INDIAN INSTITUTE OF TECHNOLOGY KANPUR
INSTITUTE WORKS DEPARTMENT
DIVISION-III

No.: IWD/DIV-III/ 326
Dated: 19.08.2026

The quotations are invited for the **"Bore Hole drilling and sub-soil Investigation for Construction of Faculty Apartment Block-E and F at IIT Kanpur"** from specialized agencies having the requisite similar type of experience are invited. The duly filled quotation shall be received online through www.eprocure.gov.in/eprocure/app upto **27-08-2026 at 03:00 PM and shall be opened on same day at 03:30 PM** in the office of the Executive Engineer, Civil Division-III, IWD, IIT Kanpur in presence of the representative of the quotationer, who wish to be present.

Estimated cost (inclusive of GST)	:	**Rs. 6,00,667/-**
Earnest Money Deposit EMD(Rs.)	:	**Rs. 12,013/-**

The earnest money (in the shape of FDR/DD) deposit is Rs. 12,013/- in favour of the Director **The original EMD shall have to be submitted in the office of the Executive Engineer, Division-III, IWD, IIT, Kanpur on or before 27-08-2026 upto 03:00 PM.**

The quotations should be submitted online along with scan copy of EMD, experience certificate of similar nature of works and other required documents **through www.eprocure.gov.in/eprocure/app upto 27-08-2026 at 03:00 PM.**

1. The item rates should be offered in price BoQ.
2. **The 08 bore holes each of 40 mtr depth.**
3. The firm should have valid GST Registration, PAN the same should be submitted along with the technical bid. In the absence of these particulars the quotations are liable for rejection.
4. According to standard terms, payment shall be made after its completion. Payment against Performa invoice shall not be made.
5. The quotations shall remain open for acceptance for four weeks from the date of opening.

6. Necessary statutory deductions shall be made from the bills.
7. The Institute has right to reject all or any of the quotations and to split up the requirements or relax any or all of the above conditions without assigning any reason.
8. The work shall be executed as per entire satisfaction of the Engineer-in-charge In time with all labour, materials & T&P etc. complete with all respect.
9. A penalty 1% shall be charged if required work is not completed by due date.
10. The water charges @1% (for water connection) shall be borne by the contractor.
11. The period completion is 60 days from the date of supply order.
12. The rates quoted shall be F.O.R. IIT Kanpur & inclusive of GST.
13. Site visit must be done by the bidder before quoting their rates.
14. The experience certificate of similar works duly certified already executed in Central Government /State Government/ Central PSUs may also be attached along with the technical bid.
15. If the bidder makes any modification in the terms and conditions of the bid, which is not acceptable to the Institute, then the Institute shall, without prejudice to any other right or remedy, be at liberty to suspend the bidder for one year.

(V. P. Singh)
Executive Engineer

Copy to: -
1. Notice Board.
2. Institute web site
3. CPPP portal

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1.0 GENERAL

1.1 Request for Price bid

Executive Engineer, requests for proposals for **"Bore Hole drilling and sub-soil Investigation for Construction of Faculty Apartment Block-E and F at IIT Kanpur"**

1.2 Proposal Submission

1.2.1 This Request for Price bid for Investigation Services is being sent for your further action.

1.2.2 The Agency shall submit the proposal by attaching copy of PAN, GST & EXPERIENCE OF SIMILAR WORK COMPLETION CERTIFICATE to Executive Engineer IWD, Kanpur

1.2.3 The Agency shall include with the price bid Proposal a statement defining clearly any proposed deviations from the requirements of this document, including any additions, deletions, exceptions and revisions.

1.2.4 The Agency shall hold this price bid open for acceptance by the IITK for a period of ninety (90) calendar days after the date of submittal to the IITK.

1.3 Experience

1.3.1 The selected Agency must bring with it a core cadre of experienced professionals of sufficient number and experience to provide the required services.

1.3.2 In selecting the Agency, the Executive Engineer, IWD will assess the experience of the Firm and the assigned personnel of the Firm in executing similar works.

1.4 Scope of Work

The detailed scope of work to be executed by the Agency is included in a separate Annexure "A"-Scope of Work.

1.6 Form of Agreement

The successful Agency will enter into a contract with the Executive Engineer, IWD upon the terms and conditions proposed by the Executive Engineer, IWD and mutually acceptable to both parties. The terms and conditions of the contract will supersede the terms and conditions of this RFP.

2.0 BACKGROUND INFORMATION

2.1 **Owner** **: INDIAN INSTITUTE OF TECHNOLOGY KANPUR**

2.2.1 Owner's Representatives : Executive Engineer, IWD IIT Kanpur

2.3 **Project Information**

2.3.1 **General**

* Site Location : On the area adjacent to the existing Type-4 Apartment at IIT Kanpur

2.3.2 **Other Information**

* Super-structure : Basement+ stilt+ 12 floors
* Basements : With basement.

3.0 SCOPE OF SERVICES

3.1 **Geo-technical Investigation Services**

3.1.1 The Executive Engineer, IWD proposes to appoint an Agency to conduct the necessary Geo-technical Investigation works for the proposed Development.

3.1.2 The scope of the services for the Agency shall include the provision of all management and professional services necessary and required to produce an assessment of the environmental condition of the site.

3.1.3 The exact scope is available in Annex "A".

4.0 FORM OF PROPOSAL

4.1 **Proposal Information**

4.1.1 Although any additional information or suggestions are welcome, they must be submitted in a separate binding and identified as being 'supplemental'.

4.2 **Team**

4.2.1 The offer should contain information about individuals who will be assigned to this project, along with a brief resume including relevant experience, employment history, education, and professional affiliations.

4.2.2 A numerical list containing the number of employees of the firm according to their functional disciplines, of those who will be involved with this project, should also accompany the proposal.

4.3 **Experience of the Agency**

Description of only relevant examples should be provided.

4.4 **General Background**

4.4.1 Indicate the current workload and any future assignments which may affect personnel or the Agency's ability to handle the project.

4.4.2 Describe the Firm's involvement in any litigation, arbitration or claims, whether with Owners, Consultants or any other third party currently or in the past. Briefly describe the claim or dispute and the status, outcome or resolution along with date/period.

4.5 **Schedule**

4.5.1 The time frame for the following activities shall be mentioned by the Agency:-

* Mobilization
* Completion of field work
* Completion of draft report
* Completion of final report
* Submission of Report

4.5.2 The work shall be completed within time period of maximum of Sixty **(60) days** from the date of award of work.

4.6 **Charges**

4.6.1 The Executive Engineer, IWD intends to receive a price bid (schedule of rates) inclusive of all overheads, expenses, taxes, profit and any sub-consultants fees etc.

4.6.2 The Agency shall base his charges on the scope and information contained in these documents.

4.6.3 The payments shall be made on the completion of the work.

a) Geo Technical Investigation: -

a.1) After Full Mobilization

a.2) Completion of all site work, field and laboratory tests

a.3) on submission of Preliminary Report

a.4) on submission of Final Report

4.6.4 The Executive Engineer, IWD reserves the right to use this data for adjustments of the price if finally the services of the Agency are not used for the full scope of work.

5.0 MISCELLANEOUS INSTRUCTIONS AND PROVISIONS

5.1 Submittal Criteria

5.1.1 Submit original Price bid proposal to the website www.eprocure.gov.in/eprocure/app, tender inviting authority Executive Engineer, IWD, Indian Institute of Technology, Kalyanpur, Kanpur, U.P-208016 in online mode only.

5.1.2 Response may include such other information and details deemed appropriate to support the Agency's qualifications to perform this work.

5.1.3 All responses should be submitted **www.eprocure.gov.in/eprocure/app, tender inviting authority Executive Engineer, IWD, Indian Institute of Technology, Kalyanpur, Kanpur, U.P-208016 in online mode only.**

5.2 Requests for Additional Information

5.2.1 Due to the detailed response required by this Price bid, the Owner/ Architect/Consultants are attempting to encourage requests from Agencies for additional information if required.

5.2.2 Ability to absorb the information furnished, and to respond accordingly will demonstrate the Agency's understanding the work.

5.2.3 If request for clarification or for further information are an absolute necessity, they must be submitted in writing to **Executive Engineer, IWD, IIT Kanpur.**

5.2.4 Responses to requests for information will be provided in writing to all proposers. Requests for information received by telephone will not be entertained.

5.2.5 Extension of time for submission of 'Price bid' will not be granted.

ANNEXURE - A

SCOPE OF WORK

The Agency shall perform the Geo-technical Investigation in accordance with the criteria described herein, and any other additional work necessary to provide services of high professional level as per relevant Indian standards (BIS), International standards and other prevailing professional practices for **"Bore Hole drilling and sub-soil Investigation for Construction of Faculty Apartment Block-E and F at IIT Kanpur".**

6.0 **Scope of Works**

(a) To carry out 8 nos. of boreholes at project location, boreholes of minimum 150 mm diameter or other size in soft soil (silt/clay) and for hard gravelly, sandy soils and soft disintegrated rock (SDR)/ refusal strata using NX rotary core diamond bits drilling which will be up to Maximum 40 meter or N value>100 below NGL (Normal / existing ground level) or refusal. The proposed locations shall be communicated through the drawing the time of execution.

(b) Taking disturbed soil samples as per IS/Site requirements.

(c) Taking undisturbed soil samples as per IS/Site requirement.

(d) Standard or cone penetration test as per IS/site requirements. Static and Dynamic Cone Penetration Tests are not specified as mandatory tests. These shall be identified as additional tests. If the Agency considers that these would give more realistic results, then such tests may be conducted. However, before conducting such tests the Agency shall obtain written consent of the Executive Engineer, IWD, IT Kanpur.

(e) Taking one water sample from each bore hole and its analysis

for chloride and sulphate contents.

(f) Ground water table in each bore hole

(i) Laboratory Tests as given 5.2.2

(j) Safe soil bearing capacities as mentioned in price bid / document (The

Tenderer should indicate the necessity or otherwise of all these test to make his recommendations and quotes accordingly. Samples taken from the bore holes need be produced if asked for) This specification outlines the general requirements for site sub soil investigations. The Agency shall prepare and deliver a written report of all the findings of this investigative work.

6.1 OBJECTIVE OF THE INVESTIGATION AND REPORT

The project information available is limited to the Site Plan and Architectural floor plans showing general descriptions of the building types & locations as being considered. The site is subdivided into grids both ways and each grid is marked accordingly. Bore holes are located mostly on intersection of grids. Refer drawing No. FA-01 dated Aug. 2026.

The objective of the required Geo-technical Investigation is to get all the necessary properties of the soil and definite recommendations on the following:-

- The type of foundation system to be used and the depth of foundation;
- Bearing capacity at the foundation strata for individual, strip and raft foundations with the permissible settlement, with and without single basement.
- Pile capacity at different depths with different diameter of piles including under- reamed piles in case the report recommends piles.
- Calculation for arriving at bearing capacities and pile capacities.
- Suitability of the excavated earth for back filling;
- Water table depth, Chlorides and Sulphates contents in the ground water and earth. Recommendations on the use of underground water for purposes of drinking and construction (concreting and masonry work)
- Modulus of Sub-grade reaction for the design of rafts and pile foundations.
- Other soil parameters required for design of sub structures including retaining walls; reinforced earth walls;

The Agency shall advise on the expected rise and fall of ground water table due to seasonal variations.

6.2 CODES AND STANDARDS

All work shall be carried out strictly in accordance with the Technical Specifications, unless otherwise approved by engineer in writing. Where not specified, the latest editions of one or more of the following IS codes of practice or any other applicable codes shall be followed. (In case of other applicable codes, it shall be followed subject to prior approval of IWD IITK).

IS:1498-	Classification and identification of soil for general Engineering purpose,
IS:1888-	Method of Load Test on Soils,
IS:1892-	Code of Practice for Site Investigations for Foundations,
IS:1904-	Code of Practice for structural Safety of Buildings,
IS:2131-	Code of Practice for walled Tube sampling of Soils,
IS:2720-	(Part I to Part XXII) – Method of Test for Soils,
IS:2809-	Glossary of Terms and symbols relating to soil Mechanics,
IS:2810-	Glossary of Terms and symbols relating to soil Dynamics,
IS:4434-	Code of practice for In-situ Vane and shear test for soils,
IS:4968-	(Part me and Part III) – Method of sub surface sounding,
IS:5249-	Method of test for Determination of IN–Situ Dynamic Properties of Soils,
IS:5529-	Code of practice for in– situ Permeability Test (Part 1: Test in overburden)
LAMBE-	Dry Unit Weight for un-disturbed samples (UDS)

2.0 SAMPLING AND TESTS

2.1 Benchmarks

2.1.1 The Agency shall establish a benchmark at the site, and record its location and its elevation with reference to the official datum as well as to the benchmark to be identified by the Owner at site. **The ground level of all the bores shall then be recorded in relation with this benchmark as datum.**

2.2 Extent of work

The extent of soil investigation will be as follows:

The exploration of the sub soil strata by trial pits / and Boreholes to determine the sequence and extent of the strata, and establish the geology of the soil and site as necessary.

The procuring of sufficiently representative sample of all soils, rocks and ground water to ascertain their characteristics, in order that the type of foundation and structures may be determined for the proposed site.

The preparation of a comprehensive report based on the finding and observations of the soil investigation, including recommendations as per Art 6.1 on foundation design and / or safety of existing works, nature of soil, recommendation of soil stabilization means if required and suitability of the excavated earth for back filling in building plinth and roads etc.

2.3 Bore Holes

The scope of the investigation shall include, but not be limited to the information as given in drawing showing location and depth of bore holes. The agency will bore the holes to given depth (as per Annexure B and drawings) or refusal whichever is encountered first.

2.3.1 Location & boring procedure

The location of bore holes shall be given in the sketch/drawing along with the reference mark at various points in the drawing / sketch and numbers of boreholes shall be sufficient to give a picture of the probable variation in the substrata over the site, and if necessary in certain areas adjacent to the site.

2.3.1.1 It shall be the responsibility of soil investigator or contractor/ bidder to Locate the position of the bore holes accurately which will be checked by

the engineer-in-charge. Boreholes sunk at wrong locations shall not be considered for payment.

2.3.1.2 If the Agency considers it necessary to change the location or depth of any of the proposed borings, the Consultant shall be notified in advance and a new location and / or depth shall be agreed upon between the Structural Design Consultant and the Agency. A maximum deviation of up to 5m is permissible from the given location and the agency should mark such deviations on the plan.

If unusual conditions are encountered, including but not limited to unanticipated materials which cannot be penetrated by standard sampling equipment, the Agency shall immediately discuss with the Structural Design Consultant for a mutually agreeable solution to the problem. However, financial implications if any, for implementing such solution must be intimated to the Owner by the Agency before executing such works.

The Agency shall advise the Owner as to any further exploration and testing required to obtain information that is required by the Agency to ensure a professional interpretation of the subsoil conditions at the site. The Agency shall perform such additional work only if authorized by the Owner in writing.

The extent of the exploration undertaken shall be consistent with the scope of the Project as given by the information above and by any drawings attached hereto.

2.3.1.3 08 Boreholes of 40-meter depth minimum 150 mm diameter shall be sunk to the required depth with shell and auger and powered mechanized suitable rotary or percussion equipment through sand, silt, clay, pebbles and gravels but excluding hard rocks. The boring in rock shall be carried out using mechanized boring equipment and diamond bits as per NX size. The boring shall be carried out in Mud using mud boring techniques based upon the soil. Mud boring shall be carried out by employing bentonite slurry.

In case of cohesion-less soil, borehole may be kept filled up with bentonite or any other suitable slurry to prevent sides of borehole from caving in.

The boreholes shall be cleaned properly before conducting any in- situ test and test taking out un-disturbed samples.

2.3.2 **Depth**

The depth of each borehole shall be to include all strata that will affect the design and stability of the proposed structures. Depth shall always be measured from the original NGL (Natural Ground Level) of the particular location of the bore well.

Generally, the bore hole shall be terminated on refusal upon hard pan or hard rock. When hard rock is encountered at any depth less than 40.00 meters, at least 1.5 meter long cores of such rock stratum shall be taken from below the rock to determine strength of the same and borehole shall be terminated after drilling up to 3.0 meters in rock or 20 meter total depth whichever happens earlier. Where hard rock is not encountered up to 20 meters depth from NGL, the boring is to be stopped at 20 meter depth or SPTN value >100 whichever is less.

2.3.3 **Back Filling**

All bore holes and trial pits shall be properly filled back and existing pavements / Ground reinstated material shall be cleared away and site left tidy on completion.

2.3.4 **Bore hole Log**

For each location of boring, a log shall be complied for inclusion with report, giving the information in tabulated and graphical forms. The following information shall be included….

a) Ordinance level of Ground at bore hole site

b) Borehole No. and location

c) Type and dia of boring, and equipment used

d) Classification and description of each soil and rock type, and depth below surface,

e) Levels and limits of zones in rocks which shows definite characteristics (i.e. joints or shear planes or mineral deposits)

f) The level at which ground water was encountered, the level to which the water rose, and rate of rise, if any.

g) When boring in rock, the level to which the water was lost, seasonal or Tidal variations.

h) SPT N Value, type of sample collected, RQD, CR with depth to be mentioned in the bore logs.

3.0 DRILLING AND SAMPLING METHODS

3.1 The Agency shall identify in his proposal which standards he would follow for drilling and sampling works. The work shall generally be in accordance with the current applicable BIS (Bureau of Indian Standards), or equivalent.

3.2 The samples shall be preserved and the field logs prepared by an experienced soils technician acting under the supervision of the Agency.

3.3 Frequency of sampling

A sufficient no. of disturbed and undisturbed soil samples shall be taken at varying depth for testing and analysis. The number of samples shall be adequate for complete classification of soil and accurate assessment of its properties. The manner of sampling shall be taken whenever a major change in soil is evident. In an apparently homogeneous stratum, samples are at intervals of not more than 2.0 meters in depth.

Undisturbed samples shall be minimum 50 mm in diameter and minimum 250mm long.

Disturbed samples shall be collected also at the locations where the in situ tests are carried out, at change of stratum and at all levels where UD (undisturbed) samples are drawn.

3.4 Protection

Due care shall be taken in protection and handing of the samples, in order to preserve their natural structure and moisture content. After withdrawal, the ends of the tubes shall properly sealed off with wax and capped before sending them over to laboratory for tests. Each sample shall be clearly labeled with the location and depth. These samples should be packed in widen boxes so that samples are not disturbed during trans it to soil mechanics laboratory.

3.5 Ground Water

A representative selection of water samples shall be taken over the site to determine the content and variation, if any, of sulphates or chemicals or

other deleterious matter . Water samples shall be taken as soon as possible after water has been struck, and care shall be taken to ensure that no dilution takes place with rain, or surface water, or water used to facilitate boring. Minimum 2.5 liters of water shall be collected for each sample and stored in proper containers adequately labeled and sealed prior to sending the same to laboratory for testing.

3.6 **Description**

The description of each sample of soil in the report shall include its consistency, swelling property, structure, colour, and other diverse characteristics, together with reference to any other material incorporated (i.e. stones, mineral or vegetable matter).

4.0 **PROTECTION OF PROPERTY**

4.1 The Agency shall contact the Owner for information regarding buried utilities and structures. He shall take all reasonable precautions to prevent damage to property both revealed and concealed, and shall reasonably restore the site to the condition existing prior to the his entry.
Such restoration shall include, but not be limited to, backfilling of borings with sand, patching of slabs and pavements etc. Each boring shall be temporarily plugged, pending additional ground water readings. At the completion of the ground water readings, the borings shall be permanently plugged.

5.0 **TESTING**

5.1 **Selection**

Prior to carrying out laboratory testing, a schedule of tests bases on recovered samples first shall be got approved.

5.2 The sample shall be tested for the following.

5.2.1 Field Tests or as directed by engineer-in-charge.

a) Standard penetration test (SPT) shall be employed assess the resistance of the Soils.

b) Load Test : This test shall be carried out in accordance with IS:1888–1971

c) Permeability Test : Where Specified, the permeability of the soil will be tested by in-situ methods.

d) Other Tests : Other tests will be as required.

The field test records shall be kept in an approved proforma in triplicate and one copy of this shall be submitted to the engineer in charge at the site itself. Another original copy shall be submitted along with the final reports by the soil investigator.

5.2.2 **Laboratory Tests**

(a) Cohesion & angle of Internal friction

(b) Water absorption test

(c) Waters welling properties

(d) Chemical Analysis of soil and ground water

(e) Natural Moisture content

(f) Bulk density

(g) Dry & wet density

(h) Specific Gravity

(i) Liquid and Plastic, Shrinkage limit

(j) Plastic and Liquidity Index (Cohesive Soils)

(k) Particle Size Distribution, grain size analysis

(l) Consolidation Characteristics

(m) California Bearing Ratio (C.B.R.) Test

(n) Stabilization Test

(o) Unconfined compressive tests

(p) Triaxial Shear test

(q) Water analysis

(r) Organic matter

(s) Any Other Test that is required for the report.

The sample taken from the bores to be produced by the bidder if asked for by IWD, IIT, Kanpur.

6.0 REPORTS

6.1 Format

All segments of the report covering the investigations shall be made on white A4 size paper, suitable for photocopying, and shall be bound in booklet form. All site observations shall be plotted and recorded on plans and sections and in tabular and graphical form. The local geology shall be discussed with particulars reference to the proposed structure and loadings.

6.1.1 Narrative Reports

The narrative report shall give a general description of the testing carried out; results obtained and deduced basic data useful for foundation design and settlement. The report shall include recommendations on type and depth of foundations, allowable bearing pressure at levels, typical settlement and different settlements calculations, settlements under major loads, recommendations for design and construction of roads and paving. The report shall include comments on chemical nature of soil and ground water with due regards to potential deleterious effects on concrete and steel include any other items worthy of notes, not fully covered in the tabulated results. If piles/soil stabilization means are envisaged, then report shall include recommendations regarding pile capacities, vertical, lateral and pullout capacities, and type of piles-bored cast-in-situ, driven cast-in-situ, precast, placement of piling through site fill etc., and negative skin friction on piles of such conditions exist.

6.1.2 All Computations leading to the logical conclusion of bearing capacity of soil safe capacity of piles etc. shall be included in report. If reference are drawn standard test books, such reference shall be clearly given with a copy of the reference notes to be attached with report. Typical settlement calculations& settlements under major loads to be included with the reports.

6.1.3 All field records namely the bore-log, details of samples taken, records of all in-situ and laboratory tests, profile classification of soil stratum and other significant details notices during soil investigation including data useful for foundation design and settlement etc. shall be included with the report.

6.1.4 General information about topography, geology & sub soil conditions to be included with reports. Plan showing location of boreholes with co-ordinates as executed to be included with the report.

6.2 Field and Laboratory Reports

The Agency shall prepare reports in accordance with the items listed below: -

6.2.1 All data required to be recorded according to the BIS or other standard test methods employed shall be obtained, recorded in the field and referenced to boring numbers; soils shall be classified in the field logs in accordance with the applicable BIS standards only. But, the classification for the final logs shall be based upon field information, plus results of tests, plus further inspection of samples in the laboratory by the Agency.

6.2.2 A chart illustrating the soil classification criteria and the terminology and symbols used on the boring logs should be included in the report.

6.2.3 Standards (BIS or other recognized) should be identified and included in the report for all activities.

6.2.4 Dimensions and locations of borings as executed must accompany the Report.

6.2.5 Vertical sections for each boring should be plotted and graphically presented showing:-

- Reference level of 00 at the ground and present level of the bore hole considered
- The serial number of the boring;
- Sampling method used;
- Date of start and finish;
- Surface elevations;
- Description of the soil and the thickness of each layer;
- Depth of the loss or gain of drilling fluid, if used;
- Hydraulic pressure required or the number of blows per cm (N value for each sample);
- Where applicable, depth to wet cave-in for artesian head;

- Groundwater elevation if encountered and the time when the reading was made;
- Vibrations in the soil due to adjoining transport related movements.
- Presence of gases, if any;
- Noting as applicable on strata containing organic materials, wet materials or any other inconsistencies that might have bearing on arriving at proper engineering conclusions.

6.2.6 Description of the existing surface conditions and summary of the subsurface conditions should be included in the report.

6.2.7 Sketches showing subsurface profiles of rock or other bearing stratum should be included in the report.

6.2.8 The report should contain details, results of all laboratory tests and conclusions drawn there from.

7.0 DISPOSITION OF SAMPLES

7.1 After all laboratory tests have been completed, the soil samples should be retained by the Agency at its office. These should remain open to inspection by the Owner until foundation installation is complete, which shall be notified by the Owner to the Agency.

8.0 FOUNDATION ENGINEERING EVALUATION AND RECOMMENDATIONS

For giving recommendations on the type of foundation, after completion of field work, the Agency may contact the Structural Design Consultants for information on the range of anticipated column loads.

8.1 The Agency shall analyze the information developed by the investigation or otherwise available to the Agency, including those aspects of the subsurface conditions that may affect the design and construction of the proposed structures. Based on such analysis and consultation, the Agency shall submit a professional evaluation of all related aspects and give his definitive recommendations on the issues mentioned below and earlier in this RFP.

i. Safe bearing capacity of soil for isolated, strip, mat or raft foundations

and their proposed depth of footings, subgrade modulus of soil and other parameters. Clear guidelines are required for amending S.B.C. for variation in footing depth from designated value.

ii. In Case pile foundation is recommended, difference sizes, depth of piles & capacity of each piles. If tension piles are required then their sizes/depths and capacities to be provided.

iii. Safe bearing capacity of soil for temporary and structure of secondary importance (Compound wall, security cabin and gate complex) shall be included.

iv. Most suitable type of foundation for different types of construction.

v. Para meters like co-efficient of earth pressure at rest for retaining wall design and suggestion for defining layers of soil for excavated material to be used for back filling to retaining walls.

vi. Recommendation for protecting underground concrete from salt or any other impurities/ chemicals contained in soil & water.

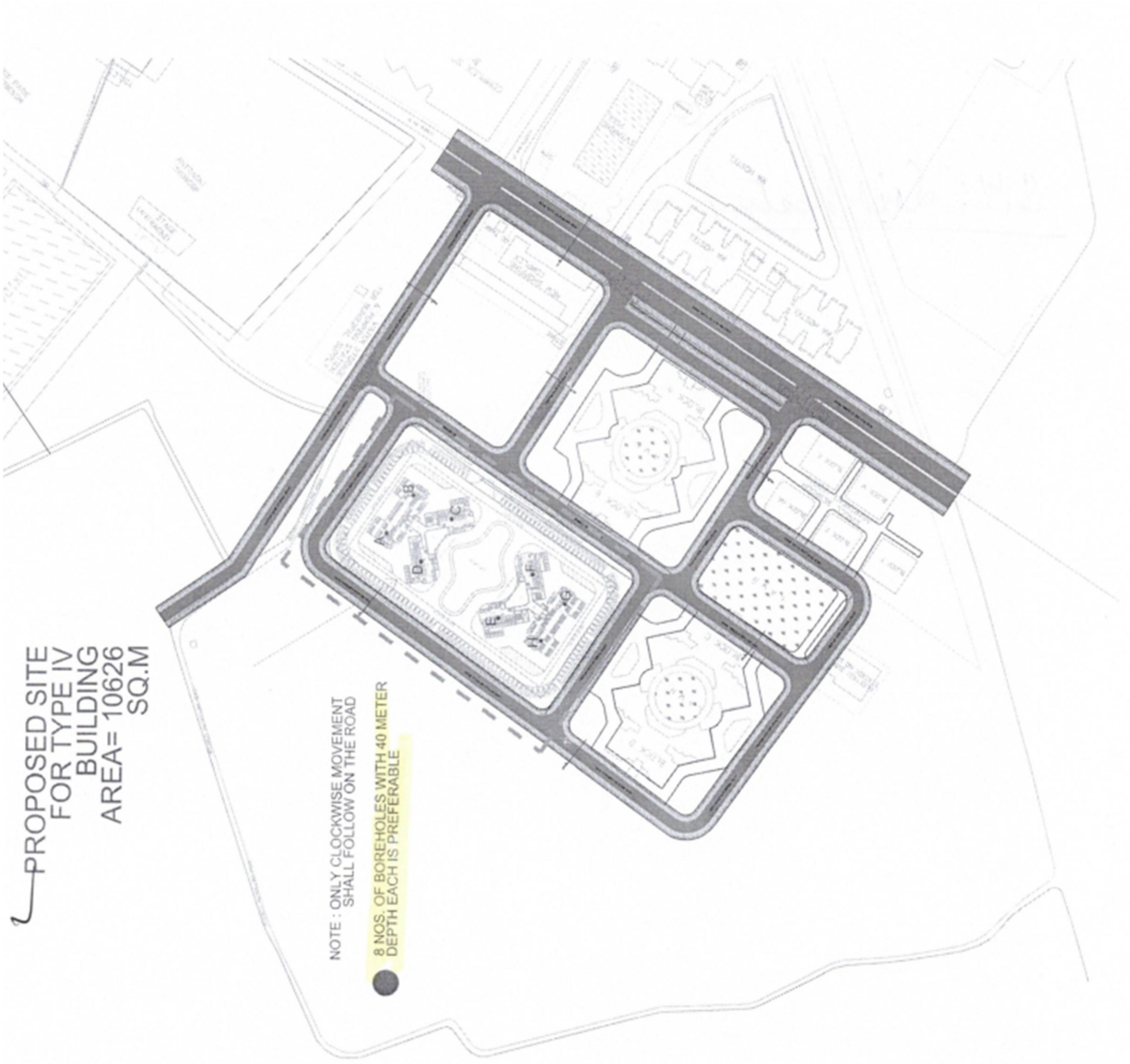
vii. Seismic zone applicable to the site as per the latest Indian standard coded.

viii. Recommendation for remedy measures to overcome against any problem observed in sub soil strata like liquefaction.

ix. Suggestion for defining layers of excavated material to be used for backfilling and plinth filling upto sub base floor level and for roads.

8.2 Specific and clear recommendations shall be made on the basis of the above criteria and substantiated by calculations as applicable on the issues identified in the document.

8.3 Three original prints of final report of the project shall be submitted in hard copy.



Drawing No. FA - 01 dated Aug. 2026.

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