



## **DRAFT TENDER PAPERS**

**Name of Work :- Const. C C Road of Kalyanbhai Nanjibhai House to Zupali Mata Mandir at Village Durgi Ta. Bavla Dist. Ahmedabad Package no. AHD/Adimjuth/02 (2026-2027)**

**D.T.P. Cost. Rs. 507801.52**

<b>Sr. No.</b>	<b>Name of Work</b>	<b>No.</b>
1	<b>Const. C C Road of Kalyanbhai Nanjibhai House to Zupali Mata Mandir at Village Durgi Ta. Bavla Dist. Ahmedabad Package no. AHD/Adimjuth/02 (2026-2027)</b>	1

**GOVERNMENT OF GUJARAT  
ROADS & BUILDING DEPARTMENT  
SACHIVALAY, GANDHINAGAR**

## **ANNEXURE – II Notice Inviting On-Line Tender**

Details about Tender :-Tender Notice No. 03 2026-2027

(Including as per Corrigendum)

Department Name	:-	(R&B) Dept. Gandhinagar
Circle	:-	Superintending Engineer Ahmedabad Panchayat ( R & B) Circle L.D. Engineering Collage Compound, Navrangpura Ahmedabad
Division	:-	Executive Engineer, R & B Panchayat Division Laldarwaja, Bhadra Ahmedabad-380001
IFB No.	:-	Tender Notice No. 10 of 2025-2026
Name of Project	:-	Building
Name of Work	:-	<b>Const. C C Road of Kalyanbhai Nanjibhai House to Zupali Mata Mandir at Village Durgi Ta. Bavla Dist. Ahmedabad Package no. AHD/Adimjuth/02 (2026-2027)</b>
Estimated Contract Value (INR)	:-	Rs. 507801.52
Period of Completion (in Months)	:-	9 (Nine ) Months
Bidding Type	:-	Single bid system
Bid Call (Nos)	:-	1
Tender Currency Type	:-	Single
Tender Currency Settings	:-	Indian Rupee (INR)
Joint Venture	:-	Not Applicable
Rebate	:-	Applicable

### **Amount Details**

Bid Document Fee	:-	Rs. 900/-
Bid Document Fee Payable To	:-	Executive Engineer, R & B Panchayat Division Ahmedabad
Bid Security / EMD (INR)	:-	Rs. 5100.00/-
Bid Security / EMD in favour of	:-	Executive Engineer, R & B Panchayat Division Ahmedabad

### **Tender Dates**

Bid Document Downloading Start Date	:-	29/05/2026	hrs 12.00
Price Bid Opening Date	:-	30/06/2026	hrs 18.00
Last Date & Time for Receipt (Submission) of Bids	:-	01/07/2026	hrs 18.00
Bid Validity Period	:-	<b>120days from the last date of online Submission of Tender</b>	
Submission of certain documents etc. in person in the office of the E.E. (R&B) Division, Ahmedabad		Submission of EMD. Tender fee and other Documents during office hours: Up to date 01/07/2026 to 10/07/2026 in the office of the Executive Engineer, (R&B) Panchayat Division, Laldarwaja Ahmedabad	
Remarks	:-	Demand Draft for EMD & Tender fee shall be submitted in Electronic Format Only thorough Online( By Scanning) While Uploading the bid. This submission shall mean that EMD & tender fee are received Accordingly offer of those shall be opened whose EMD & tender fee is received electronically.	

		<p>However for the purpose of realization of D.D. bidder shall send the D.D in original through RPAD so as to reach to Executive Engineer, R &amp; B Panchayat Division, Jilla Panchayat Bhavan, Laldarwaja , Ahmedabad-380001 Within 7 days from the last date of uploading. Penaltative action for not submitting D.D. in original to E.E. by bidder shall be initiated. D.D. for Exemption Certificate is not necessary. However Exemption Certificate shall have to be submitted electronically through online.</p> <p>All the documents in supporting of bid and prequalification documents shall be submitted in electronic format only through online (by scanning ) &amp; hard copy will not be accepted and considered.</p>
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#### **Other Details**

Officer Inviting Bids	:-	Executive Engineer, R & B Panchayat Division Ahmedabad
Bid Opening Authority	:-	Executive Engineer, R & B Panchayat Division Ahmedabad
Address	:-	Office of the Executive Engineer, R & B Panchayat Division Ahmedabad Ph. No. (079-25511608)

#### **General Terms and Conditions**

- (1) Bidders can download the tender document free of cost from the website.
- (2) Bidders have to submit Technical bid as well as Price bid in Electronic for only on nprocure website till the Last Date & time for submission.
- (3) Offers in physical form will not be accepted in any case.
- (4) Free vendor training camp will be organized every Saturday between 4.00 to 5.00 P.M. at (n)code solutions-A Division of GNFC Ltd., Bidders are requested to take benefit of the same.

Bidders who wish to participate in online tenders will have to procure / should have a legally valid Digital Certificate as per Information Technology Act-2000 using which they can sign their electronic bids. Bidders can procure the same from any of license certifying Authority of India or can contract (n)code solutions-A division GNFC Ltd, who are licensed Certifying Authority by Govt. of India.

All bids should be digitally signed, for details regarding digital signature certificate related training involved the below mentioned address should be contacted:

(n) Code Solutions

A division of GNFC

301, GNFC Infotower, Bodakdev,  
Ahmedabad – 380 054 (India)

Tel: +91 26857316 / 17 / 18

Fax: +91 79 26857321

E-mail: nprocure@gnvfc.net

Web-site: www.rnb.nprocure.com

Toll Free: 1800-233-1010(Ext. 321)

Name of Work :- **Const. C C Road of Kalyanbhai Nanjibhai House to Zupali Mata Mandir at Village Durgi Ta. Bavla Dist. Ahmedabad Package no. AHD/Adimjuth/02 (2026-2027)**

## SCHEDULE – B

### Memorandum Showing items of Works to be Carried out

Sr. No.	Item of Work	Quantities estimated but may be more or less	Unit	Tender Rates In Figures Rs.P.S.	Total Amount According to Estimated Quantities
1	2	3	4	5	6
1	Item No. 1 Box cutting the road surface to proper slope and camber for making a base for road work including removing the excavated stuff and depositing on the road side slope as directed upto 50Mt.lead.	99.880	Cmt	102.93	10280.65
2	Item No. 2 Supplying, stacking and Spreading M.C. Stone aggregate Chipping etc. of Hard Stone of 40 mm to 63 mm size free of disintegrated other deleterious and organic matter and grading as Per I.R.C. Code as per instruction of engineers Incharge.	99.88	Cmt	1484.79	148300.83
3	Item No. 3 Supplying Stacking and Spreading Sand materials on road side incl. filling the boxes with all lead and lift as per Instruction of Engineer incharges.	29.96	Cmt	1025.01	30709.30
4	Item No- 4 Providing and laying Cement concrete 1:2:4 (1 Cement 2 coarse sand 4 graded stone aggregate 20 mm nominal size) and curing complete including cost of formwork in (A) Foundation and plinth	77.08	Cmt	4132.21	318510.75
	-			Total	507801.52

Rs. Five Lacs Seven Thousand Eight Hundred One & Paise Fifty Two Only

I/We am / are willing to carry out the work at ..... % above/ below percent (Should be written in figures and words) of the estimated rate mentioned above. Amount of my/ our tender works out as under.

\*Estimated Amount

\*Estimated Amount

Put to tender Rs. .... Put to tender Rs. ....

Add.....% above Rs. .... Deduct .....% below Rs. ....

Total Rs. .... Net. Rs. ....

In Words ..... In Words .....

(\* Please strike out whichever is not applicable.)

Notes 1 - All work shall be carried out as per Public Works Department Handbook and other specifications of Division or as directed.

નોંધ -૧ :- બધું જ કામ બાંધકામ વિભાગની પુસ્તિકા અને ડિવિઝનની બીજી ખાસ વિગત મુજબ અથવા સૂચના પ્રમાણે કરી આપવાનું રહેશે.

Notes 2 - All the columns in Schedule should be filled in ink and the total of the entries in the last column should be struck by the contractor under his signature.

નોંધ -૨ :- અનુસૂચિમાં બધા ખાનાની વિગતો સહીથી ભરવી અને છેલ્લા ખાનાની નોંધોનો સરવાળો કરી કોન્ટ્રાક્ટરે પોતાની સહી કરવી

Deputy Executive Engineer  
R & B Panchayat Sub Division  
Dholka

Executive Engineer  
R & B Panchayat Divisions  
Ahmedabad

# **Specification**

**Name of Work :- Const. C C Road of Kalyanbhai Nanjibhai House to Zupali Mata Mandir at Village Durgi Ta. Bavla Dist. Ahmedabad Package no. AHD/Adimjuth/02 (2026-2027)**

**TENDER OF ITEM SPECIFICATION**

Sr. No.	Name of road	Item No.	Page No.
1	Item No. 1 Box cutting the road surface to proper slope and camber for making a base for road work including removing the excavated stuff and depositing on the road side slope as directed upto 50Mt.lead.		
2	Item No. 2 Supplying, stacking and Spreading M.C. Stone aggregate Chipping etc. of Hard Stone of 40 mm to 63 mm size free of disintegrated other deleterious and organic matter and grading as Per I.R.C. Code as per instruction of engineers Incharge.		
3	Item No. 3 Supplying Stacking and Spreading Sand materils on road side incl. filling the boxes with all lead and lift as per Instruction of Enginner incharges.		
4	Item No- 4 Providing and laying Cement concrete 1:2:4 (1 Cement 2 coarse sand 4 graded stone aggregate 20 mm nominal size) and curing complete edcluding cost of formwork in (A) Foundation and plinth		

Deputy Executive Engineer  
R & B Panchayat Sub Division  
Dholka

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Ahmedabad

Item No. 1 Box cutting the road surface to proper slope and camber for making a base for road work including removing the excavated stuff and depositing on the road side slope as directed upto 50Mt.lead.

The sub grade/sub-base/ base to receive the water bound macadam course shall be prepared to the specified grade and camber and made of dust and other extraneous materials. Any nets or soft places shall be corrected in on approved manner and rolled until firm. Cutting shall be paid on cross section area as established by the longitudinal level and cross sections for this purpose. The work shall be started after the initial longitudinal section of the ground and cross sections are taken and recorded. The final surface shall confirm to proper profile, camber and super-elevation etc. as directed by the Engineer. The earthwork shall be paid on sectional measurements, cross sectional etc taken. No allowance or payments shall be made for materials excavated prior to the taking of levels by the Engineer.

The rate is inclusive of cutting in all soil and Murrum including removal of all shrubs, jungle cutting, cutting stuff in slopes, side drain bank etc complete. This item also includes the clearing the sides and demarking the line as per requirement and cutting out the. existing trees on the road side, no extra payment will be paid for at the time of preparing final bill, the road formation in embankment and cutting shall have be perfect condition true to grade, camber and side slope duly dressed and damages due to rain cuts etc., during entire working period shall have to be done by the contractor. The work taken in length shall be completed in all respects viz. width, grades, camber, side drains, side slopes etc. and measurements for incomplete work shall not be taken otherwise.

#### **1.0 Mode of Measurement & Payment:**

**1.1.** The unit rate box cutting shall include the cost of all materials, tools and plant required for excavation in all type of soils in grade and camber, line and levels and finishing as per direction of the Engineer-in-charge, excavation and all other incidental expenses for producing item of box cutting of specified breadth and depth and grade to complete the item or its components as shown on the drawings and according to these specifications.

**1.2.** The box cutting shall be measured for its cross sectional area and computing volumes of earth work in cubic meters by the method of average end areas

**1.3.** The payment will be made on **Cubic Meter** basis of the finished work.

Item No. 2 Supplying, stacking and Spreading M.C. Stone aggregate Chipping etc. of Hard Stone of 40 mm to 63 mm size free of disintegrated other deleterious and organic matter and grading as Per I.R.C. Code as per instruction of engineers Incharge.

1. Metal shall not be spread without permission of the Engineer incharge. Metal should be spread under careful supervision by trained coolies. Contractor shall see that uniform spreading as per collection of metal is done. The contractor shall spread the metal fully from the stacks without keeping any balance unless directed by the Engineer in charge to

keep some stack in balance for making good unevenness or depressions during rolling works. To ensure that the material is spread to the required thickness, the road surface shall be marked out in to length over which the contents of heaps are to be spread. The bounds of earth or murrum [one on either side] shall be laid with a distance between them equal to the width of road to be metaled and shall be enough to prevent the loose metal from spreading during consolidation as well as to retain water used for consolidation. Payment for bunds will be made in the respective item.

2. The metal [including old metal] shall be screened and rubbish, dust, grass shall be removed and spread evenly on the prepared surface in grade and camber by using camber board etc. so as to ensure that the surface is true to camber and grade. At least two camber by using camber boards shall be in use at site. The surface shall be checked at every 50 ft. by means of template while the correctness of the camber in between shall be tested by string and corrected as required. Between the straight lengths and the curves in camber of road to superelevation shall be made very gradually as may be directed by the Engineer in charge.

3. The spreading of metal shall proceed only 200mt. [max] advance of the rolling operations. The collection and spreading of the metal shall not be carried out in one and the same kilometer.

4. At the time of rolling all surface irregularities, hollows, depressions, humps etc. shall be straight. The spreading of metal in required layer shall be done by the contractor. The rate for this item shall be paid on cmt. basis and includes all the above operations with all lead and lift except consolidation.

Item No. 3 Supplying Stacking and Spreading Sand materials on road side incl. filling the boxes with all lead and lift as per Instruction of Engineer incharge.

1. Material for the purpose shall be of approved quality. Any material which is found inferior shall be rejected and the contractor shall remove such rejected material from the site at his own cost. The material shall be collected from quarries approved by the Executive Engineer. The material shall be granular and gritty.

2. The material shall be got approved by the Executive Engineer prior to collection on site. It shall be free from all rubbish, dust and any organic materials as well as clods of black cotton soils. Materials shall not be allowed to be collected from within the road boundary. Materials to be used as crust and for side shoulders shall be as determined in accordance with IS 2720 (Part-V) The materials to be used should be got tested prior to its use in road construction. Testing charges shall be borne by the contractor.

3. River or nala or sea sand required for the work shall be clear, sound, properly graded, free from organic materials silt clay etc. and shall be got approved by the Engineer-in-charge. The sand shall be well graded. The payment shall be made on Cubic Metre basis.



4. Stacking shall be done by filling in the standard steel boxes of 2 m x 1.5 m x 0.5 m size which shall be supplied by the Department if available on rent. Otherwise contractor shall make his own arrangement. No. deduction for voids shall be made from the grade measurements. Where any doubt exists as to whether the quantity of stacks of murrum in an hectometre is not confirming with the cubic content of the standard pharas(2 x 1.5x 0.5 M)the same shall be got corrected by the contractor if so ordered by the Engineer-in-charge for which no extra payment shall be Claimed by the contractor. If the quantity of murrum in any stack in a particular hectometer is found to be less than the standard measurement viz. 1.5 cmt. the entire collection in the hectometre shall be paid on the quantity so found Require stacks shall be done by the Contractor on a fairly level ground Stacking of the murrum shall be done in a manner as directed by the Engineer-in-charge.
5. For road work completed stacking or murrum as per requirement shall be carried out in 2 KM length before spreading. The collection shall always be commenced at one end of the K.M. and be carried continuously toward the other end unless the Engineer-in-charge shall direct otherwise.
6. The payment shall be made on cubic metre basis without deduction for voids. The contractors shall maintain all stacks in regular and proper size till the whole materials are collected, measured and finally accepted by the Department. The spreading of materials shall not be allowed till the materials are fully stacked and completed kilometer wise.
7. The rate incl. cost of collection, conveyance to the site with all lead and lift and filling the boxes incl. all labour, tools, equipment and other incidental expenses.
8. The rate quoted are inclusive of all such tools, duties, fees, royalties taxes etc.

Item No- 4 Providing and laying Cement concrete 1:2:4 (1 Cement 2 coarse sand 4 graded stone aggregate 20 mm nominal size) and curing complete edcluding cost of formwork in (A) Foundation and plinth

**1.0. Materials :** Water shall conform to M-1. Cement shall conform to M-3. Sand shall conform to M-6. Grit shall conform to M-8. Graded stone aggregate 20 mm. nominal size shall conform to M-12.

**2.0. General:**

2.1. The concrete mix is not required to be designed by preliminary tests. The proportion of the concrete mix shall be 1 : 2 :

4 (1 cement: 2 coarse sand ; 4 graded stone aggregate 10 mm. nominal size) by volume.

Concrete work shall have exposed

concrete surface or as specified in the item.

2.2. The designation ordinary M-100, M-150, M-200, M-250 specified as per. I.S.

Corresponding approximately to 1 : 3 : 6,

1 : 2 : 4, 1 : 1 1/2 : 3 and 1:1:2 nominal mix of ordinary concrete by volume respectively.

2.3. The ingredients required for ordinary concrete containing one beg of cement of 50 Kg. by weight (0.0342 Cu. M.) for

different proportions of mix shall be as under:

Grade of

concrete

Total quantity of dry aggregate by volume  
per 50 Kgs. of cement to be taken as the  
sum of individual volume of fine and  
coarse aggregates, maximum

Proportion of fine aggregate to  
coarse aggregate

Quantity of  
water per 50 Kgs.  
of cement  
maximum.

1 2 3 4

M-100 (1 : 3: 6) 300 Liters Generally 1 : 2 for fine aggregate 34 Liters

M-150 (1 : 2 : 4) 2.20 " to coarse aggregate by volume 32 "

M-200 (1 : 1 1/2 : 3) 160 " but subject to and upper limit 30 "

M-250 ( 1:1:2) 100 " of 1 : 1 1/2 and lower limit 1 : 3 27 "

2.4. The water cement ratios shall not more than those specified in the above table. The cement content of the mix specified

in the Table shall be increased if the quantity of water in a mix has to be increased to overcome the difficulties of placement

and compaction so that the water-cement-ratio specified in the Table is not exceeded.

2.5. Workability of the concrete shall be controlled by maintaining a water-cement-ratio that is bound to give a concrete mix

which is just sufficiently wet to be placed and compacted without difficulty with the means available.

2.6. The maximum size of coarse aggregate shall be as large as possible within the limits specified but in no case greater than

one fourth of the minimum thickness of the member, provided that the concrete can be placed without difficulty so as to

surround all reinforcement thoroughly and to fill the corners of the form.

2.7. For reinforced concrete work, coarse aggregates having a nominal size of 20 mm. are generally considered satisfactory.

2.8. For heavily reinforced concrete members as in the case of ribs of main beams, the nominal maximum size of coarse

aggregate should usually be restricted to 5 mm. less than the minimum, clear distance between the main bars, or 5 mm. less

than the minimum cover to the reinforcement whichever is smaller.

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2.9. Where the reinforcement is widely spaced as in solid slabs, limitations of size of the aggregate may not be important and

the nominal maximum size may sometimes be as great as or greater than the minimum cover.

2.10. Admixture may be used in concrete only with approval of Engineer-in-charge based upon the evidence that with the

passage of time, neither the compressive strength of concrete is reduced nor are other requisite qualities of concrete and steel

impaired by the use of such admixtures.

### **3.0. Workmanship:**

3.1. Proportioning : Proportioning shall be done by volume, except cement which shall be measured in terms of bags of 50

Kg. weight. The volume of one such bag being taken as 0.0342 Cu. metre. Boxes of suitable sizes shall be used for measuring sand aggregate. The size of the boxes (internal) shall be 35 cms. x 25 cms. and 40 Cms. deep. While measuring the aggregate and sand, the box shall be filled without shaking ramming or hammering. The proportioning of sand shall be on the basis of its dry volume and in case of damp sand, allowances for bulkage shall be made.

### **3.2 Mixing:**

3.2.1. For all work, concrete shall "be mixed in a mechanical mixer which alongwith other accessories shall be kept in first class working condition and so maintained throughout the construction. Measured quantity of aggregate, sand, cement required for each batch shall be poured into the drum of the mechanical mixer while it is continuously running. After about half a minute of dry mixing, measured quantity of water required for each batch of concrete mix shall be added gradually and mixing continued for another one and a half minute. Mixing shall be continued till materials are uniformly distributed and uniform colour of the entire mass is obtained and each individual particle of the coarse aggregate shows complete coating of mortar containing its proportionate amount of cement. In no case shall the mixing be done for less than 2 minutes after all ingredients have been put into the mixer.

3.2.2. When hand mixing is permitted by the Engineer-in-charge for small jobs or for certain other reasons, it shall be done on the smooth watertight platform large enough to allow efficient turning over the ingredients of concrete before and after adding water. Mixing platform shall be so arranged that no foreign material gets mixed with concrete nor does the mixing water flow out. Cement in required number of bags shall be placed in a uniform layer on top of the measured quantity of fine and coarse aggregate, which shall also be spread in a layer of uniform thickness on the mixing platform. Dry coarse and fine aggregate and cement shall then be mixed thoroughly by turning over to get a mixture to uniform colour. Specified quantity of water shall then be added gradually through a rose-can and the mass turned over till a mix of required consistency is obtained. In hand mixing, quantity of cement shall be increased by 10 percent above that specified.

3.2.3. Mixers which have been out of use for more than 30 minutes shall be thoroughly cleaned before putting in a new batch. Unless otherwise agreed to by the Engineer-in-charge the first batch of concrete from the mixture shall contain only two thirds of normal quantity of coarse aggregate. Mixing plant shall be thoroughly cleaned before changing from one type of cement to another. .

3.3. Consistency: 3.3.1. The degree of consistency which shall depend upon the nature of the work and methods of vibration of concrete, shall be determined by regular slump tests in accordance with I.S. 1199-1959. The slump of 10 mm. to 25 mm.

shall be adopted when vibrators are used and 80 mm. when vibrators are not used.

#### **4.4. Inspection:**

3.4.1. Contractor shall give the Engineer-in-charge due notice before placing any concrete in the forms to permit him to inspect and accept the false work and forms as to their strength, alignment, and general fitness but such inspection shall not relieve the contractor of his responsibility for the safety of men, machinery, materials and for results obtained. Immediately before concreting, all forms shall be thoroughly cleaned.

3.4.2. Centering design and its erection shall be got approved from the Engineer-in-charge. One carpenter with helper shall invariably be kept present throughout the period of concreting. Movement of labour and other persons shall be totally prohibited for reinforcement laid in position. For access to different parts, suitable mobile platforms shall be provided so that steel reinforcement in position is not disturbed. For ensuring proper cover, mortar blocks of suitable size shall be cast and tied to the reinforcement. Timber, kapachi or metal pieces shall not be used for this purpose.

#### **3.5. Transporting and laying:**

3.5.1. The method of transporting and placing concrete shall be as approved. Concrete shall be so transported and placed that no contamination, segregation or loss of its constituent material takes place.

All form work shall be cleaned and made free from standing water, dust, snow or ice immediately before placing of concrete.

No concrete shall be placed in any part of the structure until the approval of the Engineer-in-charge has been obtained.

3.5.2. Concreting shall proceed continuously over the area between construction joints.

Fresh concrete shall not be placed

against concrete which has been in position for more than 30 minutes unless a proper construction joint is formed. Concrete

shall be compacted in its final position within 30 minutes of its discharge from the mixer.

Except where otherwise agreed to

by the Engineer-in-charge concrete shall be deposited in horizontal layers to a compacted depth of not more than 0.45 metre

when internal vibrators are used and not exceeding 0.30 metre in all other cases.

3.5.3. Unless otherwise agreed to by the Engineer-in-charge, concrete shall not be dropped into place from a height exceeding

2 metres. When trucks or chutes are used they shall be kept close and used in such a way as to avoid segregation. When

concreting has to be resumed on a surface which has hardened, it shall be roughened, swept clean, thoroughly wetted and

covered with a 13 mm. thick layer of mortar composed of cement and sand in the same ratio as in the concrete mix itself. This

13 mm. layer of mortar shall be freshly mixed and placed immediately before placing of new concrete. Where concrete has

not fully hardened, all laitance shall be removed by scrubbing the wet surface with wire or bristle brushes, care being taken

to avoid dislodgement of any particles of coarse aggregate. The surface shall then be thoroughly wetted, all free water

removed and then coated with neat cement grout. The first layer of concrete to be placed on this surface shall not exceed 150 mm. in thickness and shall be well rammed against old work, particular attention being given to corners and close spots.

3.5.4. All concrete shall be compacted to produce a dense homogeneous mass with the assistance of vibrators unless, otherwise permitted by the Engineer-in-charge for exceptional cases, such as concreting under water, where vibrators cannot be used. Sufficient vibrators in serviceable condition shall be kept at site so that spare equipment is always available in the event of breakdowns.

Concrete shall be judged to be compacted when the mortar fills the spaces between the coarse aggregate and begins to cream up to form an even surface. Compaction shall be completed before the initial setting starts i.e. within 30 minutes of addition

of wafer to dry mixture. During compaction, it shall be observed that needle vibrators are not applied on reinforcement which is likely to destroy the bond between concrete and reinforcement.

**3.6. Curing:** Immediately after compaction, concrete shall be protected from weather, including rain, running water, shocks, vibration, traffic, rapid temperature changes, frost and drying out process. It shall be covered with wet sacking, hassain or other similar absorbant material approved, soon after the initial set and shall be kept continuously wet for a period of not less than 14 days from the date of placement. Masonary work over foundation concrete may be started after 48 hours of its laying but curing of concrete shall be continued for a minimum period of 14 days.

**3.7. Sampling and Testing of concrete :**

3.7.1. Samples from fresh concrete shall be taken as per I.S. 1199-1959 and cubes shall be made, cured and tested at 7 days or 28 days as per requirements in accordance with I.S. 516-1959. A random sampling procedure shall be adopted to ensure that each concrete batch shall have a resonable chance of being tested i.e. the sampling should be spread over the entire period of concreting and cover all mixing units. The minimum frequency of sampling of concrete of each grade shall be in accordance with following :

Quantity of concrete in the work	No. of samples	Quantity of concrete in the works	No. of samples
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1-5Cmt.	1	16-30Cmt.	3
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6-15Cmt.	2	31-50	4
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51 and above	4 + one additional for each additional 50 M. or part thereof.
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NOTE : At least one sample shall be taken from each shift. Ten test specimens shall be made from each sample, five for testing at 7 days and the remaining five at 28 days. The samples of concrete shall be taken on each day of the concreting as per above frequency. The number of specimens may be suitably increased as deemed necessary by the Engineer-in-charge when procedure of tests given above reveals a poor quality of concrete and in other special cases.

3.7.2. Tire average strength of the group of cubes cast for each day shall not be less than the specified cube strength of 150 Kg/Cm at 28 days. 20% of the cubes cast for each day may have value less than the specified strength provided the lowest value is not less than 85% of the specified strength. If the concrete made in accordance with the proportions given for a particular grade does not yield the specified strength, such concrete shall be classified as belonging to the appropriate lower, grade concrete made in accordance with the proportions given for a particular grade shall not, however, be placed in a higher grade on the ground that the test strength are higher than the minimum specified.

### **3.8. Stripping:**

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3.8.1. The Engineer-in charge shall be informed in advance by the contractor of his intention to strike the form work. While fixing the time for removal of form work, due consideration shall be given to local conditions, character of the structure, the weather and other condition that influence the setting of concrete and pf the materials used in the mix. In normal circumstances (generally where temperatures are above 20 ° C) and where ordinary concrete is used, forms may be struck

after expiry of periods specified in item No. 9.1 (A) for respective item of form work.

3.8.2. All form work shall be removed without causing any shock or vibration as would damage the concrete. Before the soffit and struts are removed, the concrete surface shall be exposed, where necessary in order to ascertain that the concrete has sufficiently hardened. Centring shall be gradually and uniformly lowered in such manner as to permit the concrete to take stresses due to its own weight uniformly and gradually. Where internal metal ties are permitted, they or their removable parts shall be extracted without causing any damage to the, concrete and remaining holes filled with mortar. No permanently embedded metal part shall have less than 25 mm. cover to the finished concrete surface. Where it is intended to re-use the form work, it shall be cleaned and made good to the satisfaction of the Engineer-in- charge. After removal of form work and shuttering, the Executive Engineer shall inspect the work and satisfy by random checks that concrete produced is of good quality.

3.8.3. Immediately after the removal of forms, all exposed bolts etc., passing through the cement concrete member and used for shuttering or any other purpose shall be cut inside the cement concrete member to a depth of at least 25 mm. below the surface of the concrete and the resulting holes be filled by cement mortar. All fine caused by form joints, all cavities produced by the removal of form ties and all other holes and depressions honeycomb spots, broken edges or corners and other defects shall be thoroughly cleaned, saturated with water and carefully pointed and rendered true with mortar of cement and fine

aggregate mixed in the proportions used in the grade of concrete that is-being finished and of as dry consistency as is possible to use. Considerable pressure shall be applied in filling and pointing to ensure thorough Riling in all voids. Surfaces which are pointed shall be kept moist for a period of 24 hours.

If rock pockets/honeycombs in the opinion of the Engineer in- charge are of such an extent or character to effect the strength of the structure materially or to endanger the, life of the steel reinforcement, he may declare the concrete defective and require the removal and replacement of the portions of the structure affected.

**4.0. Mode of measurement and payment:**

4.1. The consolidated cubical contents of concrete work as specified in item shall be measured. The concrete laid in excess of section shown on drawings or as directed shall not be measured. No deduction shall be made for

(a) Ends of dis-similar materials such as joits, beams, posts, girders, rafters, purline trusses, corbels and steps etc upt 500 Sq.

Cm. in section.

(b) Opening upto 0.1 Sq. M.

4.2. The rate includes cost of all materials, labour, tools and plant required for mixing, placing, position, vibrating and compacting, finishing, as directed, curing and all other incidental expenses for producing concrete lied strength The rate excludes the cost of form work.

4.3. The rate shall be for a unit of one cubic metre.

Name of Work :- Const. C C Road of Kalyanbhai Nanjibhai House to Zupali Mata Mandir at Village Durgi Ta. Bavla Dist. Ahmedabad Package no. AHD/Adimjuth/02 (2026-2027)

SCHEDULE FOR TESTING OF MATERIALS

For ensuring quality control and workmanship, Various tests prescribed below for materials shall be taken at periodical intervals as stipulated below.

The materials shall be got tested at Government recognised Laboratory, (R & B) of field Laboratory of GERI (R & B) for which 1 % of the estimated amount pur to Tender shall be recovered from the contractor from the R.A. bills and final bills at the testing charges shall be paid to the GERI by the Government However if the charges increase over 1 % no excess recovery shall be made from the contractor as per resolution of B & C Department dated 10<sup>th</sup> May 1985 vide TNC/1085 (4)s.

Item No. as per schedule B	Brief Description of Materials to be tested	Qty. of Materials	Prescription of test which shall be carried out	Frequency @ which test shall be carried out		Total No. of Test to be taken
	40 MM		Gradation Test	1 to 100 Cmt – 1 Test		
	20 MM			100 to 500 cmt – 3 Test		
	25 to 40 mm metal		Impact value	500 to 1500 cmt – 5 Test		
	10 to 20 mm kapchi		Flakiness Index	1500 to 5000 cmt – 7 Test		
	6 mm size grit					
	10 to 12 mm kapchi					
	6 to 10 mm grit					
	19.20 to 26.5 mm					
	13.20 to 19.20 mm					
	4.75 to 13.20 mm					
	2.36 to 4.75 mm					
	5.60 to 11.20 mm					
	2.80 to 5.60					
	Quarry Spall					
	40 mm nominal sie					
	20 mm MCBT					
2	Sand		Stripping Value	-As above-		
3	Murum		P. I. Value	One test per / 50 Cmt		
4	Sand		Silt Content	One test per work		
	Stone dust		Gradation	One test per 200 Cmt		
5	Asphalt		1 Penetration Test as per I.S. 1203	No. of Tankar	Test	
	(ii) Emulsion			1 to 10	1	
				11 to 20	2	
				21 to 50	3	
				50 to 100	4	
				Remaining every 50 tankar		
				1		
			2. Ductility Test	As per I.S. 1208		
			3. Specification Gravity Test	As per I.S. 1202		
			4. Softening point Test	As per I.S. 1204		
			5. Viscosity Test	As per I.S. 1206		



6	Tack coat		Binder temperature for application	Irregular close in intervals Two tests per day	
			Rate of spread of binder		
7	WOOD				
8	Bricks		Water absorption	1 test per 50000 Bricks	
			Efflorence		
			Size		
			Compressive Strength		
9	Cement		Consistency	Up to 50 T	1 test
			Setting time	100 T	2 tests(As per
			Compressive stemgth	200 T	3 tests GERI
			Fineness	300 T	4 tests Manual
			Chemical analysis	500 T	5 Tests (2002)
			Soundess	800 T	6 tests
				1300 T	7 tests
				and 8 tests for longer consingment	
10	Steel T.M.T. Bar		Tensile Strength	1 Test/40tonnes/per category	
	M.S. Bar		Yield Stress		
			Elongation		
			Size		
11	C C cube 1.1.5.3		Compressive Strength	Only C.C. M.P	No. of test
	M-100		(I.S. 516 – 1959)	1 to 5	1 No
	M-150			6 to 15	2 No
	M-200			16 to 20	3 No
	M-250			31 to 50	4 No
	C.C. 1:3:6			51 & above	4 + 1
				(For each additional 50 or part thereof)	

The number of test will be as per Manual of Quantity Control of latest Govt. G.R./ Circulars will be final .

The Contractor shall have to pay 1 % of the estimate cost put to tenders all testing of materials & same shall be deducated from their bills for the works. The testing of various materials shall be carried out in DERI and result received shall be binding to all i.e. the contractor and Govt.

Testing charges of GERI shall be born by Govt. No refund be made nor extra charges over 1 % shall be recoverable from the ccontractor.s

Deputy Executive Engineer  
R & B Panchayat Sub Division  
Dholka

Executive Engineer  
R & B Panchayat Division  
Ahmedabad