency 50HZ-60HZ, IP rating : 54 [Dust proof coating], Sensitivity adjustable : 0 - 400, Volume adjustable : 0-50, Alarm volume : 0 - 3 sec, Alarm tones : 15 different tone, Detection :	Nos.	2	₹90,000	₹ 1,80,000
Security	General	NON-SOR	FRISKING BOOTH	Provision and fixing of frisking booth including but not limited to canopy, female frisking booth, cloak room shelves, frisking table, revolving chairs, frisking pedestals etc. Item to include all material, labour, scaffolding and carriage in all leads, scaffolding and lifts complete as per satisfaction of	Nos.	1	₹ 1,00,000	₹ 1,00,000
Security	General	NON-SOR	HHMD	Supply, Installation, Testing & Commissioning of Hand-Held Metal Detector (HHMD) equipment as per technical specification. Working frequency: 0-25 KHz; Net weight: ~400 gms; Power supply: Standard 6F22/15F8H; 9V battery or rechargeable battery; Temperature: -15°C to +55°C; Detection Range: Pin : 25—70mm ; Type 64 pistol: 0—350mm; Six inch dagger 200—300mm; 20mm diameter steel balls 150mm; One ₹ coin 120—180 mm ; TF card, staples, 8-pin chip 10—40 mm. Having Two alarm modes: audible and vibration mode, high-brightness LED light indicator. Rugged, impact, free-fall drop height of 2 meters without damage. Light weight, large detection area fast detection	Nos.	20	₹3,000	₹ 60,000
Ticketing	General	NON-SOR	Ticketing Platform Onboarding	Ticketing Platform Onboarding & Account Setup (BookMyShow / Paytm Insider) Vendor onboarding, account creation, KYC, event/venue listing. Scheduled Booking System Development + (Backend Database). Payment Integration, API Integration with Ticketing Platform. Additionally 2% Platform Fee + 2.5% to 5% of ticket sales (based on the payment	Lot	1	₹ 10,00,000	₹ 10,00,000
Ticketing	General		Counter System	Ticket Counter System, Validation Device	Nos.	4	₹ 1,00,000	₹ 4,00,000
Total Amount								₹ 34,78,000

BOQ FOR FIRE FIGHTING SYSTEM FOR SHANI MANDIR					
SR. NO.	ITEM DESCRIPTION	UNIT	QTY	RATE	AMOUNT
(A)	PUMP ROOM				
UADD 2025 (23.4.2)	Horizontally mounted coupled motor (Eff-1) 75hp (Main Hydrant Pump)				
	Supplying, installation, testing & commissioning of approved make horizontally mounted coupled motor (Eff-1) 75hp, 2900 RPM, 3 Ph 415 V with mechanical seal pump delivery of 2850 litres per minute against total head of 70 meter so as to ensure a minimum pressure of 3.5 Kg/Cm2 at the highest. The impeller shall be closed type and accurately balanced dynamically. The pump shall be of cast iron, impeller shall be of bronze and shaft shall be of stainless steel, automatic air release valve, pressure gauges (combination suction gauge, 3½" dial type with ¼" cock and lever handle - 1 no, discharge gauge, 3½" dial type with ¼" cock and lever handle - 1 no.) i/c coupling, coupling guard, base channel foundation & matching flanges etc. as required as per specifications. The fire pump set as per NFPA -20 specifications.	Each	1.0	₹ 4,05,495.00	₹ 4,05,495.00
UADD 2025 (23.4.6)	Diesel engine driven firefighting pump water cooled 105 BHP				
	Supplying & installation of approved make diesel engine driven firefighting pump water cooled 105 BHP 2150 RPM engine, fuel tank 200 litre (empty), accessories, matching flanges, base frame, ARV, fuel gauge, exide 12 Volt battery & charger, lugs & cable between battery & charger. The pump capacity of 2850 litres per minute at total head 70 meters, automatic air release valve, pressure gauges (combination suction gauge, 3½" dial type with ¼" cock and lever handle - 1 no, discharge gauge, 3½" dial type with ¼" cock and lever handle - 1 no.) as required. All above equipment's are mounted on common base plate. The fire pump set as per NFPA -20 specifications.	Each	1.0	₹ 7,32,524.00	₹ 7,32,524.00
UADD 2025 (23.4.4)	Jockey pump horizontally mounted coupled motor (Eff-2) 5.5hp				
	Supplying, installation, testing & commissioning of approved make jockey pump horizontally mounted coupled motor (Eff-2) 5.5hp, 2900 RPM, 3 Ph 415 V with mechanical seal pump, delivery of 180 litres per minute against total head of 70 / 88 meter so as to ensure a minimum pressure of 3.5 Kg/Cm2 at the highest. The impeller shall be closed type and accurately balanced dynamically. The pump shall be of cast iron, impeller shall be of bronze and shaft shall be of stainless steel. i/c coupling, coupling guard, base channel foundation & matching flanges etc. as required as per specifications.	Each	1.0	₹ 1,71,980.00	₹ 1,71,980.00
MPPWD 2024 (26.18)	Air vessel				
	Providing and fixing air vessel made of 250mm dia, 8mm thick MS sheet, 1200mm in height with air release valve on top and flanged connection to riser, drain arrangement with 25 mm dia Gunmetal wheel valve, with required accessories, pressure guage and painting with synthetic enamel paint of approved shade as required.	Each	1.0	₹ 10,150.00	₹ 10,150.00
UADD 2025 (23.4.9)	Fire pumps electrical panel : Cubical type floor mounted electrical control panel				
	Supplying, installation, testing & commissioning of cubical type floor mounted electrical control panel of 2.0 mm thick CRCA sheet suitable for 380-415 Volt, 50 Hz, 3 Ph supply, NEMA type 2 (IP 31) drip proof metal free standing enclosure for firefighting pumps with suitable star-delta starter including indicating lamps, ammeter, voltmeter, selector switches for each, incoming and outgoing feeder, auxiliary switches, dry suction cut off, single phase preventer, alu. bus bar etc. The panel shall be provided with interlocking arrangement between electric motor driven and diesel engine driven pumps so that only one pump can operate at one time and in case of any failure in electric motor driven pump the diesel engine driven pump shall operate automatically. The installation shall include all control wiring, accommodation for battery charger etc. and connections as required.				

BOQ FOR FIRE FIGHTING SYSTEM FOR SHANI MANDIR					
SR. NO.	ITEM DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	Incoming : 1.No. 250 Amp 4 Pole MCCB, 35 KA 1 Set 300 Amp, 500V capacity 4 Nos. aluminium bus bar with epoxy insulator, heat shrink sleeve, required hole , nut bolt etc. 1 No. 96x 96 mm 0 to 500 Volt voltmeter selector switch and HRC fuse with base. 1 No. 96x 96 mm 0 to 300 Amp ammeter, selector switch and CT 1Set -3 nos. indicating lamp with HRC fuse and base Out goings : 2 Nos. 200 Amp 4 Pole MCCB,25 KA 2 Nos. 63 Amp 4 pole MCCB,10 KA. 1 No. fully automatic star delta starter suitable for main pump motor I/C CT, ammeter with selector switch & control with pressure switch, pump ON indicating lamp. 1 No. DOL starter suitable for jockey pump motor I/C CT, ammeter with selector switch. & control with pressure switch complete with auto/manual selector switch inter connecting wring, control wiring from pressure switch to panel, pump ON indicating lamp. etc. complete as required.	Each	1.0	₹ 2,93,890.00	₹ 2,93,890.00
	SUB-TOTAL OF PUMP & VESSELS				₹ 16,14,039.00
	(B) HYDRANT SYSTEM				
MPPWD 2024 (19.46)	UNDERGROUND HDPE PIPE				
	Providing, laying and jointing HDPE Double Wall corrugated (DWC) pipes (excavation to be paid seperately)				
19.46.3	200 mm dia	metre	550.0	₹ 608.00	₹ 3,34,400.00
MPPWD 2024 (26.2)	C' class heavy duty MS pipe on wall				
	MS pipe in on wall/ ceiling Providing laying, testing and commissioning of 'C' class heavy duty MS pipe confirming to IS 1239/3589 i/c fittings like elbows, tees, flanges, reducer, jointing with nuts bolts, gaskets and welding etc. and fixing the pipe on wall/ ceiling with suitable hangers, clamps, supports, as required and painting with two or more coats of synthetic. Enamel paint of required shade complete as directed by Engineering-in-Charge.				
26.2.1	200 mm dia	metre	70.00	₹ 3,086.00	₹ 2,16,020.00
26.2.2	150 mm dia	metre	230.00	₹ 2,203.00	₹ 5,06,690.00
26.2.3	100 mm dia	metre	350.00	₹ 1,527.00	₹ 5,34,450.00
26.2.4	80mm dia	metre	300.00	₹ 1,060.00	₹ 3,18,000.00
DSER 2025	Pipes of sizes 150mm & below shall be M.S. 'C' class as per IS : 1239 and pipes size above 150mm shall be welded black steel pipe heavy class as per IS: 3589, from minimum 6.35mm thick M.S. Sheet for pipes upto 350 mm dia. and from minimum 7mm thick MS sheet for pipes of 400 mm dia and above.				
3003	M.S. Pipe 300 mm dia	metre	50.00	₹ 5,026.50	₹ 2,51,325.00
3004	M.S. Pipe 250mm dia	metre	65.00	₹ 4,217.40	₹ 2,74,131.00
3014	M.S. Pipe 25 mm dia	metre	130.0	₹ 296.10	₹ 38,493.00
MPPWD 2024 (18.14)	Ball valve				
	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :				
18.14.3	25 mm dia	each	8.0	₹ 499.00	₹ 3,992.00
MPPWD 2024 (26.6)	Butterfly valve				
	Providing, fixing, testing and commissioning of butterfly valve PN 1.6, with Bronze/Gunmetal seat duly ISI marked complete with Nuts, Bolts, washers, gaskets, confirming to IS 13095, of following sizes as required.				
26.6.1	200 mm dia	each	4.0	₹ 8,530.00	₹ 34,120.00
26.6.2	150 mm dia	each	3.0	₹ 6,815.00	₹ 20,445.00
26.6.3	100 mm dia	each	5.0	₹ 4,500.00	₹ 22,500.00
26.6.4	80mm dia	each	14.0	₹ 3,400.00	₹ 47,600.00
MPPWD 2024 (26.8)	Dual plate non- return valve				
	Providing, installation, testing and commissioning of dual plate non- return valve of following sizes confirming to IS 5312 complete with rubber gasket, GI bolts, nuts, washers etc. as required.				
26.8.1	200 mm dia	each	2.0	₹ 9,775.00	₹ 19,550.00
26.8.2	150 mm dia	each	2.0	₹ 7,350.00	₹ 14,700.00
26.8.3	100 mm dia	each	2.0	₹ 4,900.00	₹ 9,800.00

BOQ FOR FIRE FIGHTING SYSTEM FOR SHANI MANDIR					
SR. NO.	ITEM DESCRIPTION	UNIT	QTY	RATE	AMOUNT
MPPWD 2024 (26.7)	Orifice plate				
	Providing and fixing orifice plate made of 6mm thick stainless steel with orifice of required size in between flanged and landing valve of external and internal hydrant to reduce pressure to working pressure of 3.5 kg/cm complete as per specification required.	each	13.0	₹ 1,195.00	₹ 15,535.00
MPPWD 2024 (26.9)	Stainless steel strainer				
	Providing, installation, testing and commissioning stainless steel strainer fabricated out of 1.6 mm thick stainless steel sheet with 3 mm dia holes with stainless steel flange.				
26.9.1	100 mm dia	each	2.0	₹ 6,631.00	₹ 13,262.00
MPPWD 2024 (26.1)	Gun metal valves				
	Providing, installation, testing and commissioning of gun metal valves of following sizes as required.				
26.10.3	65mm dia	each	13.0	₹ 2,106.00	₹ 27,378.00
DSER 2025	NON - RETURN VALVE with duel plate of C I body SS plates vulcanized NBR seal flanged end & PN 16 pressure rating for chilled / hot water circulation including insulation as specified.				
3042	125mm dia	each	2.0	₹ 4,074.40	₹ 8,148.80
DSER 2025	Y - STRAINER of Ductile CI Body flanged ends with stainless steel strainer for chilled / hot water circulation including insulation as specified.				
3046	200mm dia	Each	2.0	₹ 35,614.00	₹ 71,228.00
3047	150mm dia	Each	2.0	₹ 18,992.00	₹ 37,984.00
UADD 2025 (23.4.10)	Supplying & installation of approved make pressure switch with 15 mm dia brass check nut for automatic operation on required pressure including necessary wiring up to control panel.	Each	5.0	₹ 2,898.00	₹ 14,490.00
UADD 2025 (23.4.11)	Supplying & installation of pressure gauges with 15 mm dia brass check nut & capable of showing pressure reading from 0. to 30 kg.	Each	8.0	₹ 1,913.00	₹ 15,304.00
MPPWD 2024 (26.11)	RRL hose pipe				
	Supplying and fixing dia,15m long, RRL hose pipe with following diamale and female gun metal couplings duly binded with GI wire, rivets etc. confirming to IS 636 (type-A) as required.				
26.11.2	65mm dia	each	25.0	₹ 5,510.00	₹ 1,37,750.00
MPPWD 2024 (26.12)	First -Aid hose reel				
	Providing and fixing first -Aid hose reel with MS construction spray painted in post office red, confirming to IS 884 with up to date amendments, complete with the following as required.) (a) 30-36m long 20mm (nomina linternal) dia water hose thermoplastic (textile reinforced) type -2 as per IS 12585 (b) 20mm (nominal internal) dia gun metal globe valve and nozzle. (c) Drum and brakets for fixing the equipments on wall. (d) Connections from riser with 40 mm dia stop valve (gun metal) and M.S. pipe	each	5.0	₹ 6,065.00	₹ 30,325.00
MPPWD 2024 (26.14)	Hose cabinet size 700x600x300mm				
	Providing and fixing hose cabinet of size 700x600x300mm made of 16 gauge thick MS sheet with 4 mm thick float glass doors in front painted "FIRE" in red paint i/c necessary locking arrangement suitable to accommodate external hydrant with butterfly valve 2 nos. 15m Long hose pipe, 1 no branch pipe mounted on wall or raised brick platform& duly painted with post office red externally and white internally with synthetic enamel paint complete in all respects for external hydrant, as directed by Engineer-in-Charge.	each	15.0	₹ 4,000.00	₹ 60,000.00
MPPWD 2024 (26.15)	4 way fire brigade connection				

BOQ FOR FIRE FIGHTING SYSTEM FOR SHANI MANDIR					
SR. NO.	ITEM DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	Providing and fixing 4way fire brigade connection (FBC)of cast iron body with 4 nos. gun metal male instantaneous inlet couplings complete with cap and chain as required. For 150mm dia MS pipe connection, confirming to IS 904 as required.	each	2.0	₹ 14,150.00	₹ 28,300.00
MPPWD 2024 (26.17)	2 way fire brigade connection				
	Providing and fixing 2 way fire brigade connection (FBC) of CI body with2 nos. gun metal male instantaneous inlet couplings complete with cap and chain as required. For 150mm dia MS pipe connection, confirming to IS 904 as required.	each	2.0	₹ 6,000.00	₹ 12,000.00
MPPWD 2024 (26.27)	Carbon-di-oxide type fire extinguishers				
	Providing and fixing of carbon-di- oxide type fire extinguishers consisting of welded M.S. cylindrical body, squeeze lever discharge valve fitted with pressure indicating gauge internal discharge tube 30 cm long high pressure discharge hose, discharge nozzle, suspension bracket conforming to IS : 15683 finished externally with red enamel paint and fixed to wall with brackets complete with internal charge.				
26.27.3	Capacity 4.5 kg	each	20.0	₹ 11,351.00	₹ 2,27,020.00
MPPWD 2024 (26.28)	ABC Power type fire extinguishers				
	Providing and fixing of ABC Power type fire extinguishers consisting of welded M.S. cylindrical body, squeeze lever discharge valve fitted with pressure indicating gauge internal discharge tube 30 cm long high pressure discharge hose, discharge nozzle, suspension bracket. Conforming to IS: 15683 finished externally with red enamel paint fixed to wall with brackets complete with internal charge.				
26.28.3	Capacity 4.0 kg	each	20.0	₹ 4,091.00	₹ 81,820.00
UADD 2025 (15.5)	Supplying & fixing of Fire Extinguisher/Refills as per IS specification: -				
7	4 bucket set with stand and sand dully painted red	each	20.0	₹ 2,488.00	₹ 49,760.00
MPPWD 2024 (26.3)	Single headed hydrant valve				
	Providing and fixing single headed hydrant valve with instantaneous female Gun metal couplings of required dia with cast iron wheel ISI marked conforming to IS 5290 (Type - A) with blank gunmetal cap and chain, adopter as required complete as directed by Engineer-in-Charge.				
26.3.1	63mm dia	each	15.0	₹ 6,700.00	₹ 1,00,500.00
NON-SOR	Providing and fixing of flexible Connection/Rubber Bellow.				
a)	200MM	each	2.0	₹ 12,500.00	₹ 25,000.00
b)	150MM	each	4.0	₹ 8,500.00	₹ 34,000.00
a)	100MM	each	4.0	₹ 7,500.00	₹ 30,000.00
b)	80MM	each	2.0	₹ 6,500.00	₹ 13,000.00
NON-SOR	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :				
a)	32 mm dia	each	5.0	₹ 3,820.00	₹ 19,100.00
NON-SOR	Providing and fixing Float Valve :				
a)	25 mm dia	each	2.0	₹ 1,200.00	₹ 2,400.00
NON-SOR	Providing fixing, including testing and commissioning the following size of flanged type sluice valve of cast iron body and bronze/ gun metal seat confirming to class PN 1.6 of IS: 14846/IS: 780 complete with bolts and nuts, rubber insertions etc. as per specification complete as required.				
a)	250MM	each	3.0	₹ 40,000.00	₹ 1,20,000.00

BOQ FOR FIRE FIGHTING SYSTEM FOR SHANI MANDIR					
SR. NO.	ITEM DESCRIPTION	UNIT	QTY	RATE	AMOUNT
NON-SOR	Supply installation of Tank sleeve mounted suction strainer with The filter media is a woven stainless mesh of pleated construction supported on the inside by a perforated steel tube. The pleats provide a generous area of filtration in relation to the overall size. The pleated element and perforated steel tube are bonded to the end caps with epoxy resin. One end blind and the other is threaded. Fluid flow is radially inwards through the pleated element so that contaminants are deposited on the outside of the strainer where they may be removed easily by immersing in cleaning solution. The Strainer is mounted with SS Flange bolted with SS 304 Bolt inside tank to avoid rusting. The strainer is made up of Perforated SS 304 Sheet the thickness of sheet will not be less the 16 Gauge with 40-45% Perforation and internally mounted fine SS wiremesh 140- 262 micron.				
a)	Suction Strainer Sleeve and SS flanged coupled 250 MM Diameter	each	4.0	₹ 15,000.00	₹ 60,000.00
NON-SOR	SITC of Combination Air Release Valve for fire water mains, ductile iron/SS body with large-orifice and small-orifice mechanism, flanged ends ANSI Class 150, epoxy-coated internal/ external. Installed at pipeline high points and at split-case fire pump casing (as applicable). Includes isolation sluice/butterfly valve, bypass, fittings, testing, and commissioning per NFFA 20				
a)	25 mm dia	each	8.0	₹ 1,850.00	₹ 14,800.00
b)	32 mm dia	each	4.0	₹ 3,650.00	₹ 14,600.00
NON-SOR	Providing and fixing of Fire Extinguisher Clean Agent HCFC 123 Providing 6Kg Stored Pressure Type, Pressure Gauge, Gross Weight 9.4kg, empty weight 3.4 kg Can Height 480MM, Diameter 160 MM, Discharge Time less than 13 Secs, Controllable discharge mechanism (Squeeze grip with easy snap safety seal), Range minimum 4 Meters, applicable on Class A,B,C and electrically started Fire, A Rating 2A, B Rating 21B Can Construction; Deep drawn & CO, Mig welded, Valve Construction: Forging & Machining, Internal Coating of Can : Epoxy Powder coating, External Coating of Can : Epoxy Polyester Powder coating, Sheet metal thickness: 1.60MM, Helium Leak Detection Tested, EN Approved, 5 years warranty with instalert system with Superior quality EPDM Rubber Hosepipe etc., complete	each	4.0	₹ 9,250.00	₹ 37,000.00
NON-SOR	Supply, installation, testing and commissioning of Fire Axe of approved make, conforming to IS: 926 (or equivalent standard), with insulated handle and suitable mounting arrangement inside the Fire Box / Fire Station cabinet, complete as required.	each	15.0	₹ 450.00	₹ 6,750.00
SUB-TOTAL OF HYDRANT SYSTEM & ACCESSORIES					₹ 39,53,670.80
TOTAL FOR FIRE FIGHTING SYSTEM					₹ 55,67,709.8

Fire Alarm System						
Item No.	Sub item no.	Description of Items	Unit	Rates (in Rs.)	QTY.	Amount
23.1		ADDRESSABLE FIRE ALARM SYSTEM				
	23.1.1	2 Loop microprocessor				
		Supply, installation, testing and commissioning of 2 loop microprocessor based intelligent and electronically addressable, modular, loop capacity of 159 detectors. Fire alarm control panel with 5.7 inch touch screen LCD display, multiple access levels, 10,000 event history logs in the nonvolatile memory (EEPROM). The panel should be modular microprocessor based in nature. The panel shall have 240V AC power supply, automatic battery charger, 24 V, ceiled lead acid maintenance free batteries sufficient for 24 hours normal working and then be capable of operating the system for 30 mints during emergency condition. The panel shall be EN 54/UL certification.	Each	157872.00	1	157872
	23.1.2	4 Loop microprocessor				
		Supply Installation, testing & commissioning of 4 loop microprocessor based intelligent and electronically addressable, modular, with networking card & printer port- loops panel (expandable) with each loop capacity of 159 detectors. Fire alarm control panel with 5.7 inch touch screen LCD display, multiple access levels 10,000 event history logs in the nonvolatile memory (EEPROM). The panel should be modular microprocessor based in nature and should be expandable from single loop to up to 32 loops. The panel shall have 240V AC power supply, automatic battery charger, 24 V, ceiled lead acid maintenance free batteries sufficient for 24 hours normal working and then be capable of operating the system for 30 minutes during emergency condition. Provision for integration to BMS back net software. The panel shall be EN 54/UL certification.	Each	412620.00	1	412620
	23.1.3	Supply installation, testing and commissioning of loop card LSN 0300 A LSN module.	Each	39332.00	2	78664
	23.1.4	Supply, installation, testing and commissioning of active and networkable repeater panel with LCD display complete system function keys for programming and control like system reset, alarm acknowledgement, alarm silence, trouble acknowledgement UL/EN54 certified.	Each	115877.00	1	115877
	23.1.7	Supply, installation, testing and commissioning of addressable- automatic dual LED smoke detector with two integrated light-scattering smoke sensors using LEDs with different colours/wavelengths (blue/infrared) to avoid false alarm & should comply to test fire 1, Inbuilt Isolator, automatic addressing shall be UL/EN54 certified	Each	5263.00	150	789450
	23.1.1	Supply, installation, testing and commissioning of indoor addressable manual break glass unit (double action) with inbuilt isolators, with flexible network structures & necessary fixing arrangements with key complete as required shall be UL/EN54 certified	Each	4450.00	5	22250
	23.1.11	Supply, installation, testing and commissioning of outdoor addressable manual break glass unit (double action) with inbuilt isolators, with flexible network structures & necessary fixing arrangements with key complete as required, shall be UL/EN54 certified	Each	8386.00	10	83860
	23.1.12	Supply, installation, testing and commissioning of Indoor Standalone Loop Powered detector base sounder with inbuilt isolators & with 32 different tone variants selection options & adjustable sound pressure by 5 levels, the sound pressure 92.1 dB(A), shall be UL/EN54 certified	Each	7176.00	3	21528
	23.1.13	Supply, installation, testing and commissioning of outdoor standalone loop powered detector base sounder with inbuilt isolators & with 32 different tone variants selection options & adjustable sound pressure by 5 levels, the sound pressure 92.1 dB(A), shall be UL/EN54 certified	Each	9808.00	3	29424
	23.1.14	Supply, installation, testing and commissioning of strobe for base sounder red with inbuilt isolators, shall be UL/EN54 certified	Each	5024.00	3	15072
	23.1.15	Supply, installation, testing and commissioning of beam detector including mounting base along with interface module to direct connect to the loop, having a coverage area with a distance of min. 10 m and max. 100 m with extra width of up to 14 m ,operating temperature range: -20 C to +55 C, response sensitivity of 40% UL/EN54 certified	Each	86471.00	1	86471
	23.1.16	Supply, installation, testing and commissioning of addressable control relay module with inbuilt isolators & with flexible network structures with a maximum switching current of 1A @ 30V DC, shall be UL/EN54 certified	Each	15044.00	2	30088
	23.1.17	Supply, installation, testing and commissioning of addressable output module with inbuilt isolators, shall be UL/EN54 certified	Each	16972.00	3	50916
	23.1.18	Supply, installation, testing and commissioning of 1output+1input interface module with inbuilt isolator UL/EN54certified	Each	15941.00	3	47823
	23.1.19	Supply, installation, testing and commissioning of response Indicator shall be UL/EN54certified	Each	282.00	40	11280

	PWD-2024(41.28)	Supply ofXLPE insulated 1.5 sq.mm. Armoured 2 core FRLSZH fire alarm cable (RED) Fire Survival Cable conforming IS-7098 (Part-1) 1988, 1100 Voltgrade,2/3/4/8/10/12core ISI marked with copper stranded/solid conductor.	Meter	154	2500	385000
			Total of Fire Alarm System			2338195

