



गति शक्ति विश्वविद्यालय

GATI SHAKTI VISHWAVIDYALAYA

(A Central University under the Ministry of Railways, Government of India)

लालबाग, वडोदरा, गुजरात / Lalbaug, Vadodara, Gujarat 390004

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Gati Shakti Vishwavidyalaya (GSV), Vadodara

Tender Document (PAC Purchase)

(As per General Financial Rules, 2017)

The Vice Chancellor,
Gati Shakti Vishwavidyalaya (GSV),
Vadodara – 390004,
Gujarat.

Date: 30 Oct 2025

Tender Enquiry No. : GSV/Civil/SoftwareLab/01

Date : 30 Oct 2025

Subject: Request For Proposal (RFP) for Procurement of PLAXIS 2D & 3D Work Suite Software (Academic Licenses) on PAC Basis.

1. **Type of Tender:** Single / Limited Tender (PAC Basis) under Rule 166 & Rule 173(iv) of GFR 2017.

2. **Name of Procuring Entity (Quotation to be made in favour of):**

Vice Chancellor (VC) / Registrar, Gati Shakti Vishwavidyalaya (GSV), Vadodara, Gujarat – 390004.

3. **Details of the Bid:**

Last Date & Time for Submission	07- Nov- 2025, 10:00 hrs
Date & Time of Bid Opening (Financial Bid)	07- Nov- 2025, 10:30 hrs
Place of Bid Opening	Stores & Purchase Office, Room No.-10, Gati Shakti Vishwavidyalaya, Palace Building, Vadodara
Contact Person (Any clarification required about this Tender)	Dr. Dinesh Gundavaram Asst. Professor (Civil Engg.) Email ID- gdinesh@gsv.ac.in

Stamp and Sign of the Bidder

For
Gati Shakti Vishwavidhyalaya
Vadodara



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4. **Schedule of Requirement: (*Refer Technical Specification of the software at Annexure 1 & 2 of the RFP)**

S. No.	Item(s)	Description / Specs	Qty	Rate per Unit (₹)	Total Amount (₹)
01	PLAXIS 2D WorkSuite Academic Perpetual Licence	License Type: Perpetual	01		
02	PLAXIS 2D WorkSuite Academic SELECT Subscription	Subscription period : 1 Yr.	01		
03	PLAXIS 3D WorkSuite Classroom Perpetual Licence	License Type: Perpetual	15		
04	PLAXIS 3D WorkSuite Classroom SELECT Subscription	Subscription period : 1 Yr.	15		
Total Estimated Basic Value (₹)					
Add GST @ _____%					
Total Cost: (₹)					
Total Amount (In Words) (Rupees.....)					

5. **Price:** Rates shall be firm and inclusive of all taxes, duties, freight, and installation charges at consignee's site. No escalation is permitted during the contract period.

6. **Delivery:** Delivery to be completed within **07 (Seven) days** from the date of issue of the Purchase Order.

7. **Payment Terms:** 100% payment will be made after successful installation, activation, and acceptance of licenses at GSV, Vadodara.

8. **Earnest Money Deposit:** Not Applicable as PAC / Single tender.

9. **Performance Bank Guarantee (PBG):** The successful bidder shall furnish a **Performance Bank Guarantee (PBG)** for an amount equal to **five percent (5%) of the total contract value (inclusive of GST)**, as per **Rule 171 of the General Financial Rules (GFR) 2017** and **Para 7.7.2 of the Manual for Procurement of Goods (2022), Ministry of Finance**. The PBG shall be submitted **within 21 days from the date of issue of the Purchase Order**, in the form of a **Bank Guarantee** or **Fixed Deposit Receipt (FDR)** issued by any **Scheduled Commercial Bank** drawn in favour of "**Gati Shakti Vishwavidyalaya, Vadodara**", payable at **Vadodara (Gujarat)**. The Performance Security shall remain valid for **60 days beyond the completion of the warranty or subscription period**, whichever is later. In case of non-performance, breach of contract, or failure to fulfill the terms and conditions, the Performance Security shall be **forfeited** in part or full at the discretion of the Competent Authority.

10. **Warranty / Support:** Software shall carry a minimum **12-month warranty/support** or as per OEM terms, whichever is higher. All updates and technical support during the SELECT subscription period shall be provided without additional cost.

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11. **Liquidated Damages:** Delay in delivery beyond the stipulated delivery period shall attract Liquidated Damages @0.5% per week, subject to a maximum of 10% of the contract value.
12. **Arbitration:** Any dispute shall be resolved in accordance with the Arbitration and Conciliation Act, 1996. Jurisdiction shall lie with the courts at Vadodara, Gujarat.
13. **Escalation / De-escalation:** Escalation or de-escalation of rates during the contract period shall not be allowed. However, if the contract is extended beyond the specified period, escalation or de-escalation of rates may be permitted as per GSV norms, and no additional claim shall be entertained.
14. **Confirmation & Distribution:** After placement of the Supply Order, confirmation shall be sent to: Accounts Section – for financial sanction and payment record; User Section – for verification of receipt; Supplier – for order acknowledgement.

Prepared by: _____

Checked by: _____

(Signature with Seal)
Competent Authority,
GSV
Vadodara

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Annexure 1 to
RFP No- GSV/Civil/SoftwareLab/01
dated 30 Oct 2025

Technical Specification of the Software for 3D

MODELING

- Automatic Swept Meshing for more efficient meshes
- Elastoplasticity for beams and plates
- Connections
- Design arbitrary geometries using Combine, Intersect, Extrude, Loft, Blendsurfaces and Revolve around axis tools
- CAD Import and Export*
- Nonlinear geogrids: Elastoplastic (N-ε) and Viscoelastic (time-dependent)
- Discontinuity element to model fractured or jointed rocks
- Polar and rectangular array
- Tunnel Designer with easy definition of rock bolts, umbrella arches and girders*
- Define excavation sequence in the Tunnel Designer*
- Automatic generation of staged construction phases for tunnels*
- Automate processes with full command line support and remote scripting API*

MATERIAL MODELS

- Industry standard soil models: Hardening Soil, HSSmall, Soft Soil and Soft Soil Creep
- Rock models: Jointed rock, Hoek-Brown with parameter guide, N2PC rock creep model with MC failure criterion
- Concrete
- UDCAM-S with cyclic accumulation and optimization tool
- NGI-ADP
- User-defined soil models*
- Static and dynamic liquefaction models: NorSand, UBCSand

CALCULATIONS

- Well-proven and robust calculation procedures
- Multicore computing and 64 bit
- K0, gravity loading and field stress for initial stress calculations
- Distinguish between a plastic calculation, safety or consolidation analysis
- Facilities for steady-state or transient groundwater flow calculations, including flow-related material parameters, boundary conditions, drains, and wells
- Pseudo-static and dynamic analysis, including dynamics with consolidation and free field and compliant base boundary conditions, and moving point or line loads
- Specify load, acceleration or head variations through time with linear, harmonic, or table functions
- Fully coupled flow-deformation analysis
- Convenient and intuitive phase explorer
- Automatic regeneration of construction stages for geometric changes

Stamp and Sign of the Bidder

Pratik

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CALCULATIONS • Well-proven and robust calculation procedures

- Multicore computing
- K0, Gravity loading and Field stress for initial stress calculations
- Distinguish between a plastic calculation, safety, or consolidation analysis
- Facilities for steady-state and transient groundwater or thermal flow calculations, including flow-related material parameters, boundary conditions, drains, and wells
- Pseudo-static and dynamic analysis, including dynamics with consolidation and free field and compliant base boundary conditions
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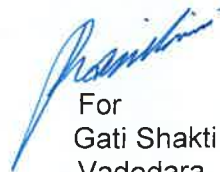
RESULTS

- Realistic assessment of stresses and displacements
- Vector, contour, and iso-surfaces plots of displacement, stress, pore pressure, temperature, or acceleration
- Use the Output command line to display plots, generate cross-sections or save plots with user-defined resolution
- Curves Manager to create load vs. displacement,
- Pseudospectral acceleration plots, or cross-section curves
- Automatic centerline extraction for structural forces plots
- Structural forces in volume plates (tunnel lining, retaining wall)
- Resulting Force View
- Plot annotations
- Extensive report and movie generator
- 2D Viewer

USAGE

- Surface settlements and mechanical response of intact, fractured or jointed rock masses due to tunneling, mining, or reservoir depletion
- Slope stability and seepage analysis for large earth dams, tailing dams, embankments, and pit mines
- Predicting differential settlements of buildings adjacent to excavation pits
- Stability of and seepage into excavation pits and lateral displacements of diaphragm walls
- Calculate necessary consolidation time for pore pressure dissipation in undrained loading problems
- Bearing capacity and foundation settlement analysis for high-rise buildings, LNG tanks, and other structures (for example, offshore suction anchors)
- Liquefaction analysis to predict the safety of critical infrastructure such as levees or large dams under earthquake loading
- Seismic design of jetties, quays, walls, and building foundations
- Stability of dams or levees under rapid drawdown during seasonal variations of water level or during precipitation or flooding
- Ice wall formation during ground freezing in tunnel construction
- Temperature distribution and propagation into surrounding soils of nuclear waste disposal facilities

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SUBSCRIPTION ENTITLEMENT SERVICE SUPPORTS

- Provides a universal ID to link together all activity within Bentley applications
- Manage license entitlements at a user level, without requiring activation keys or hardware dongles
- Access personal learn material, paths and history, timely product related news, automatic product updates, and notifications

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Annexure 1 to

RFP No- GSV/Civil/SoftwareLab/01

dated 30 Oct 2025

Technical Specification of the Software for 2D

MODELING

- Tunnel deconfinement
- CAD Import and Export*
- Nonlinear geogrids: Elastoplastic (N- ϵ) and Viscoelastic (time-dependent)
- Discontinuity element to model fractured or jointed rocks
- Polar and rectangular array
- Nonlinear embedded beam (M-k diagrams)
- Connections
- Tunnel Designer with easy definition of rockbolts*
- Automate processes with full command line support and remote scripting API*
- MATERIAL MODELS**
- Industry standard soil models: Hardening Soil, HSsmall, Soft Soil and Soft Soil Creep
- Rock models: Jointed rock, Hoek-Brown with parameter guide, N2PC rock creep model with MC failure criterion
- Concrete
- UDCAM-S with cyclic accumulation and optimization tool
- NGI-ADP
- User-defined soil models*
- Static and dynamic liquefaction models: NorSand, UBCSand, PM4Sand, PM4Silt
- CALCULATIONS**
- Well-proven and robust calculation procedures
- Multicore computing
- K0, Gravity loading and Field stress for initial stress calculations
- Distinguish between a plastic calculation, safety, or consolidation analysis
- Facilities for steady-state and transient groundwater or thermal flow calculations, including flow-related material parameters, boundary conditions, drains, and wells
- Pseudo-static and dynamic analysis, including dynamics with consolidation and free field and compliant base boundary conditions
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RESULTS

- Realistic assessment of stresses and displacements
- Vector, contour, and iso-surfaces plots of displacement, stress, pore pressure, or acceleration
- Structural forces from cylindrical and square volume piles
- Curves Manager to create loads vs. displacement, Pseudospectral acceleration plots or cross-section curves
- Advanced data slicing
- Movable cross-sections
- Extensive report and movie generator
- 3D Viewer

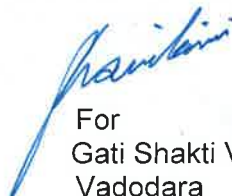
USAGE

- Surface settlements and mechanical response of intact, fractured or jointed rock masses due to tunneling, mining, or reservoir depletion
- Slope stability and seepage analysis for earth and tailing dams, embankments, and open pit mines
- Predicting differential settlements of buildings adjacent to excavation pits
- Stability of and seepage into excavation pits, and lateral displacements of diaphragm walls
- Calculate consolidation time for pore pressure dissipation in undrained loading problems
- Bearing capacity and foundation settlement analysis for high-rise buildings, LNG tanks, and other structures (for example offshore suction anchors)
- Liquefaction analysis to predict the safety of critical infrastructure like levees or large dams under earthquake
- Stability of embankments for high-speed railways
- Seismic design of jetties, quays, walls, building foundations
- Stability of dams or levees under rapid drawdown, during seasonal variations of water level or during precipitation or flooding

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