SYMMETRIC for Post-Tension

COMPANY PROFILE · 2026

Post-tensioned slab design, construction drawings and structural review.

For design offices and contractors in Egypt and the GCC.

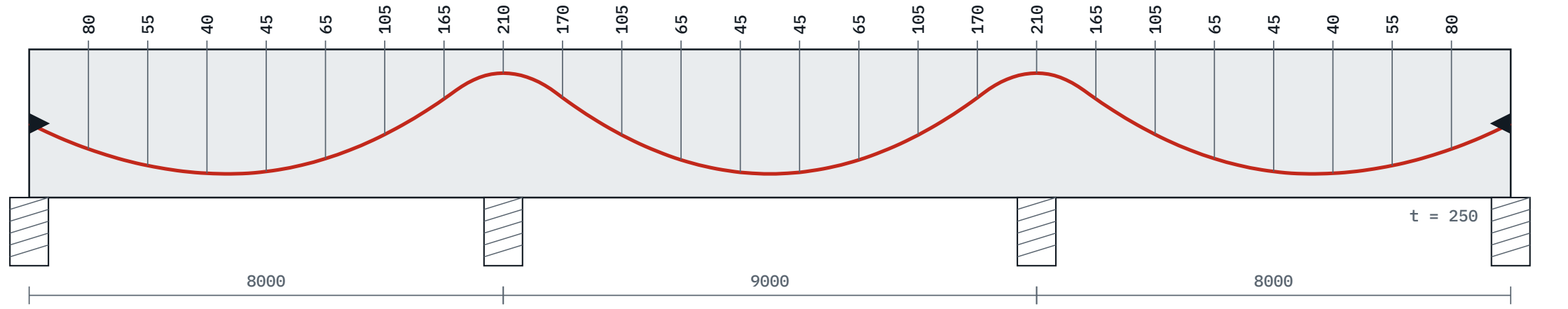


Illustration: a tendon over three spans, with its height above the soffit of a 250 mm slab at every metre, as written on our PT-X and PT-Y sheets. Dimensions in mm.

Email mohamedelbasiouny00@gmail.com | LinkedIn Symmetric for Post-Tension | Facebook Symmetric for Post-Tension | Web symmetric-pt.pages.dev

Who we are

Symmetric for Post-Tension is a structural engineering practice for post-tensioned concrete. We design PT slabs in RAM Concept, produce the construction drawings, and check every sheet against the model before issue.

We also review reinforced-concrete designs against the governing code, and set out every finding with its clause for the designer.

We work with design offices and contractors. The engineer of record stays responsible for the design and its approval.

CODES

ECP 203 (Egypt) · ACI 318-19 · Saudi Building Code: SBC 301, SBC 304 and SBC 303

SOFTWARE

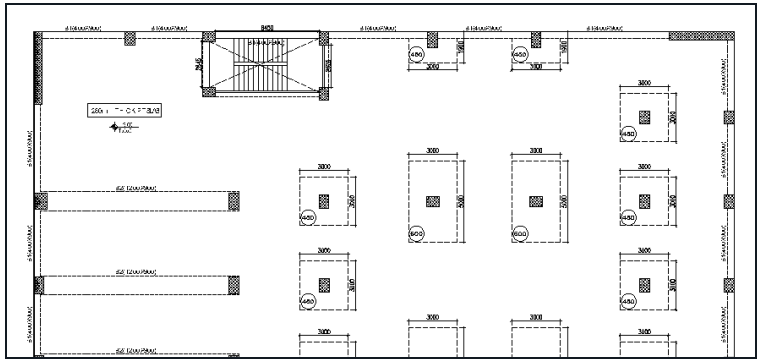
RAM Concept · ETABS · SAFE · AutoCAD, with our own software for the PT drawings

WAY OF WORKING

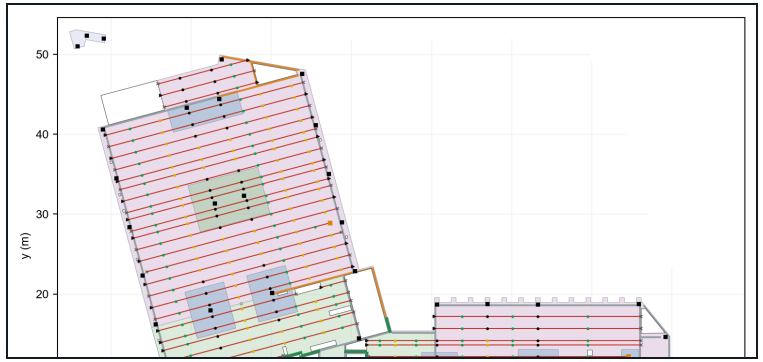
Remote. Models and drawings are exchanged electronically, and every sheet goes through an engineer's review.

REGION

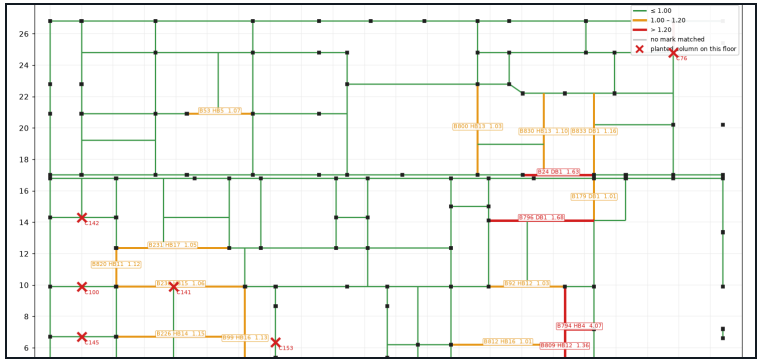
Egypt and the GCC



Industrial floors, Damietta. GA of one block.



Seven-storey building. Tendon layout of the first floor.



Villa review, Riyadh. Required against drawn reinforcement.

03 · SERVICES

What we do

From the architectural drawings to the sheets that go to site, or any stage in between.

RAM CONCEPT · ECP · ACI

Full PT design

The RAM Concept model, design strips, tendon layout and profiles, reinforcement, and the punching and deflection checks, from the architectural drawings or the GA.

GA · PT-X · PT-Y · RFT · BOQ

Shop drawings from your model

Send a finished RAM Concept model and receive the floor's sheets on your title block: tendons with chair heights and anchorages, reinforcement in practical lengths, quantities in Excel.

MODEL ⇔ DRAWINGS

Model-to-drawings check

Slab edges, openings, drop panels, tendons and reinforcement on the sheets compared with the model, with every difference located.

DEFLECTION · PUNCHING

Client report

A PDF report from the model: deflection, punching with a schedule, tendons and design strips, each drawn and explained.

SBC · ECP · ACI

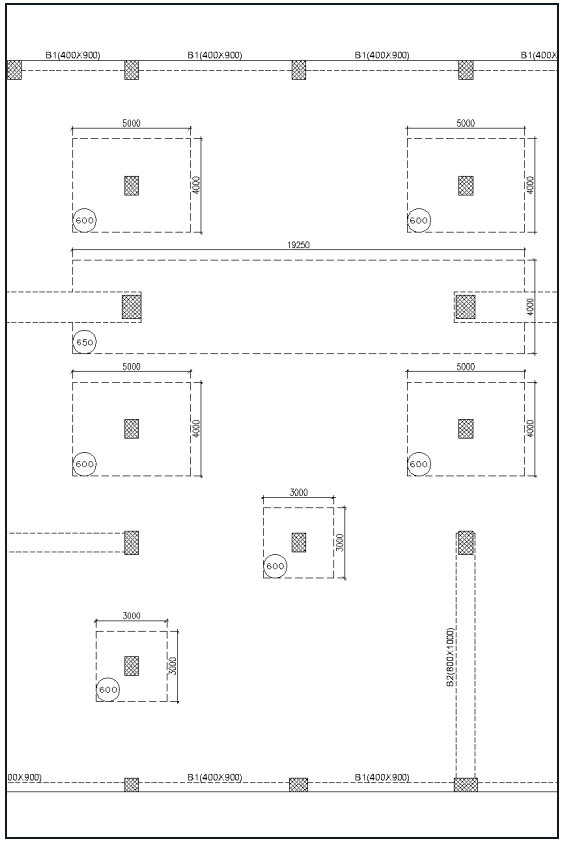
Structural design review

A check of a reinforced-concrete design against the governing code: loads, members and foundations, with a calculation note that ties each finding to its clause.

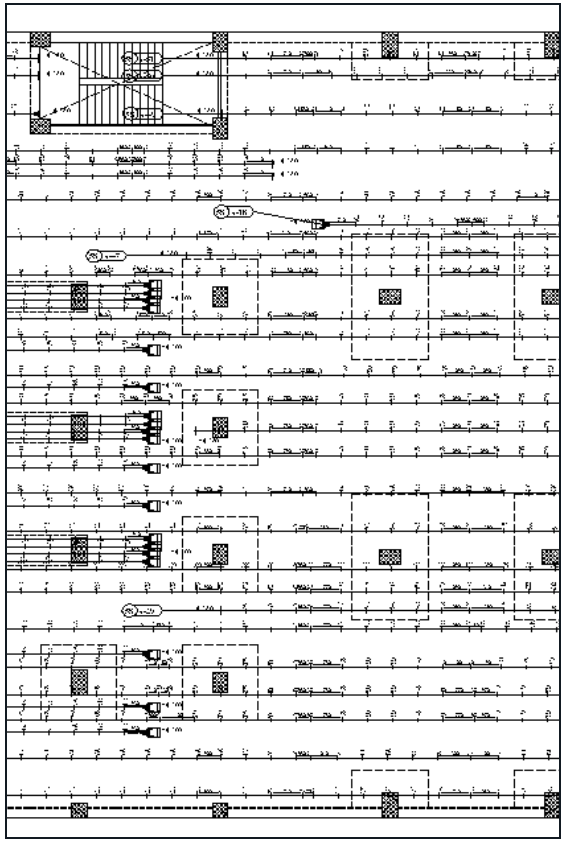
Every sheet is checked against the model before issue, and reviewed by a PT engineer.

What you receive for each floor

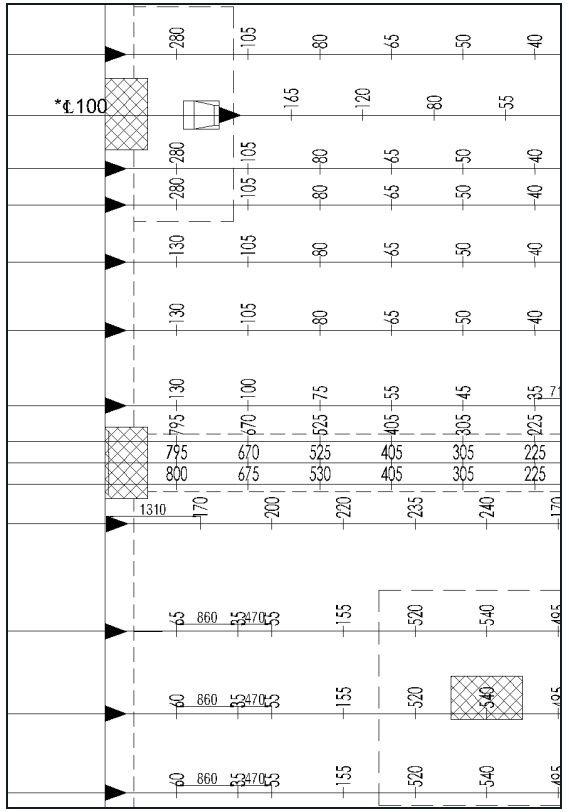
DWG sheets on your title block, PDFs, the BOQ in Excel, and the check report.



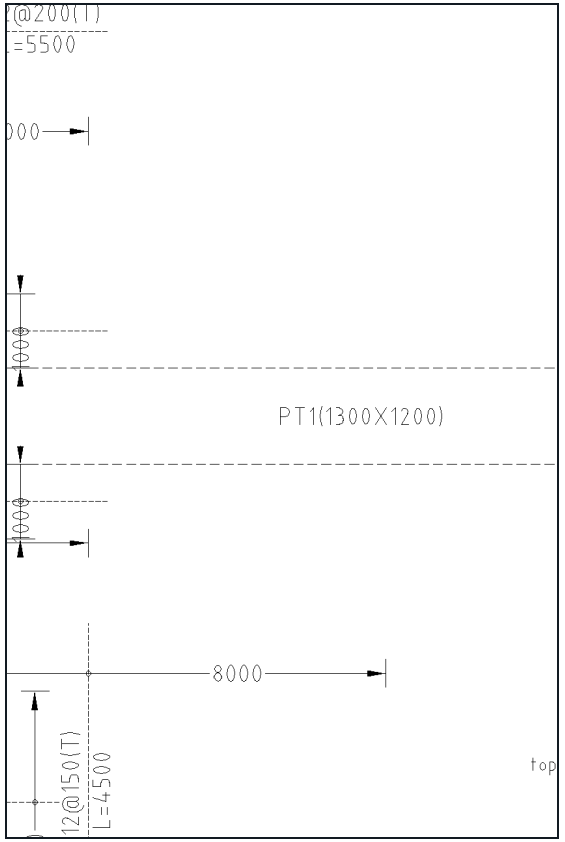
GA. Slab thicknesses, drop panels and openings with dimensions, beam marks and levels.



PT-X · PT-Y. Every tendon with its tag, strand count and anchorages, with the BOQ in Excel.



Chairs and anchorages. Chair heights at every metre along each tendon, live ends, dead ends and pan boxes.



RFT. Reinforcement from RAM Concept in practical bar lengths, the bottom mesh and PT beam sections.

Images from delivered projects, with client names and title blocks removed.

05 · MEASURED

Measured on real projects

Every figure below was measured; the note under it says where.

4–15 min

Run time for a complete floor package (four sheets, BOQ and checks), before the engineer's review.

Measured on two floors: 3.9 min, and about 15 min for a 3,939 m² floor. By hand, the same work takes about a day (our estimate).

99.8%

of chair heights on a PT-Y sheet matched the hand-drafted sheet, and every BOQ row matched in both directions.

Element-by-element comparison on a delivered project.

94–99.9%

of tendon-sheet elements were kept exactly as generated after the engineer's review.

Industrial floors in Damietta: five parts, X and Y sheets.

1.96 m

difference between the model and the issued drawings in one part of a project, found by the model-to-drawings check.

Referred to the engineer of record for a decision.

Projects at a glance

Client and project names are withheld; every figure comes from the project files.

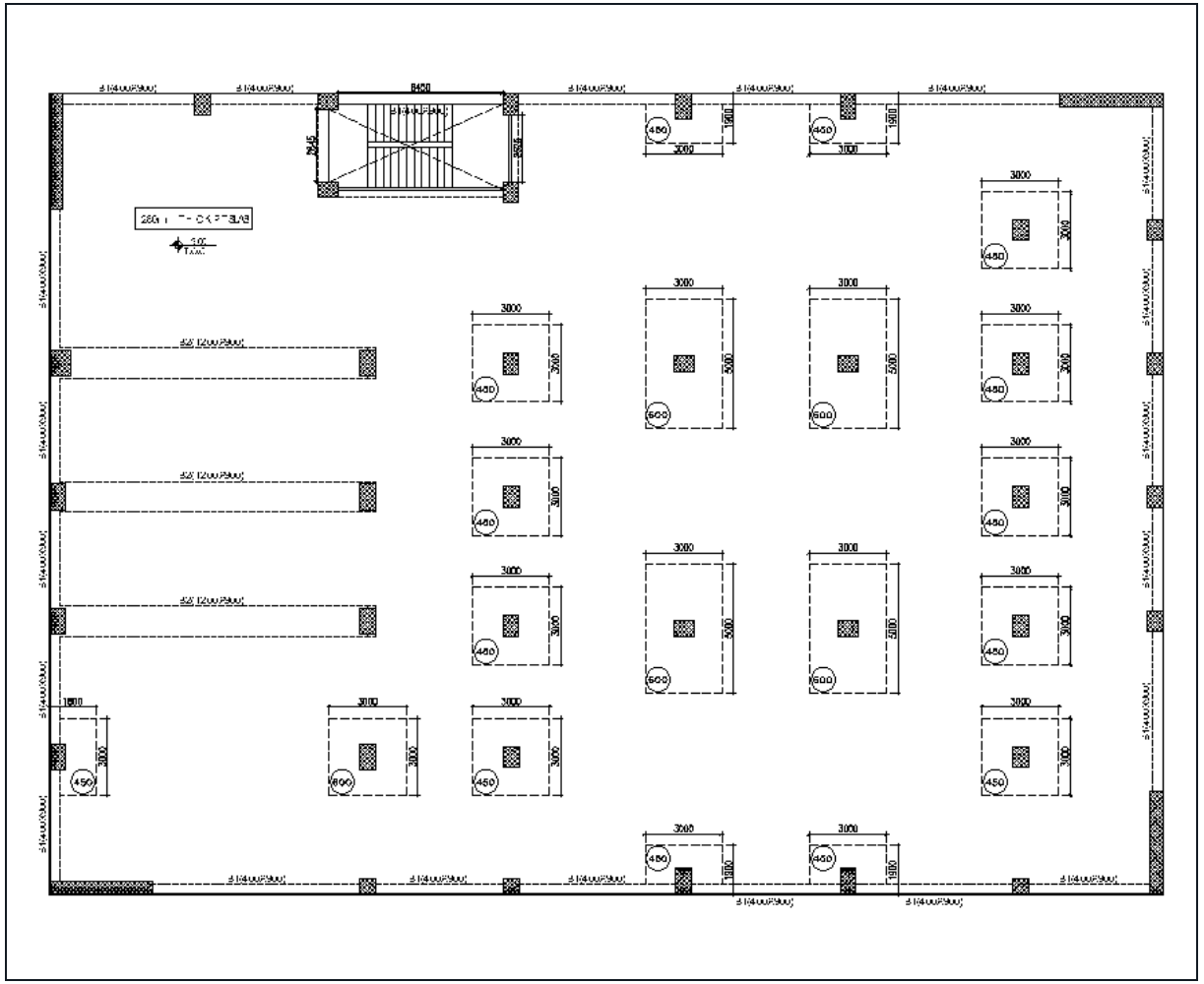
PROJECT	LOCATION	OUR WORK	STATUS
Industrial floors: four blocks and a mezzanine	Damietta, Egypt	PT design in RAM Concept, 457 tendons, 20 drawings with the BOQ	Delivered
Seven-storey building from Revit drawings	—	RAM Concept models of six PT floors, loads checked against ETABS, tendons for every floor	In progress
Issued basement package	Egypt	Model-to-drawings check of the issued sheets against their RAM Concept model	Delivered
Delivered PT package	—	The package regenerated by our software and compared element by element with the hand-drafted sheets	Delivered
Earlier PT packages, 2026	Egypt · Jordan	GA, RFT, PT-X, PT-Y, BOQ and RAM Concept reports for a mixed-use complex, administrative buildings, a tower, a mall, a mosque and others	Delivered
Private villa	Riyadh, KSA	Structural design review to SBC 301, SBC 304 and SBC 303	In progress

Industrial floors: heavy loads, long bays

LIVE LOAD **15 kN/m²**	SUPERIMPOSED DEAD **2.5 kN/m²**
BAYS, BLOCK A **15 × 10.35 m**	PT SLABS **250–300 mm**
DROP PANELS **450–650 mm**	PT BAND BEAMS **≤ 1300 × 1200 mm**
TENDONS **457**	DRAWINGS **20 + BOQ**

- An early study showed that a flat plate would have needed 7 to 22 strands per tendon and 540 to 880 mm of depth at the supports. Band beams on the long column lines solved it with a slab of practical thickness.
- Drop panels at the interior columns give the depth needed for punching shear under 15 kN/m².
- Columns and drop panels changed during design. Each time, the model was updated from the revised drawing and checked against it before the tendons and reinforcement were rerun.

ECP 203, concrete C32/40. Four structural blocks and a mezzanine. Delivered.

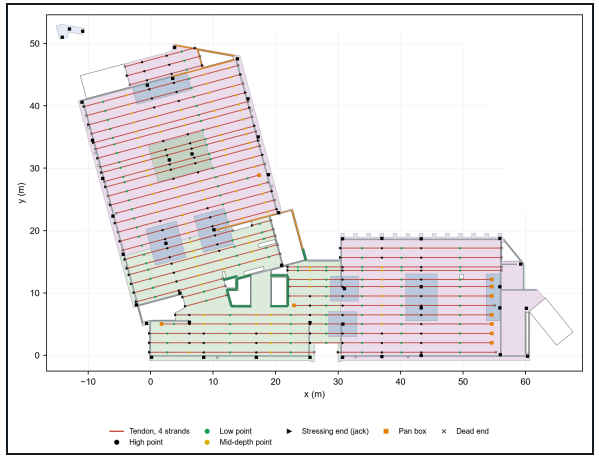


GA of one block: drop panels, band beams and the stair opening.

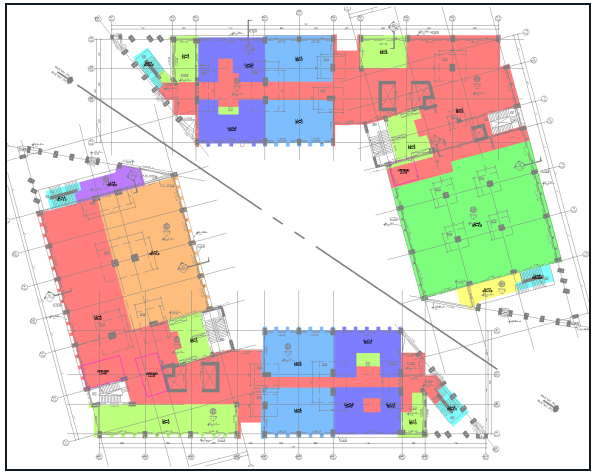
Seven-storey building from Revit drawings

- Six post-tensioned floors and a reinforced-concrete upper roof, to ACI 318-19, with 15.2 mm bonded flat-duct tendons.
- Two L-shaped wings on every floor: one is rotated by 15°, and one sits 350 mm lower.
- Seven RAM Concept models built from the Revit drawings, meshed with 0 errors.
- Loads checked against the ETABS model: 27,703 against 27,702 kN dead, and 15,520 against 15,520 kN live.
- 263 tendons on the first floor, carried over to the other floors.

> Tendons are complete; reinforcement is under way, and the drawing set follows.



Tendon layout, first floor.



Load plan of one floor.

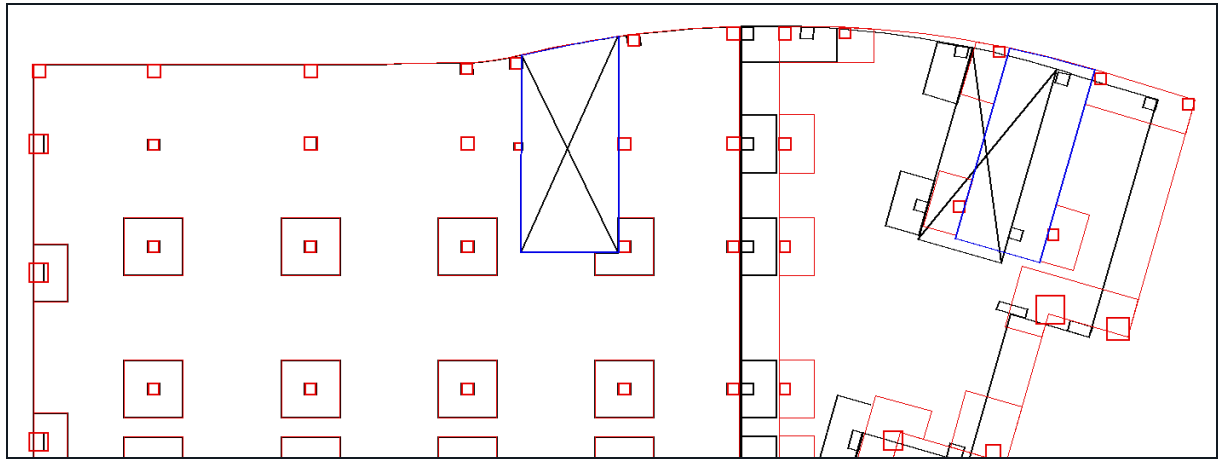
09 · PROJECT · DELIVERED

Checking an issued package against its model

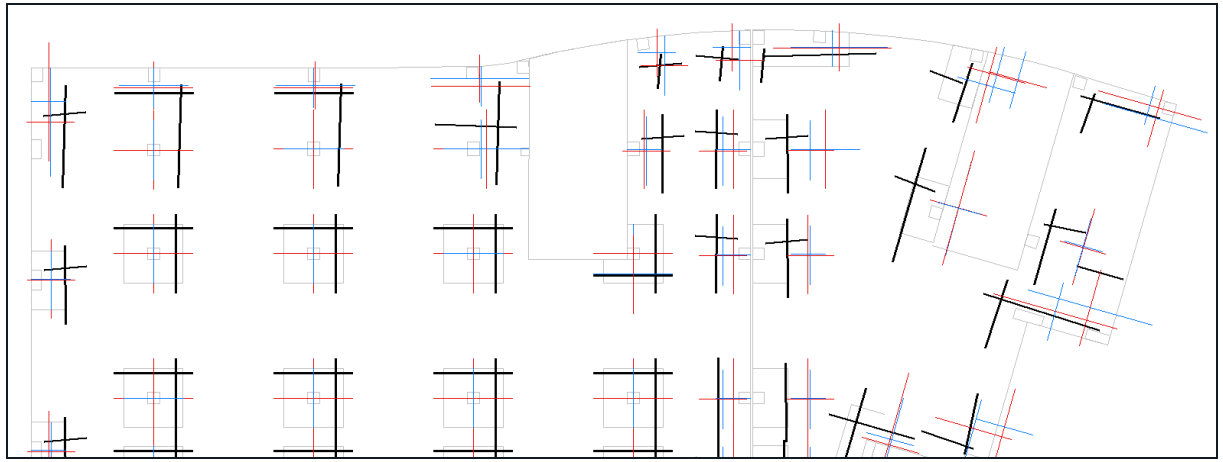
We laid the issued drawings of a basement floor over its RAM Concept model and listed every difference.

- One part of the drawings sat 1.96 m away from the model.
- Six drop panels on the sheets differed from the model.
- The reinforcement on the sheet was longer than RAM Concept's in 38 places.

> Each difference went to the engineer of record for a decision.



Drawings (black) over the model (red).



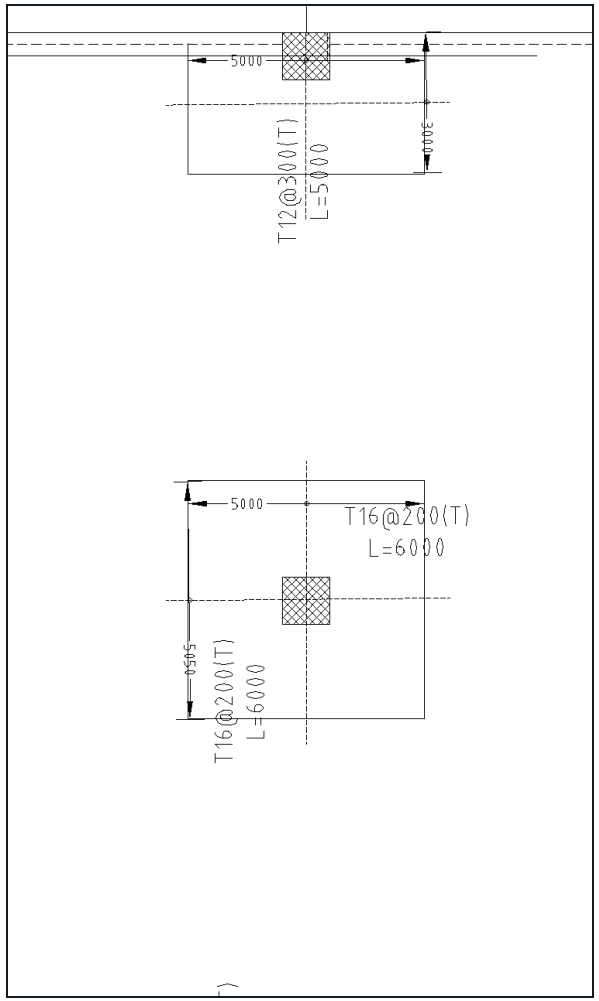
Reinforcement: the sheet against RAM Concept.

Our drawings against a hand-drafted package

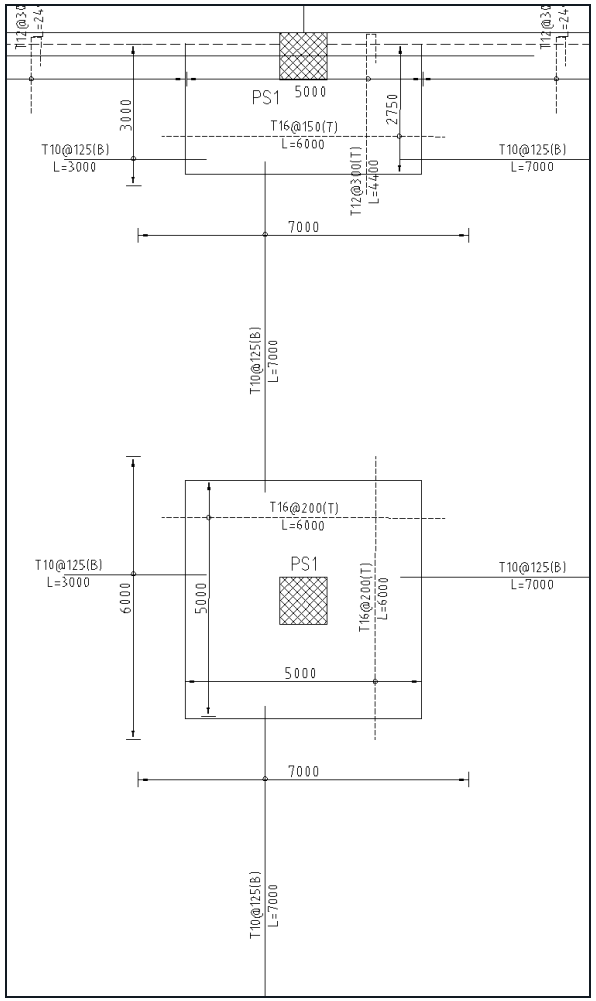
Our software regenerated a delivered PT package from its RAM Concept model, and we compared it element by element with the hand-drafted sheets.

- 99.8% of the chair heights on the PT-Y sheet matched.
- Every BOQ row matched, in both directions.

> The rules behind our drawings come from packages that were drafted by hand and delivered.



Generated reinforcement detail.



Hand-drafted detail of the same area.

Earlier PT packages, 2026

Delivered packages, drafted by hand before our software. The rules learned on them are the ones our drawings follow today.

Mixed-use complex

Full packages (GA, RFT, PT-X and PT-Y) for floors 3 to 6. GA for 10 floors, with two complete basement packages and reports. Basement, mezzanine and ground-floor packages for another part, and GA and RFT for every floor of parts 10 to 15.

Administrative buildings

Three buildings of five levels each: four sheets per level, with a RAM Concept report for every level.

Tower

Eight levels, with a report for each.

Mall

Ground-floor PT-X and PT-Y sheets.

Mosque · Jordan

PT-X, PT-Y and BOQ for a mosque, and for a project in Jordan.

Other work

Further packages, RAM Concept models and reports.

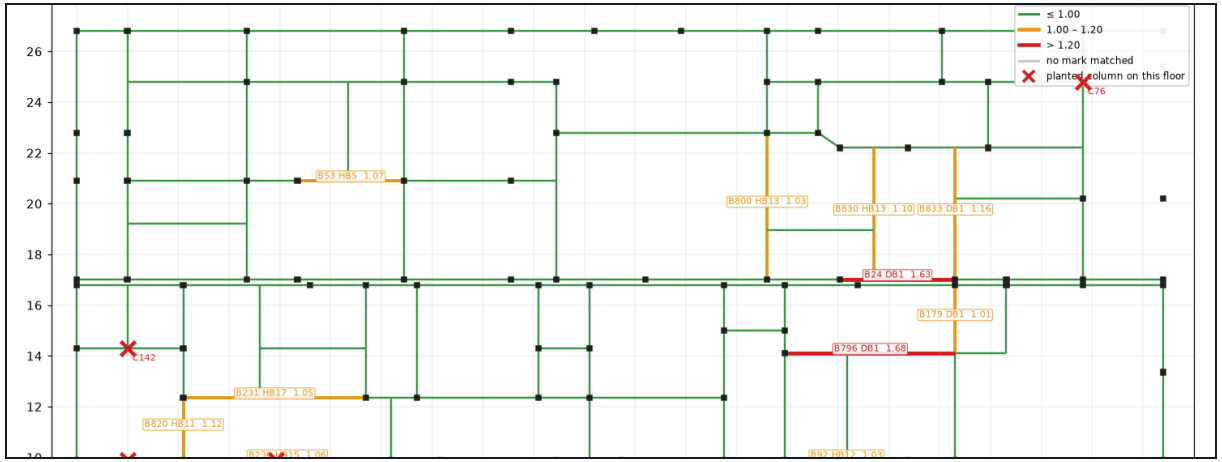
12 · STRUCTURAL REVIEW · IN PROGRESS

Private villa, Riyadh: design review to SBC

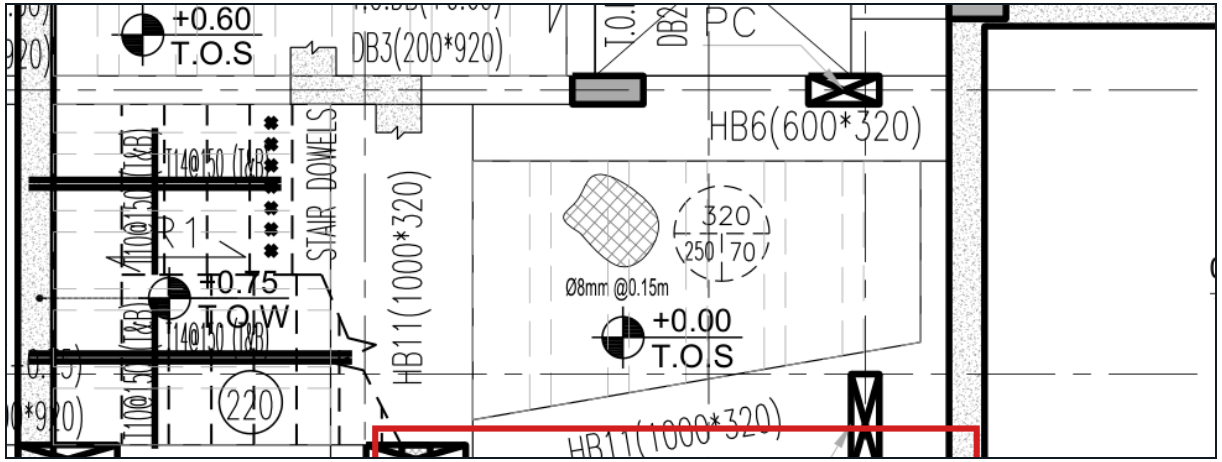
A reinforced-concrete villa with a basement, ground and first floors and a roof annex, reviewed against SBC 301, SBC 304 and SBC 303.

- We checked the design on copies of the designer's ETABS and SAFE models, together with the drawings.
- The review covers loads and load combinations, wind, columns, beams, transfer beams and the foundation.
- It found issues in the loads and in the column and beam reinforcement. A calculation note for the designer sets out each one with its SBC clause.

> No redesign: the design stays with its designer, and the note sets out what to change.



Required against drawn reinforcement on one floor.



A finding marked on the drawing.

How a floor goes through

1

You send the model or drawings

The floor's RAM Concept file (.cpt), or the architectural drawings and GA for a design from scratch.

2

We design, detail and check

Sheets and BOQ, then a check of the drawings against the model.

3

A PT engineer reviews

Every sheet is reviewed and corrected where needed.

4

You receive the package

DWG, PDF and the BOQ in Excel, with the check report.

Free pilot: one floor

Send us the RAM Concept model of one floor and receive the complete package with its check report within 48 hours. Once per company, with no obligation.

14 · CONTACT

Tell us about your next floor.

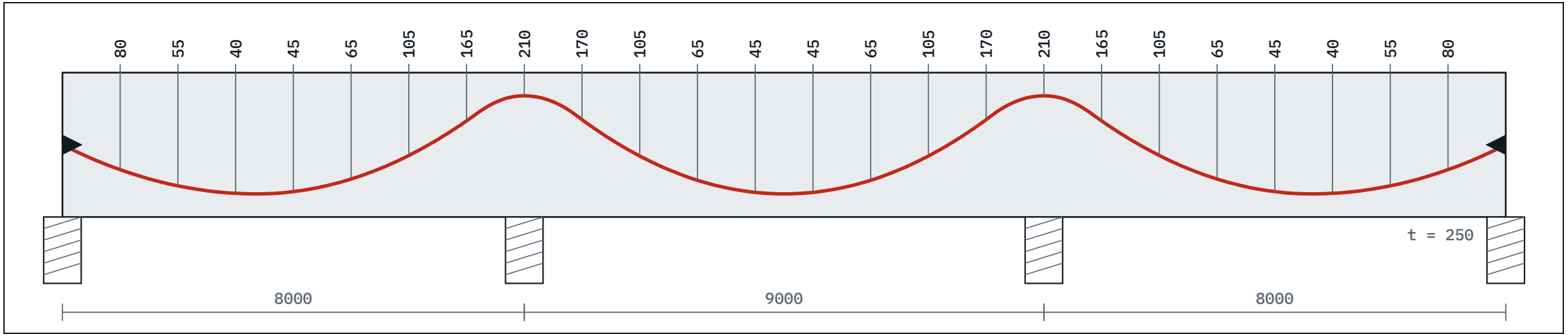
For a quotation, send the floor area, the number of floors, the design code, and whether a RAM Concept model already exists.

EMAIL
mohamedelbasiouny00@gmail.com

LINKEDIN
linkedin.com/company/symmetric-for-post-tension

FACEBOOK
Symmetric for Post-Tension

WEB
symmetric-pt.pages.dev



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