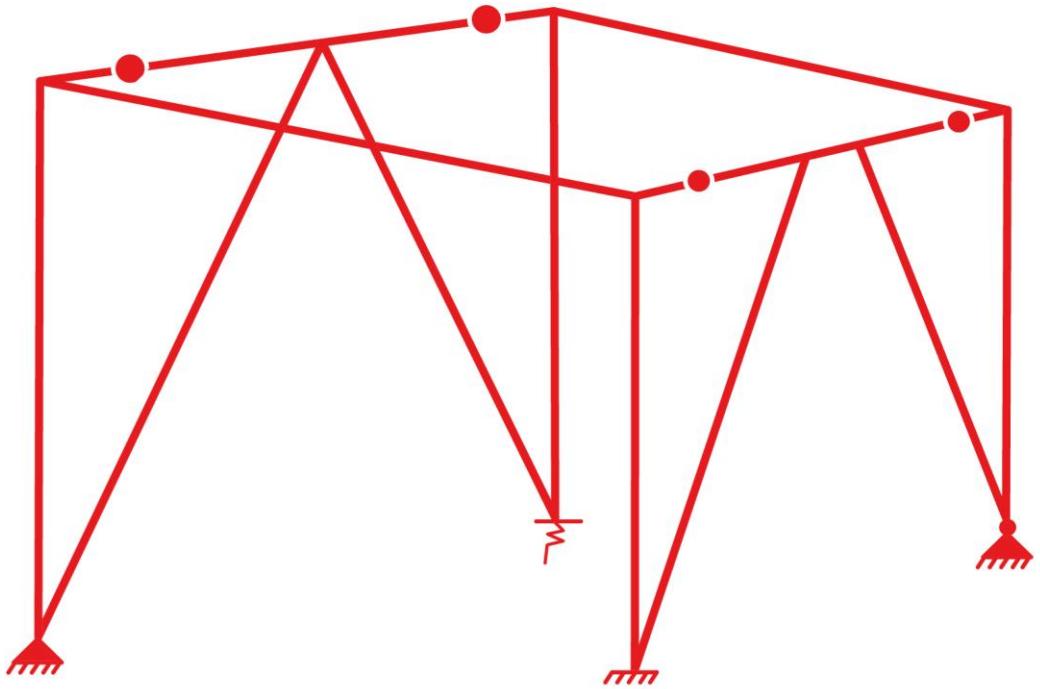


InnovacionE

PORTFOLIO

M.Sc. Jordy Joseph Sosa Rodas

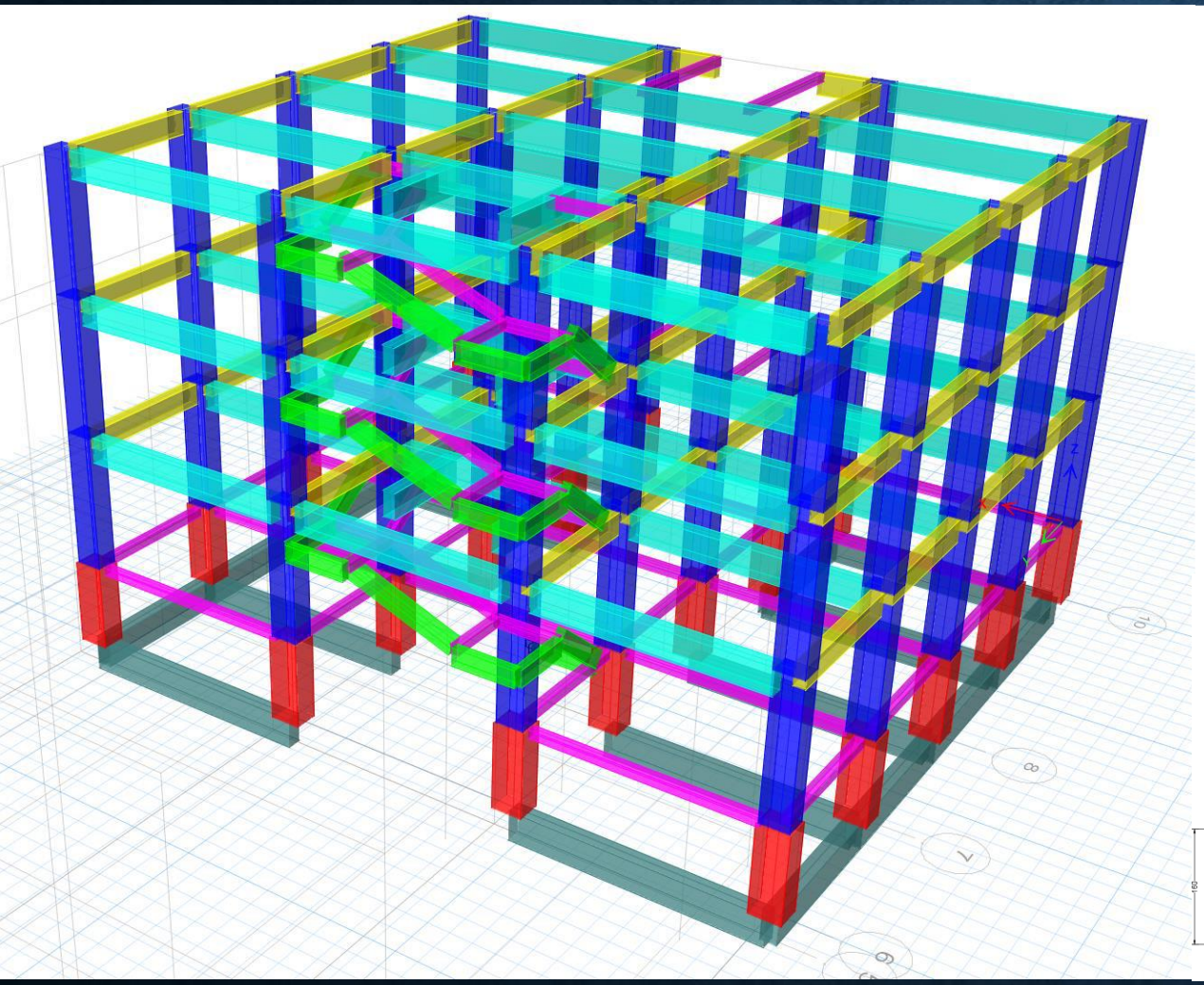
Director

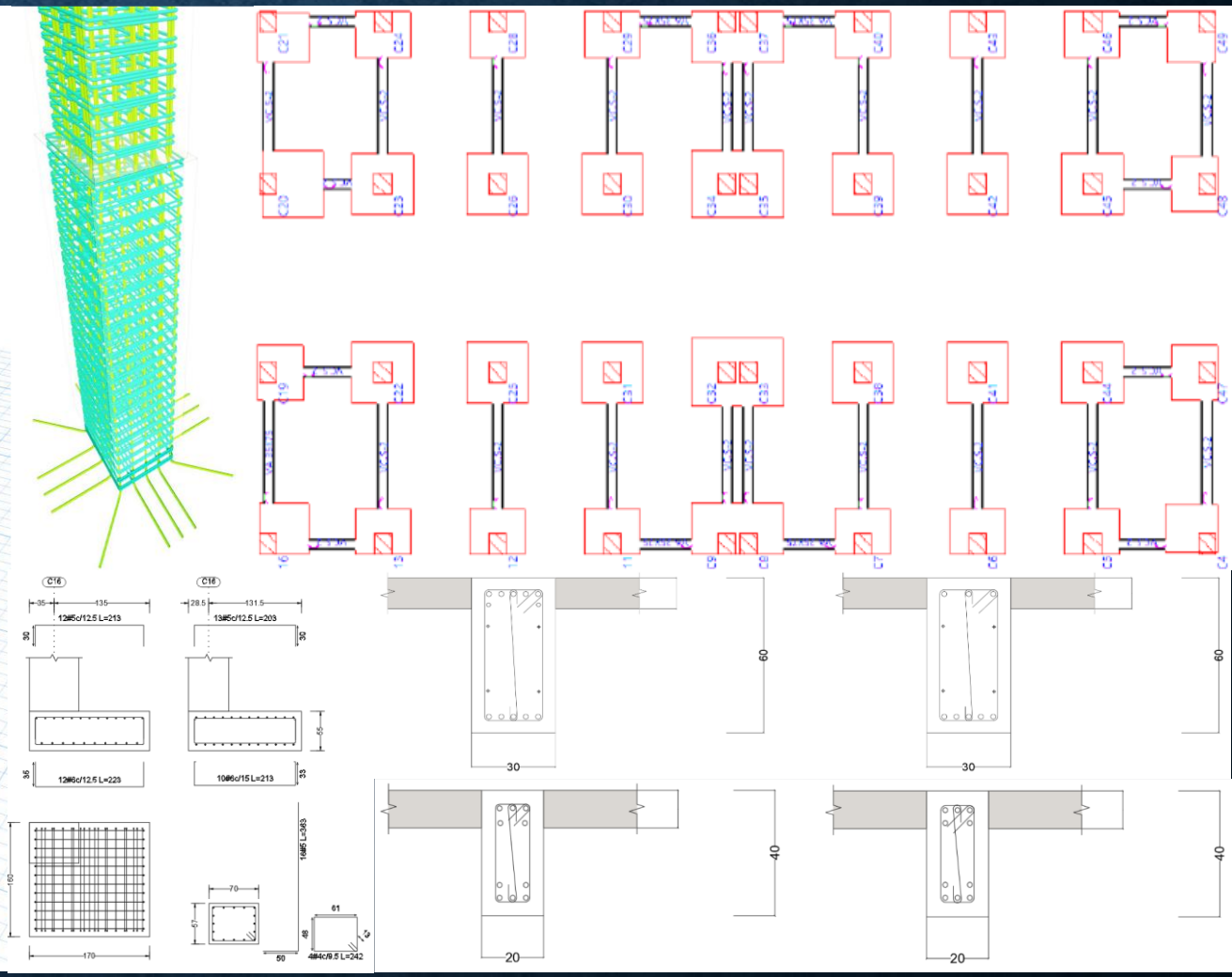
Civil Engineering and Architecture

Risk Assessment and Management of Civil Infrastructure

Structural, Geotechnical, Sanitary and Hydrological Engineering

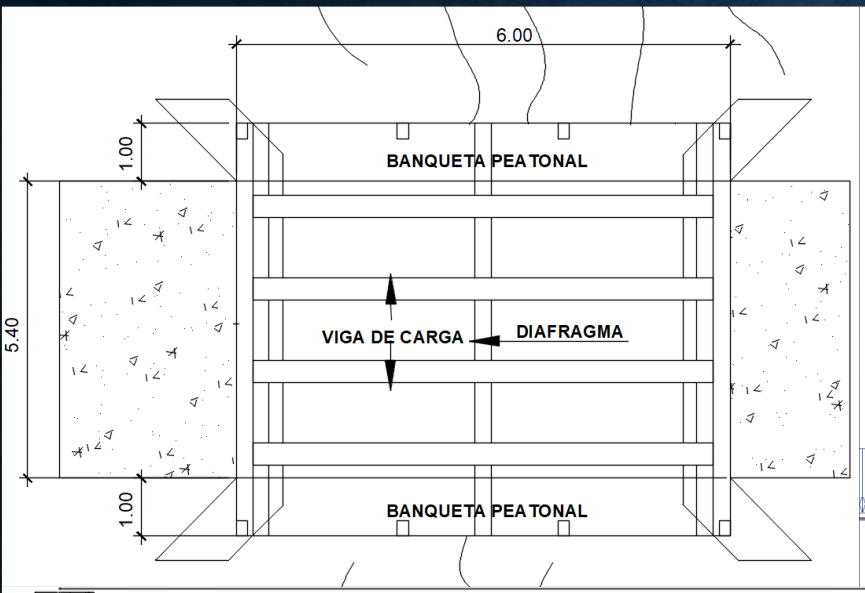
DISEÑO ESTRUCTURAL DE INSTITUTO BÁSICO CABECERA MUNICIPAL, SAN ANTONIO PALOPÓ, SOLOLÁ.

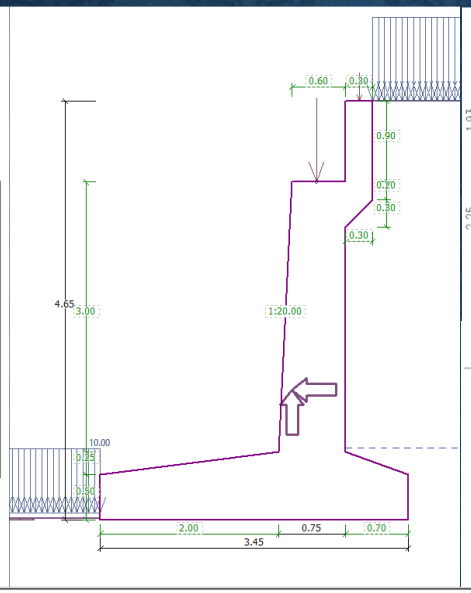


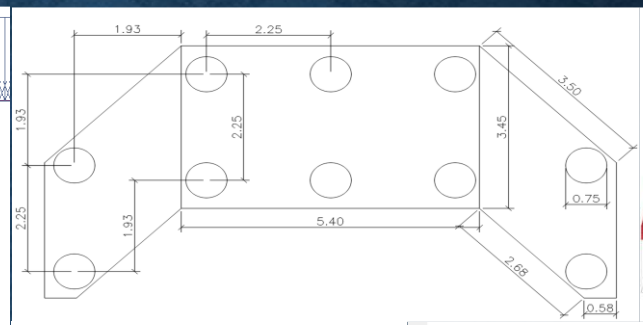


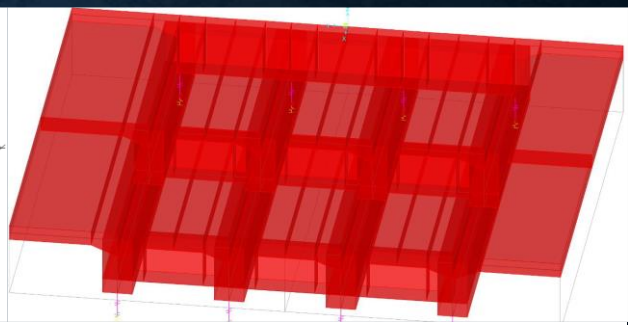
3 niveles de CR con área de 550m^2 por nivel.

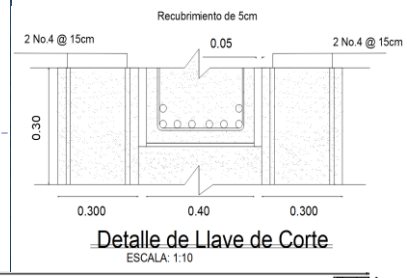
STRUCTURAL DESIGN OF THE TZALA VEHICULAR BRIDGE AT NORTH JUCANYA SECTOR, MUNICIPAL HEAD, PANAJACHEL, SOLOLÁ



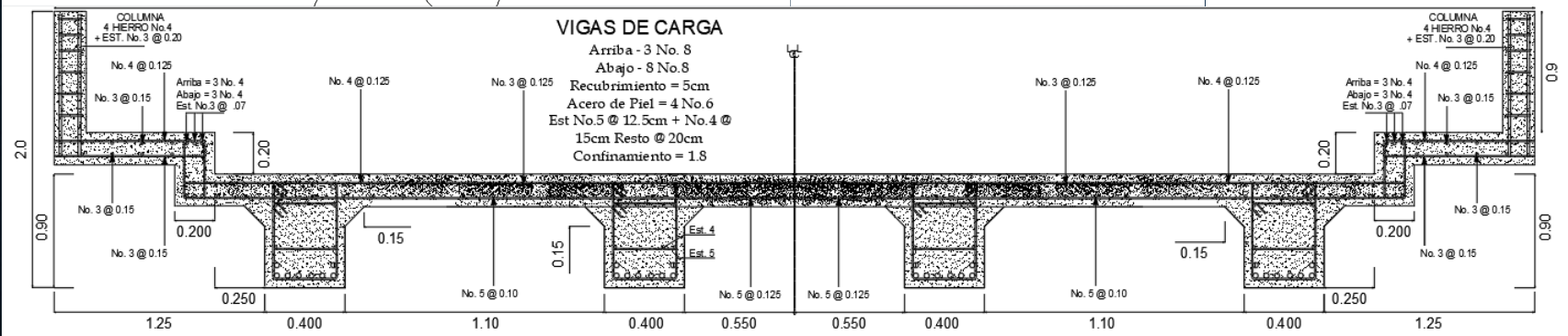




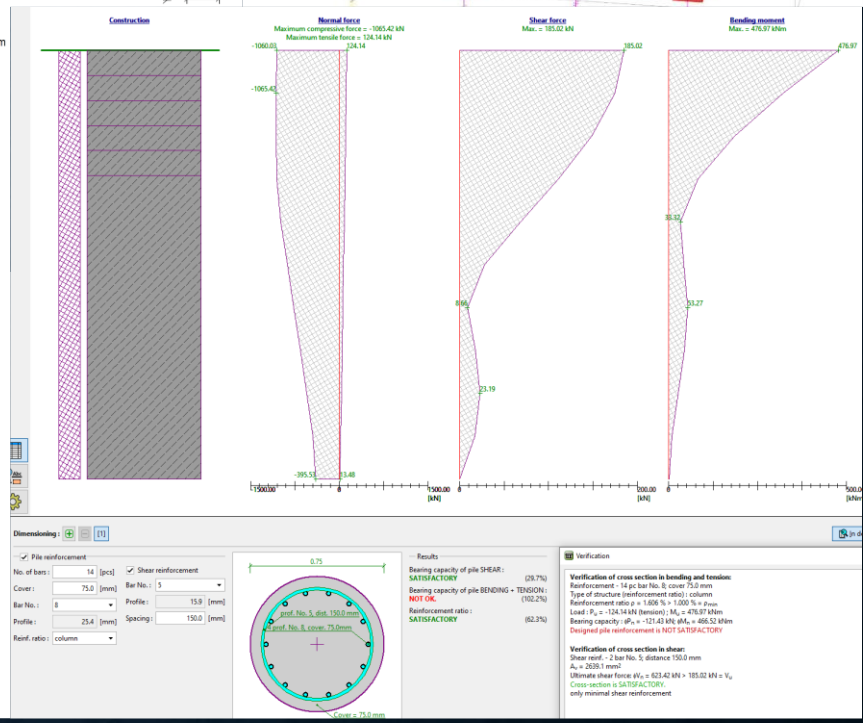




Detalle de Llave de Corte
ESCALA: 1:10

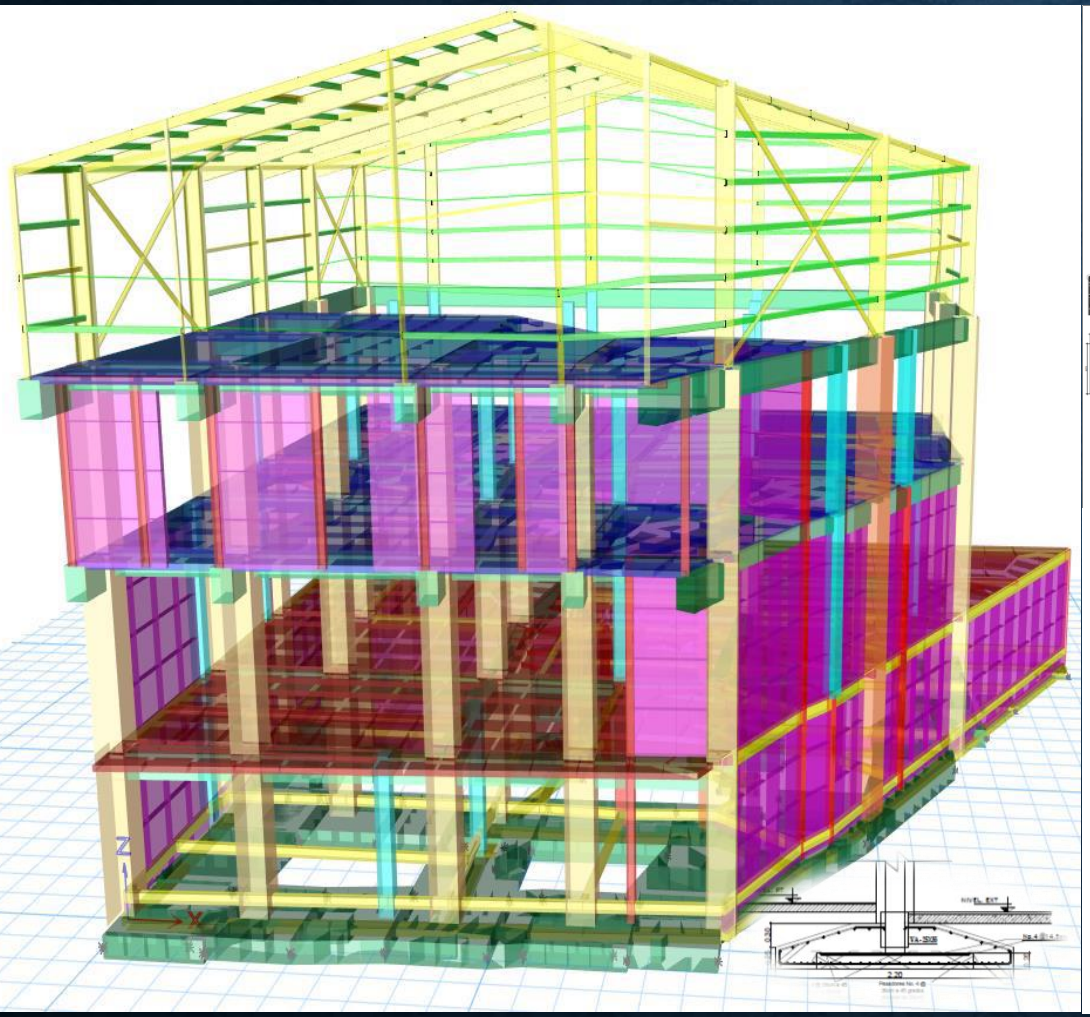


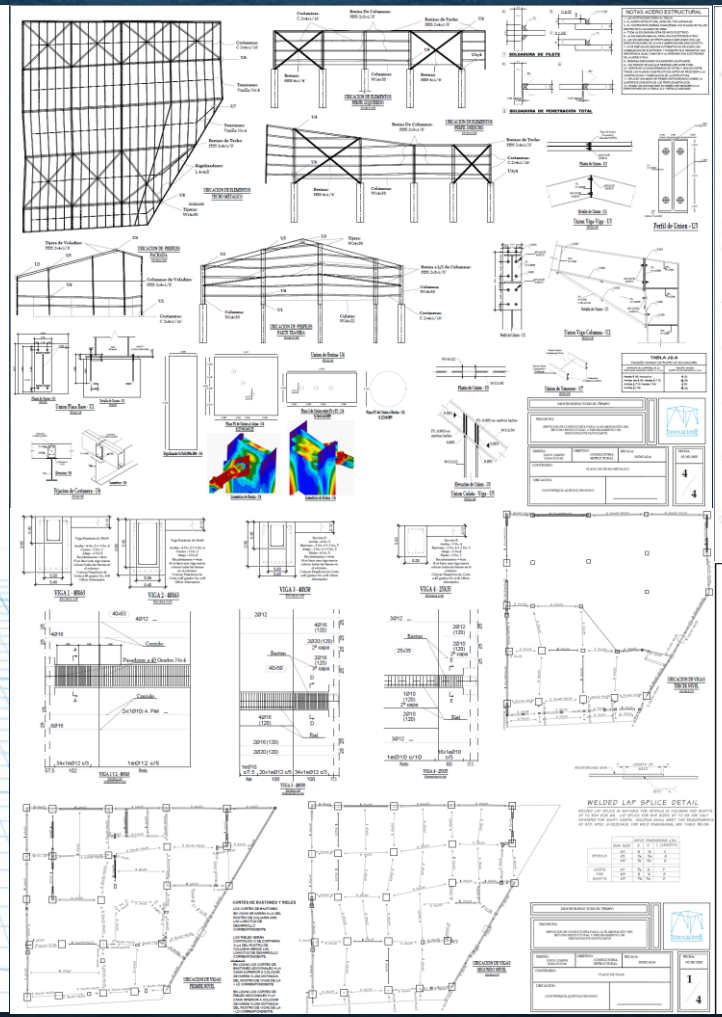
SECCION TRANSVERSAL DE PUENTE
ESCALA: 1:25

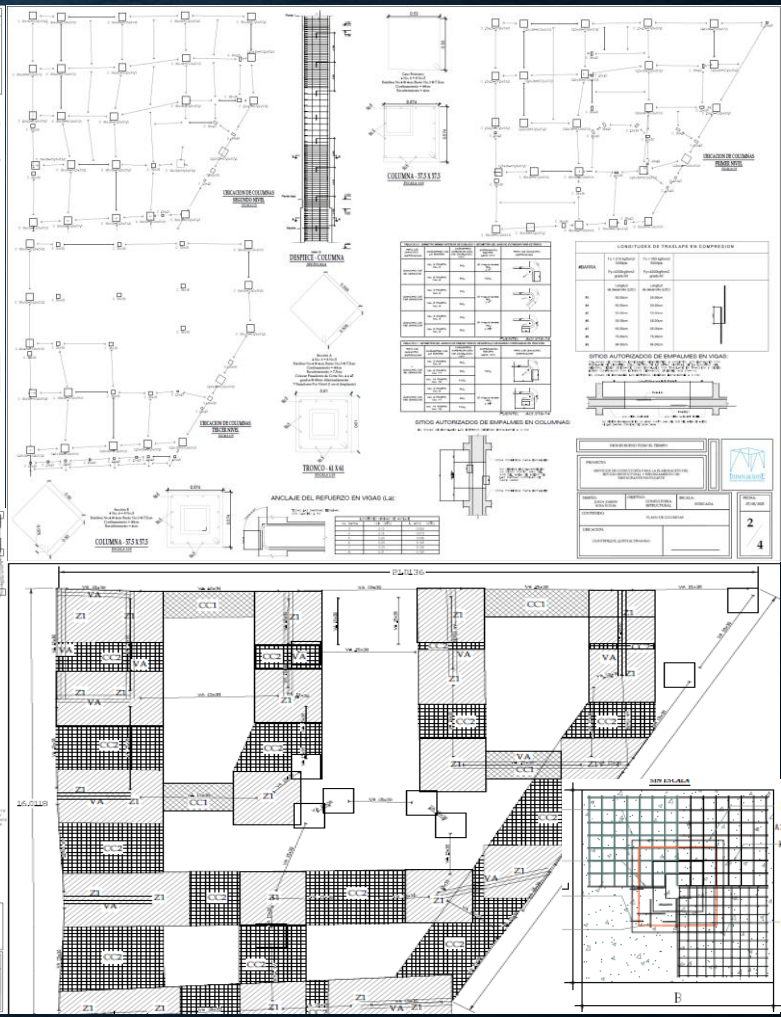


Span of 6m, width of 7.4m and height of 4.65m. 10 piles per abutment required with D = 75cm and a h = 8.55m.

STRUCTURAL REINFORCEMENT OF THE PANTOJARTE RESTAURANT, OLINTEPEQUE. FOUR-STORY STRUCTURE WITH 250 M² PER STORY

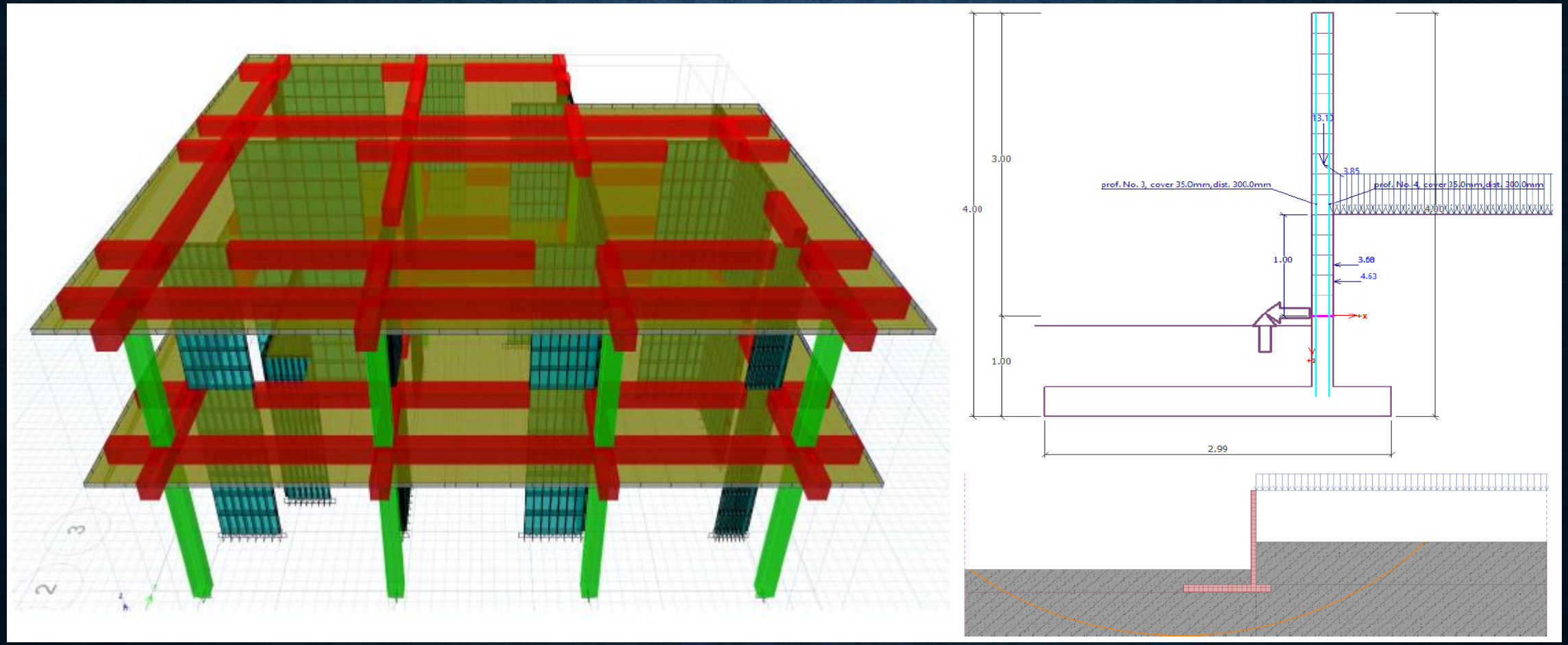






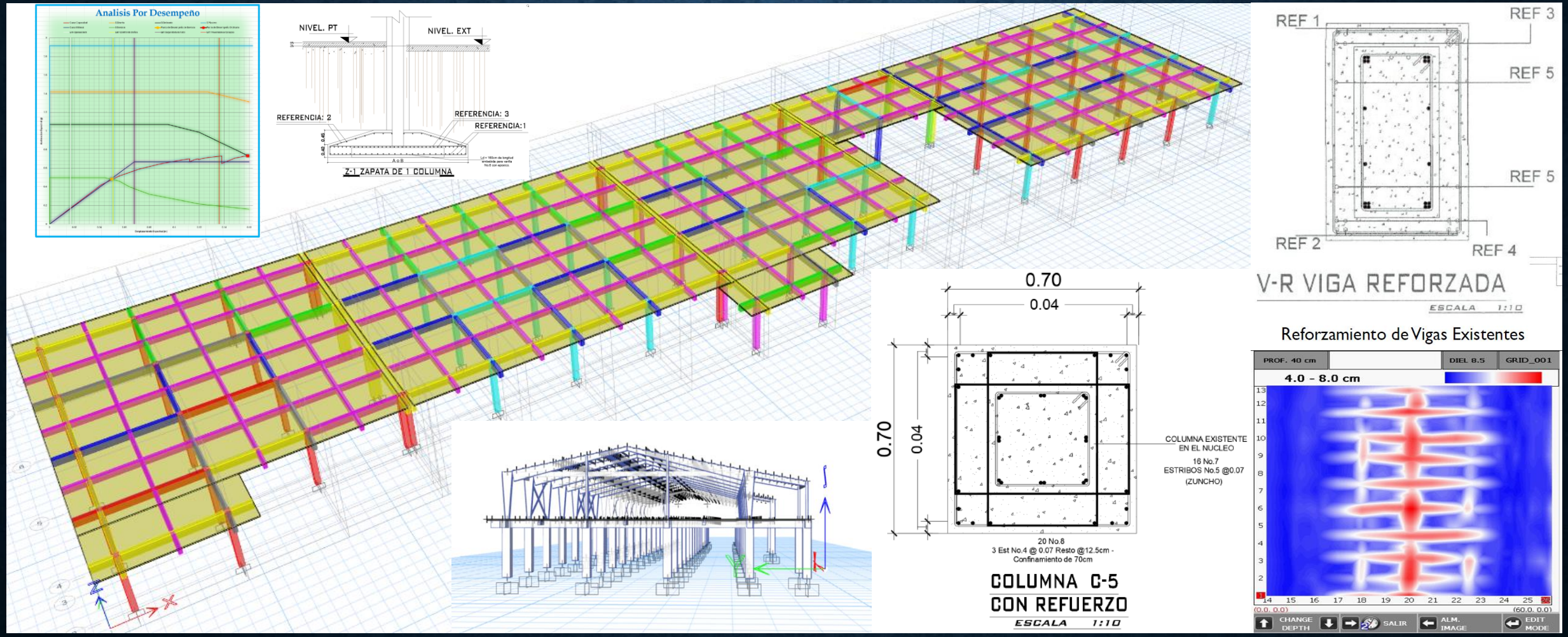
RC jacketing designs were determined for the foundation, columns, and beams. Metal roof with I-beams. Sclerometry testing of all elements.

STRUCTURAL AND SANITARY DESIGN OF 3 LAW COURT COMPLEXES IN SAN ANDRÉS VILLA SECA, SAN MARTIN ZAPOTITLÁN AND NUEVO SAN CARLOS, RETALHULEU



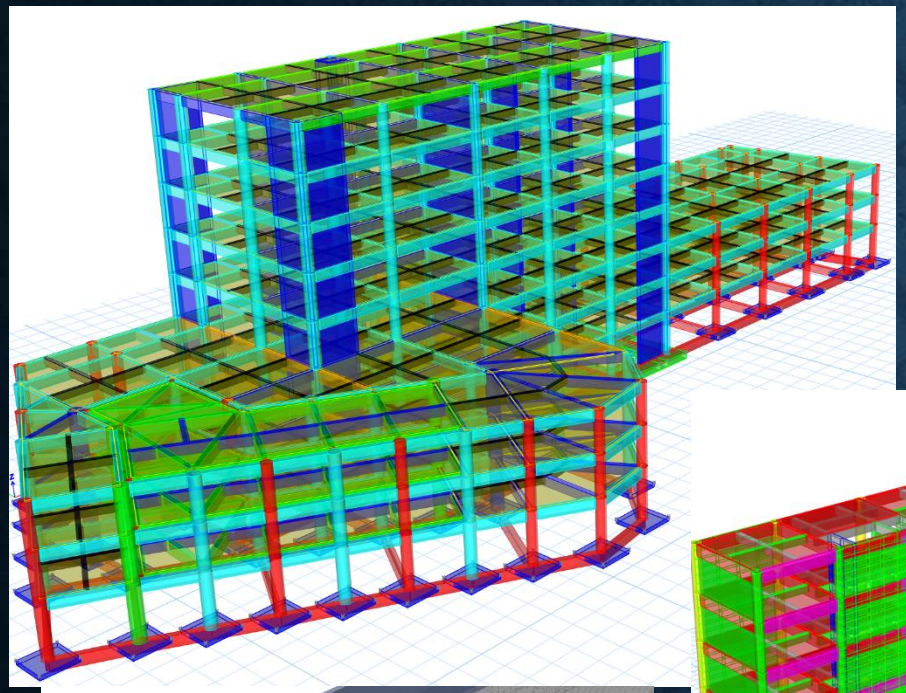
2-story structure. Project area: 187m^2 per story.

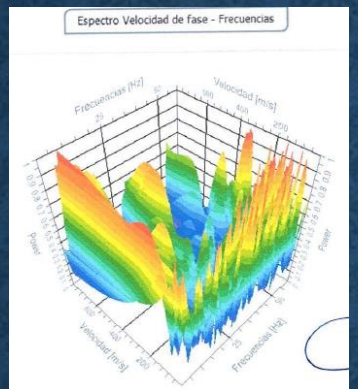
STRUCTURAL EVALUATION OF THE IGSS MAZATENANGO HOSPITAL AND DESIGN OF 2 SECOND-STORY PROPOSALS, SOLID SLAB OR METAL ROOF

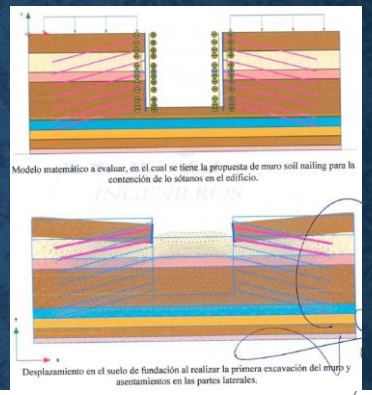


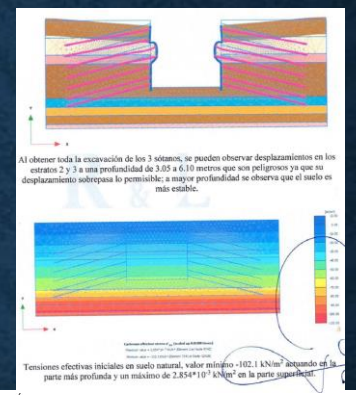
(RC Existing Structure Performance Analysis) Project area of approx. 2500m^2 per story.

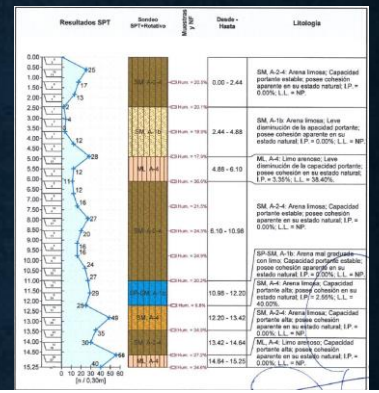
STRUCTURAL AND SANITARY DESIGN OF THE VILLA NUEVA COURT COMPLEX OF THE JUDICIAL BRANCH, GUATEMALA

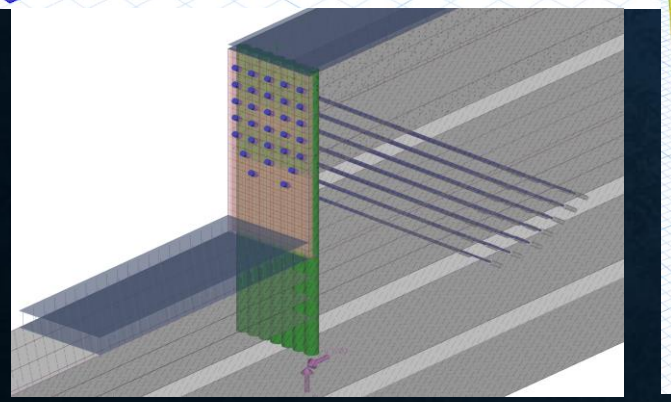


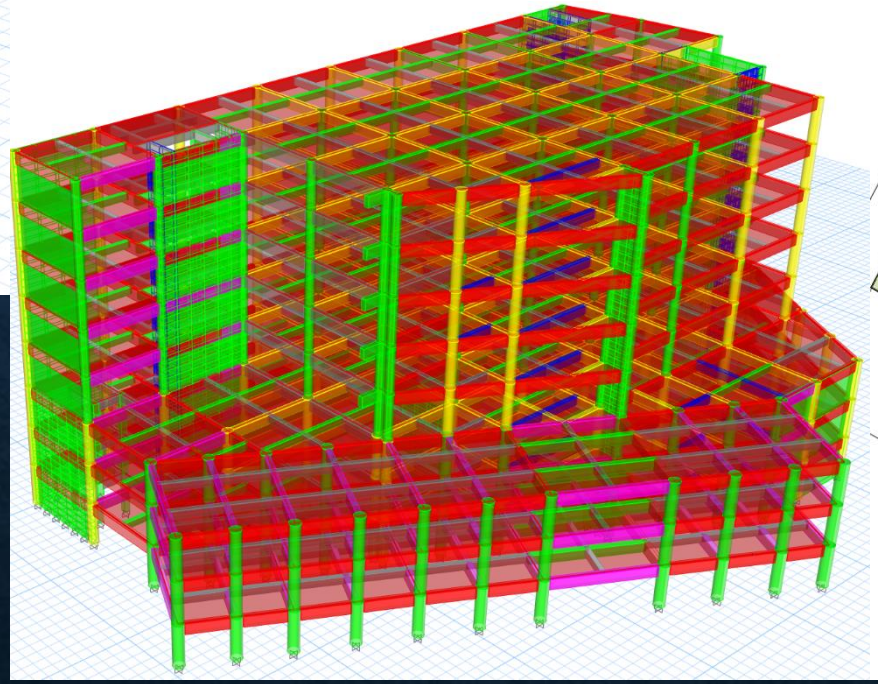






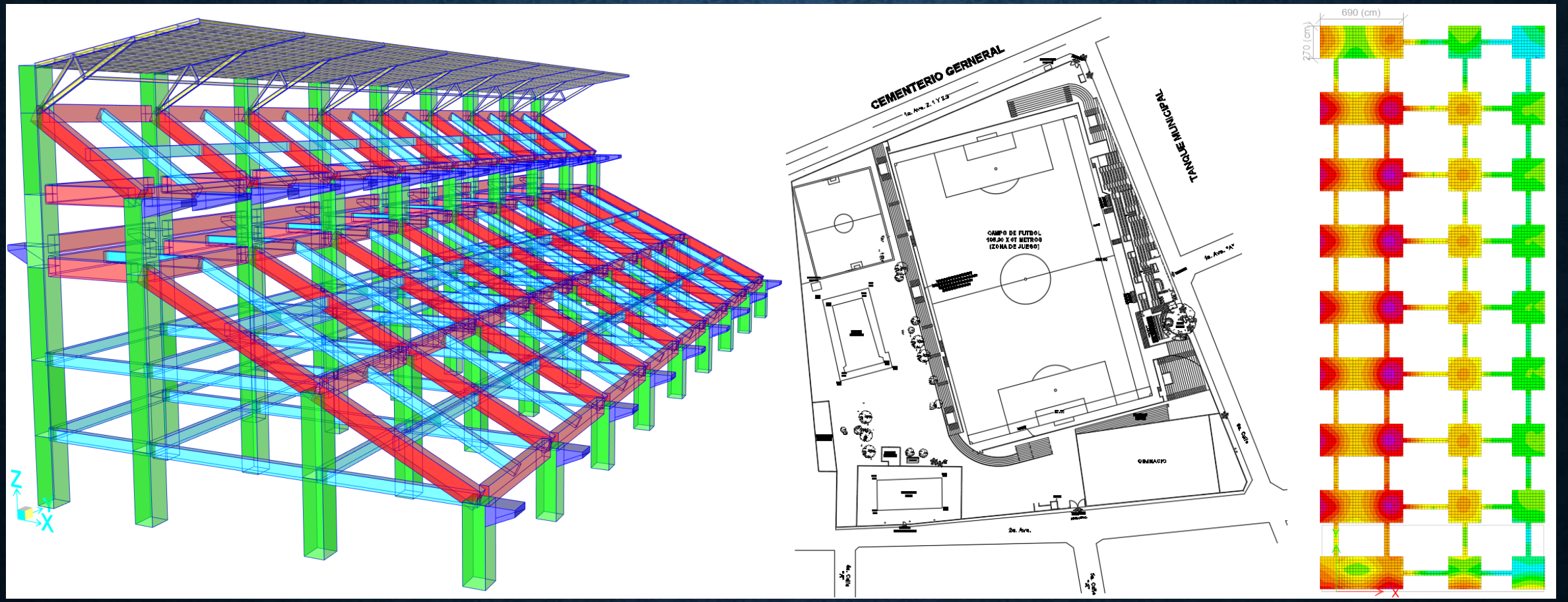






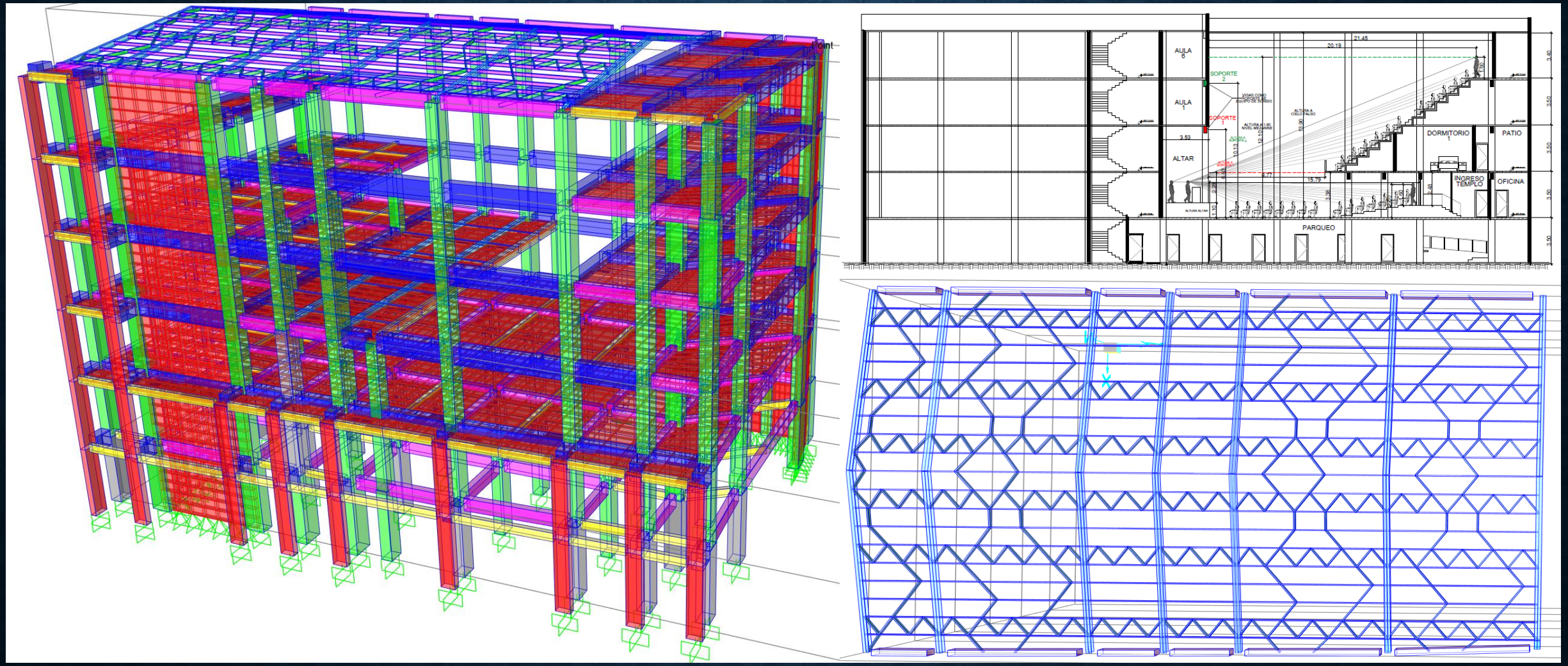
8-story building including 3 basements. Total square meters of the project: 29500m²

STRUCTURAL DESIGN OF THE PROJECT “OSCAR MONTERROSO IZAGUIRRE RETALHULEU STADIUM IMPROVEMENT”



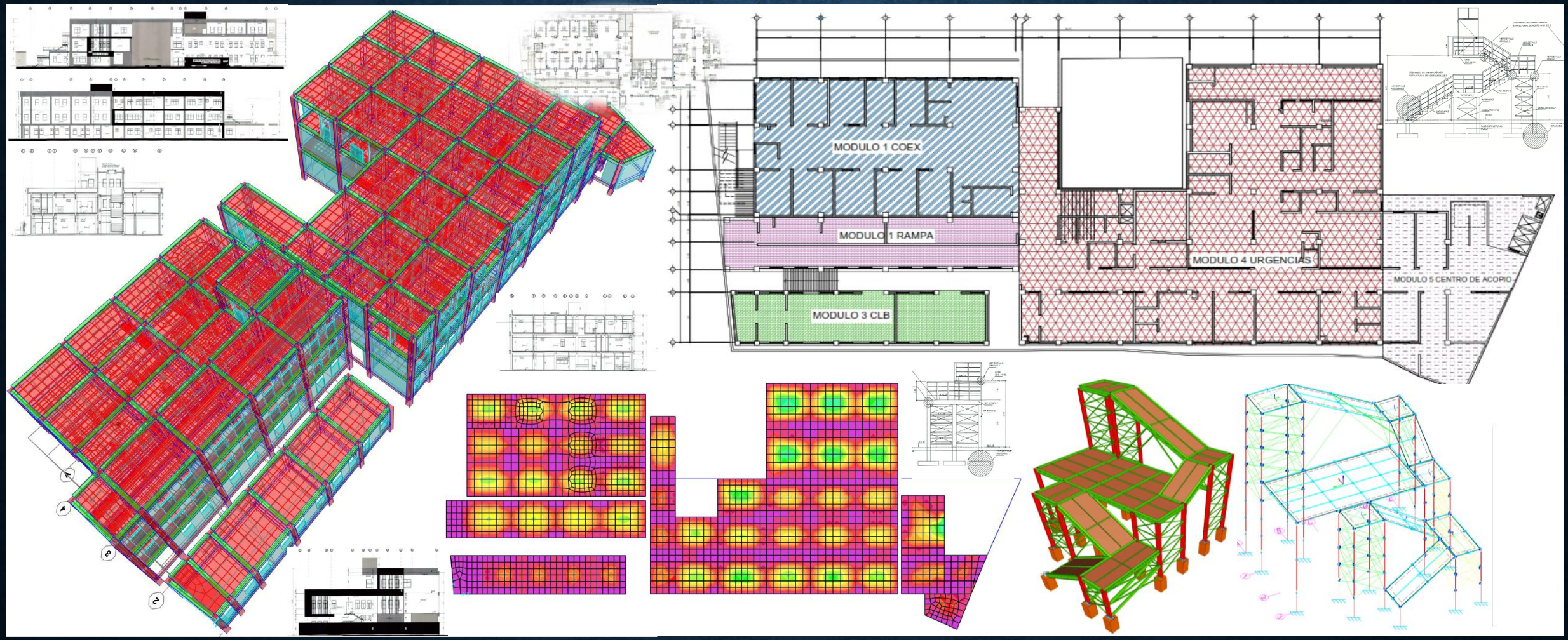
The design of the stands and metal roof of the grandstand was carried out, which consists of approximately 2415m^2 and up to 14.7 meters high.

STRUCTURAL DESIGN OF BETHEL CHURCH, SOLOLÁ



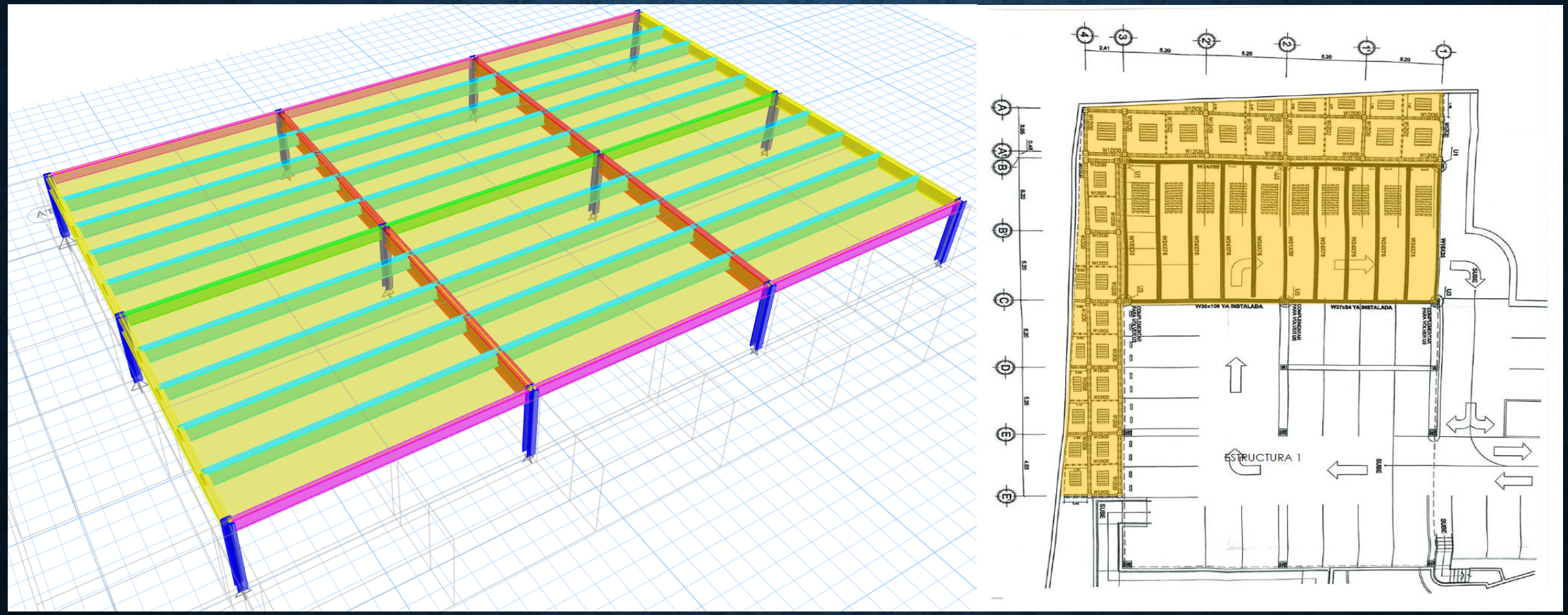
The existing building was assessed and then a structural analysis and design was made for a new 6 story building to be built of approximately 600m^2 per story. An inclined seating box for the upper floors was designed, like a stadium.

DICTUM ON THE PROJECT “SAN CRISTÓBAL TOTONICAPÁN HEALTH CENTER IMPROVEMENT, TOTONICAPÁN”, A 3-STORY BUILDING



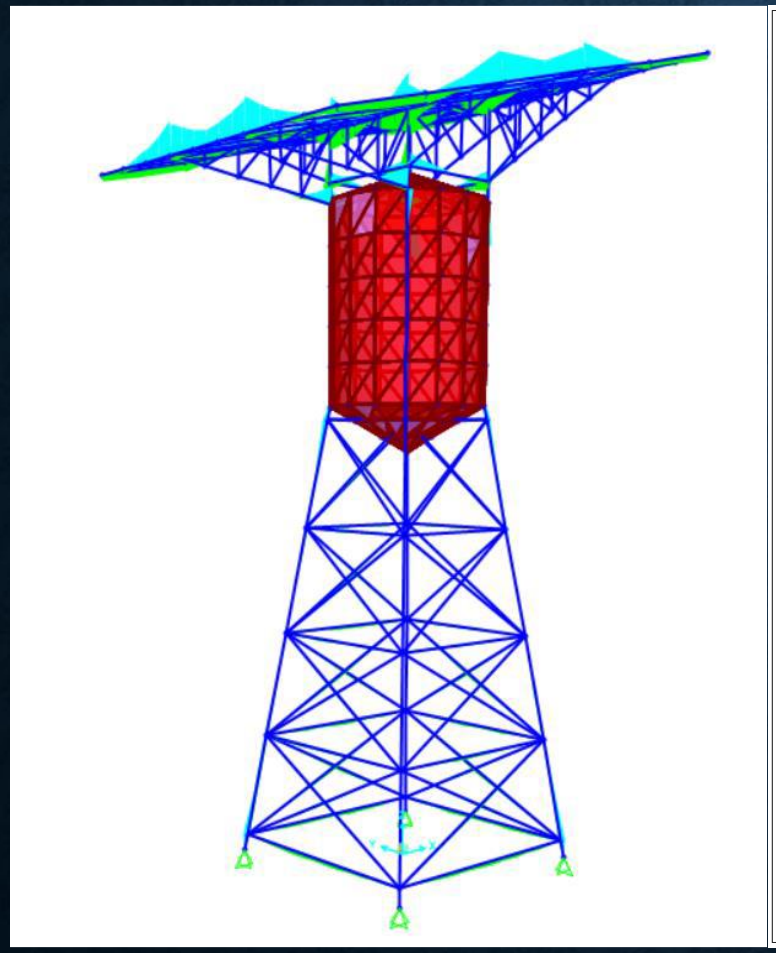
Dictum on the structural planning of the CAIMI (health center) and current state of the building along with a proposal for reinforcement. It consists of 3000m^2, elevator, ramps and metal outdoor staircases.

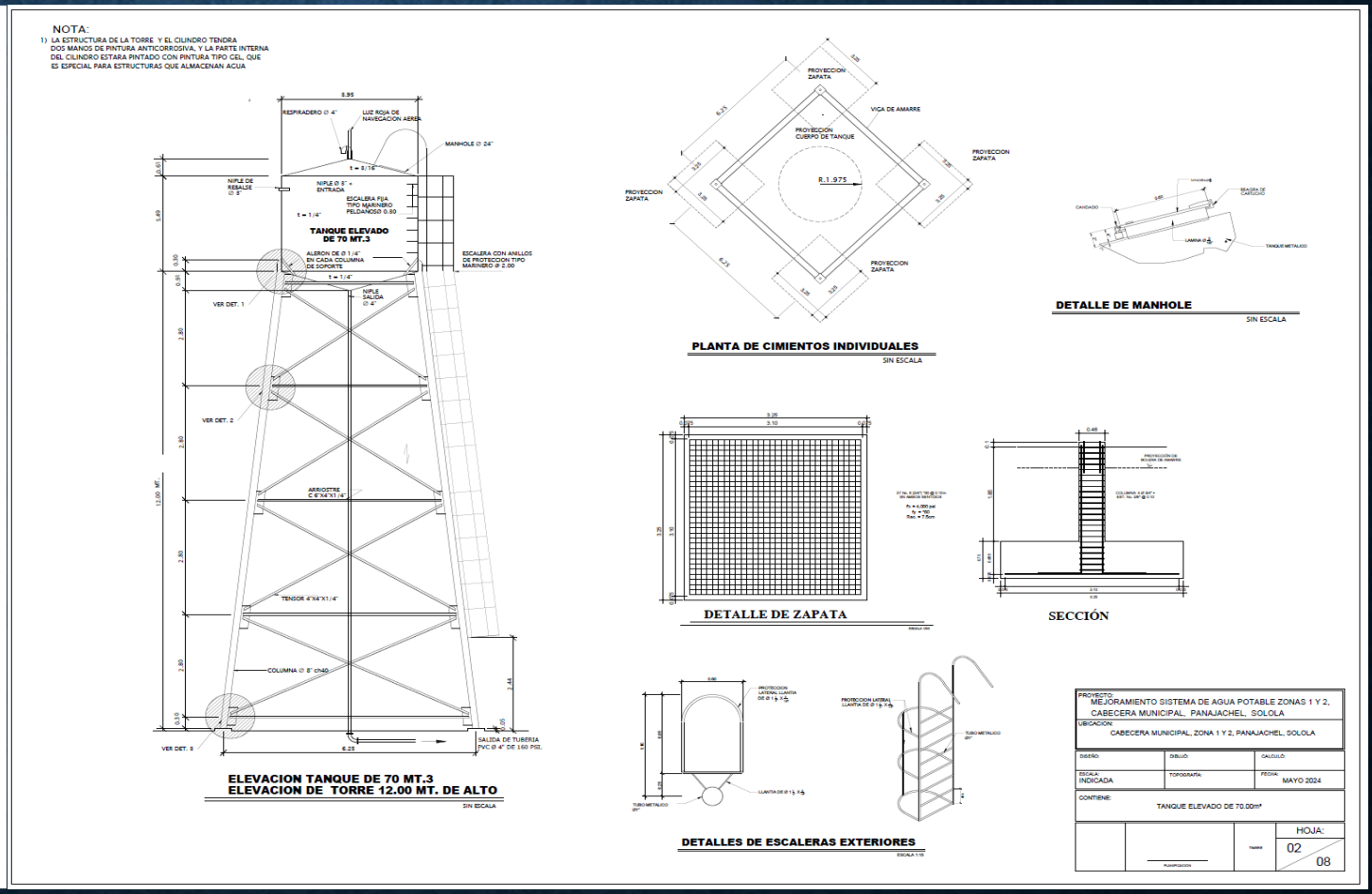
DICTUM ON “EXPANSION OF THE SAN BARTOLO HOT SPRINGS TOURIST CENTER PARKING LOT IN AGUAS CALIENTES TOTONICAPÁN”



Quotation for phase two of the construction and dictum on the current state of the structure (Phase 1). It is a steel structure and is approximately 750 m^2.

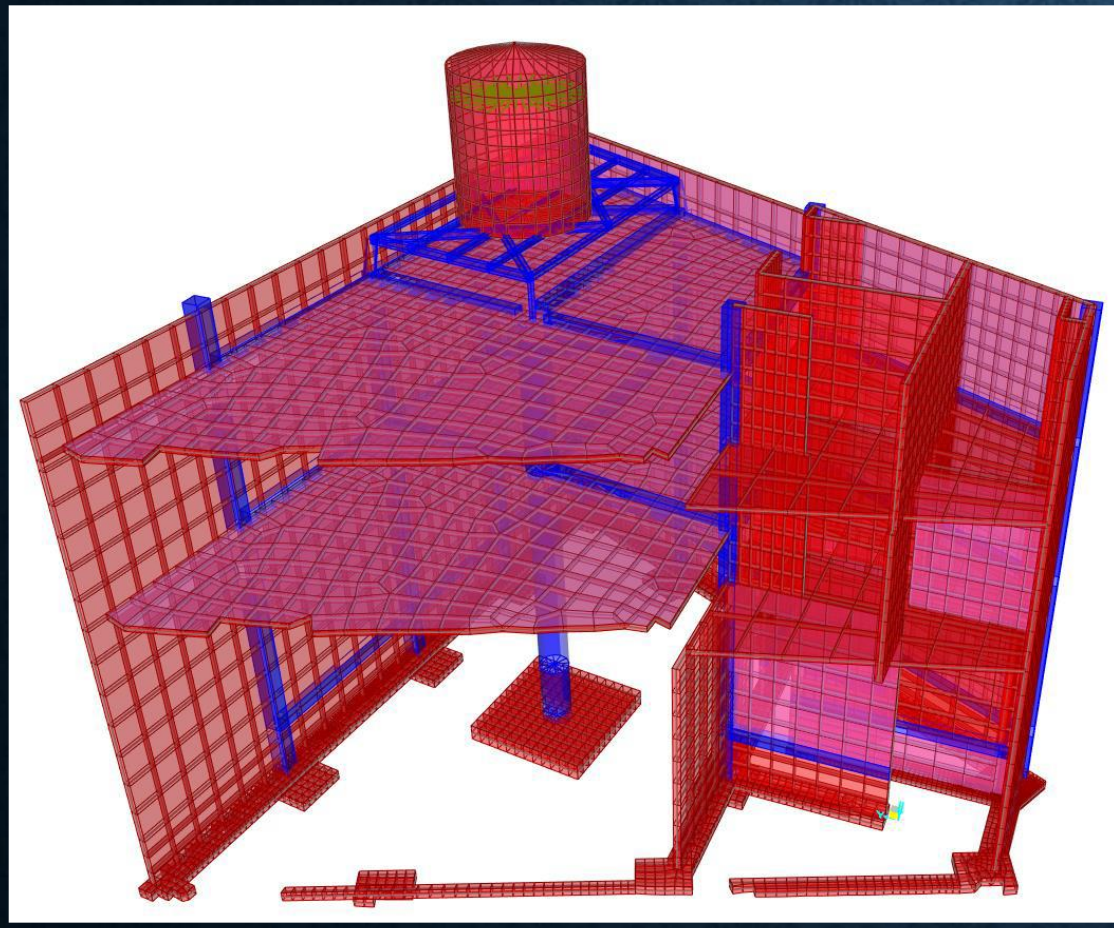
STRUCTURAL DESIGN FOR THE PROJECTS “IMPROVEMENT OF THE POTABLE WATER SYSTEM WITH MECHANICAL WELL DRILLING, VILLA LA SOLEDAD, SAN LORENZO, SUCHITEPÉQUEZ” AND “POTABLE WATER SYSTEM IMPROVEMENT, ZONE 1 AND 2, PANAJACHEL, SOLOLÁ”

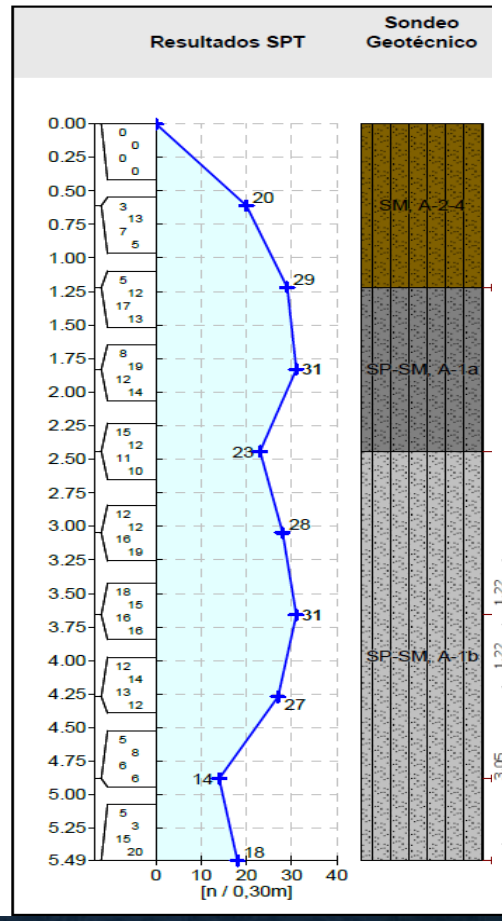


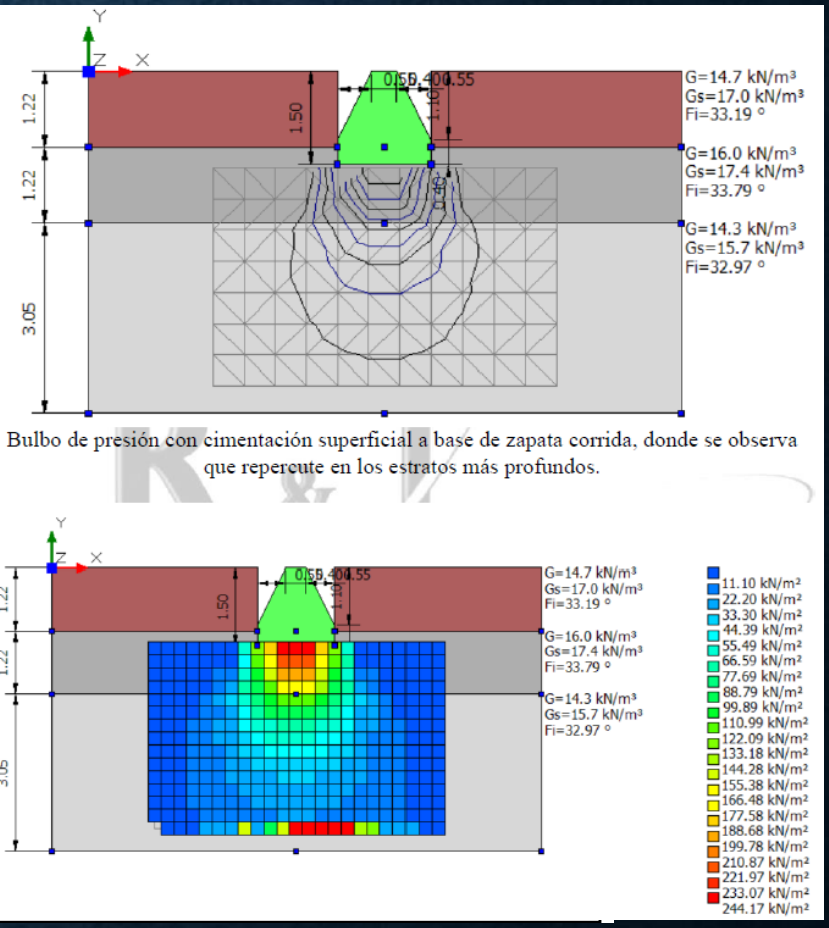


Structural design of an elevated reservoir of 17 meters in height and 73m^3.

DICTUM ON, “POTABLE WATER SYSTEM IMPROVEMENT, SOUTH SECTOR JUCANYÁ, PANAJACHEL, SOLOLÁ”



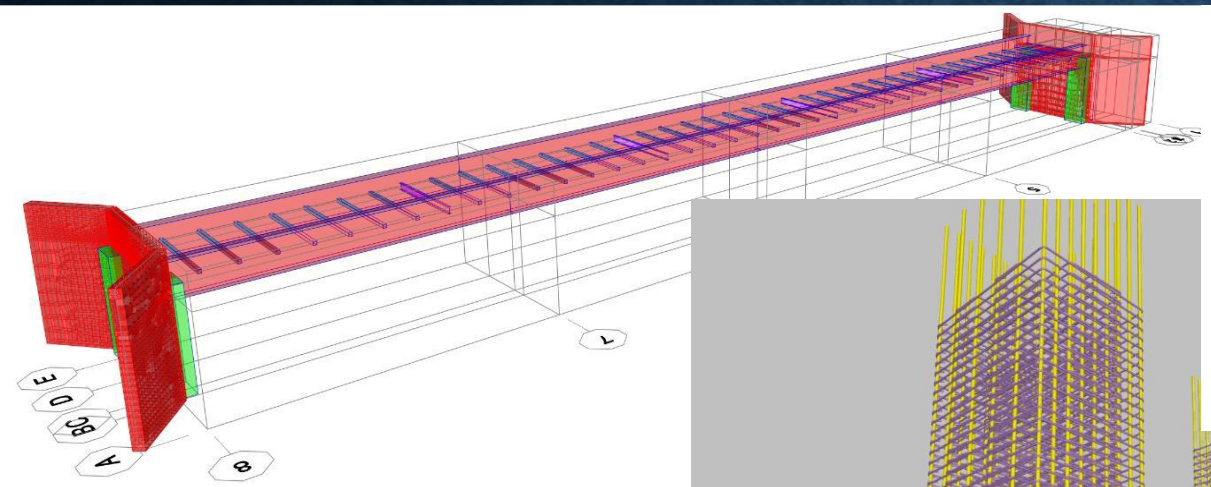


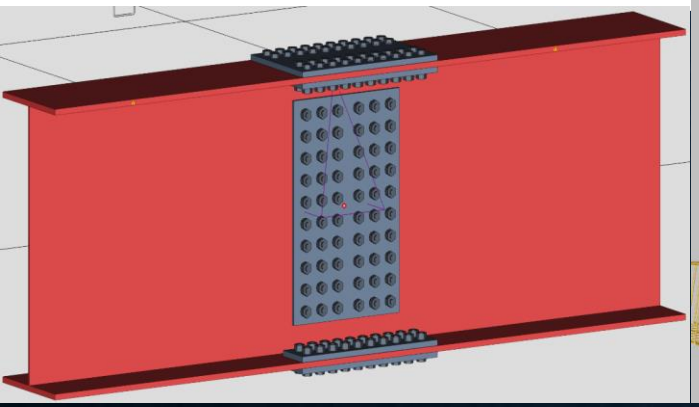


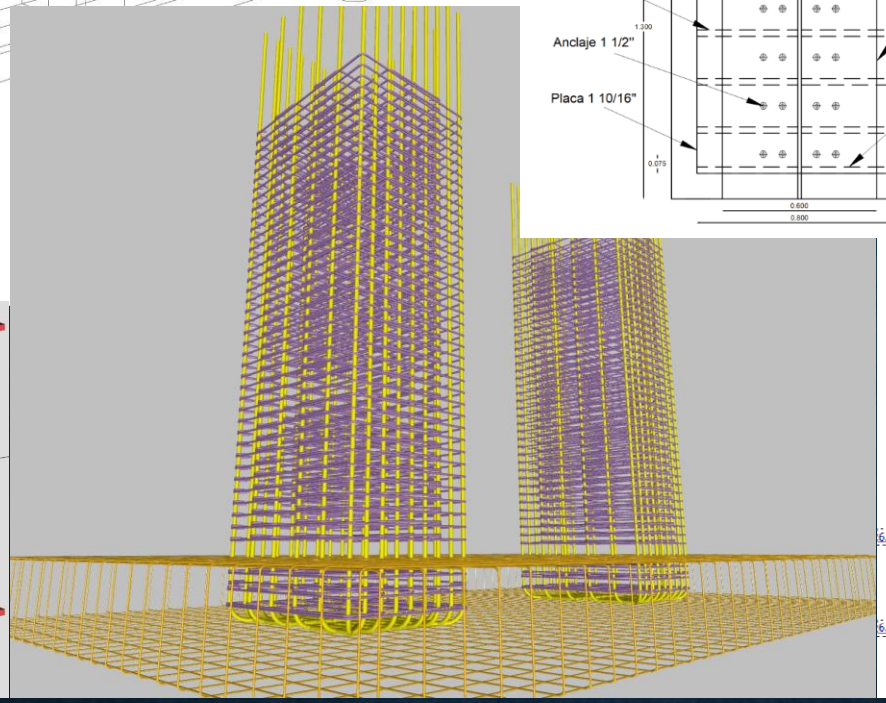
Bulbo de presión con cimentación superficial a base de zapata corrida, donde se observa que repercute en los estratos más profundos.

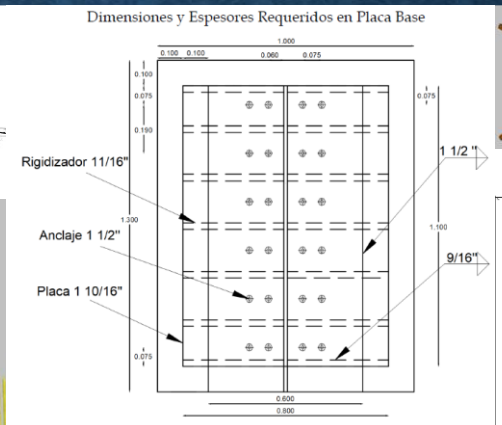
Structural analysis of the existing building to confirm its resistance to the new load (73m^3 reservoir) on the last story and structural use that it would have.

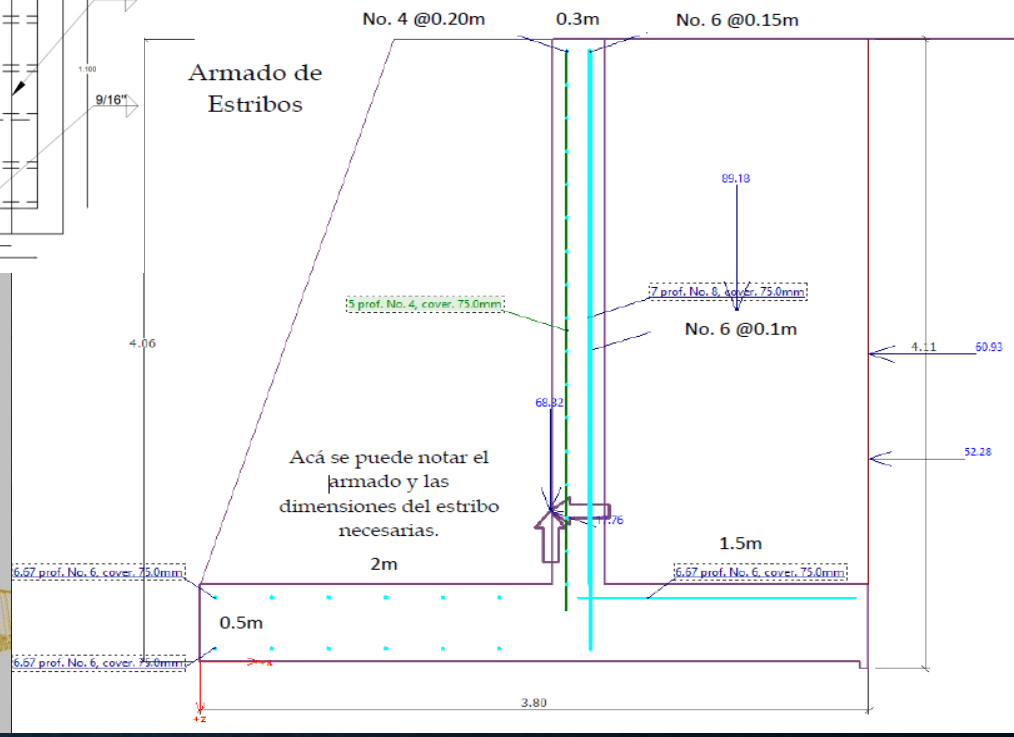
DESIGN OF THE PROJECT, “CONSTRUCTION OF A VEHICULAR BRIDGE, SOUTH JUCANYÁ, PANAJACHEL, SOLOLÁ”





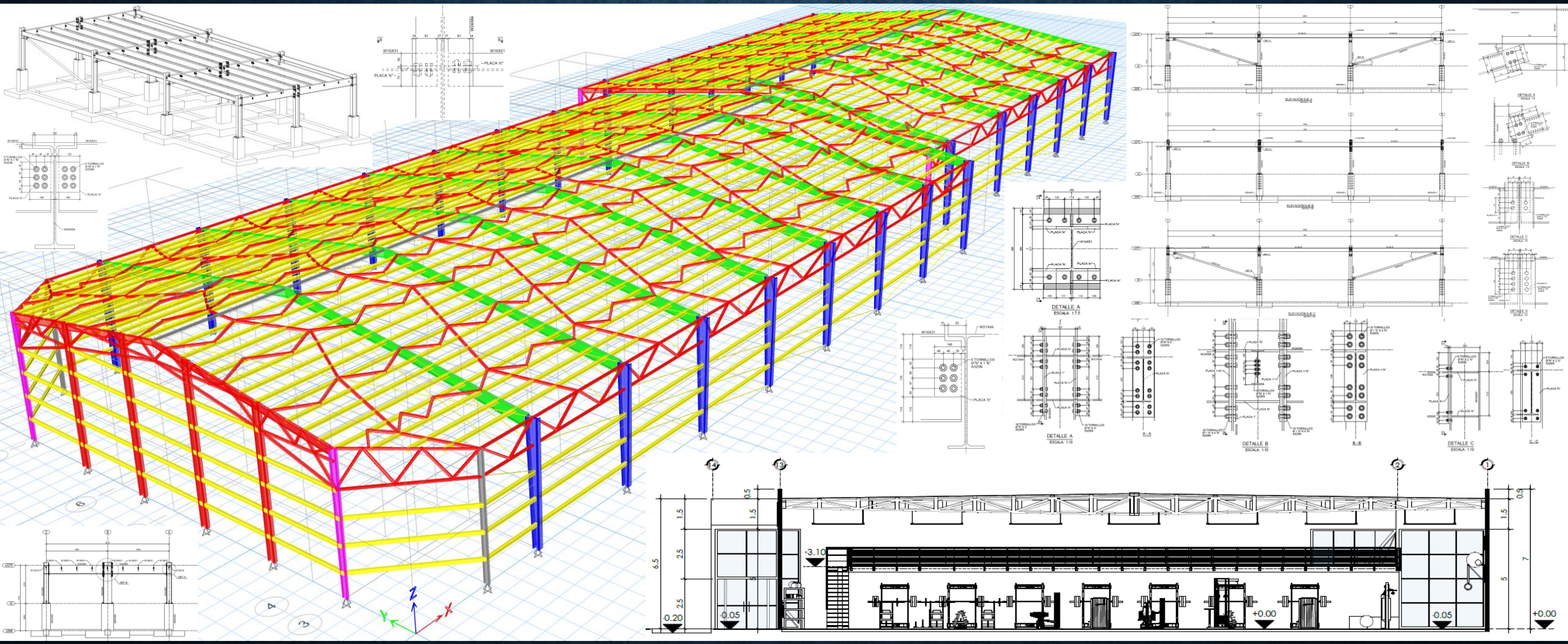






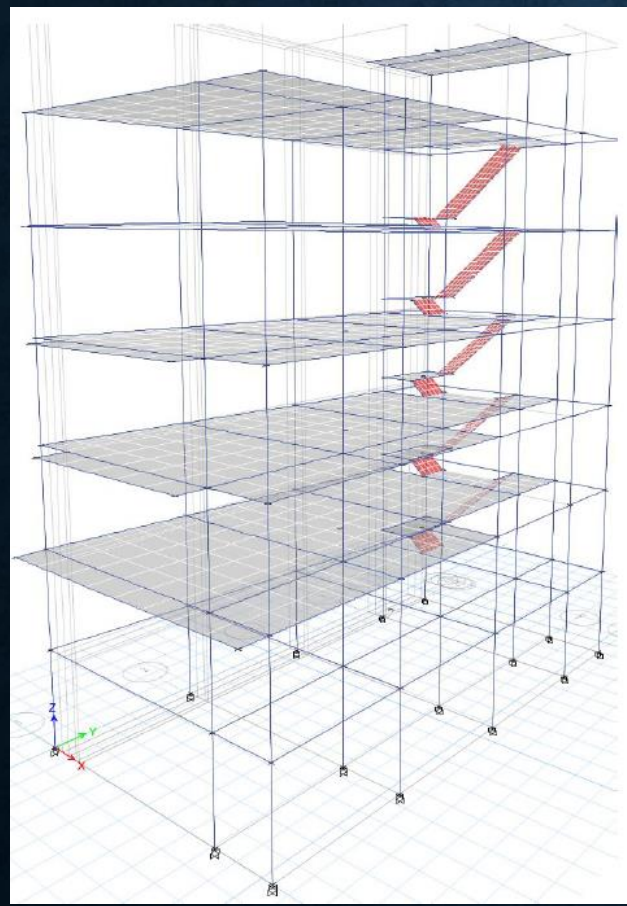
Dictum on the status of the structural planning of the project. 40 meters of span and light vehicle load.

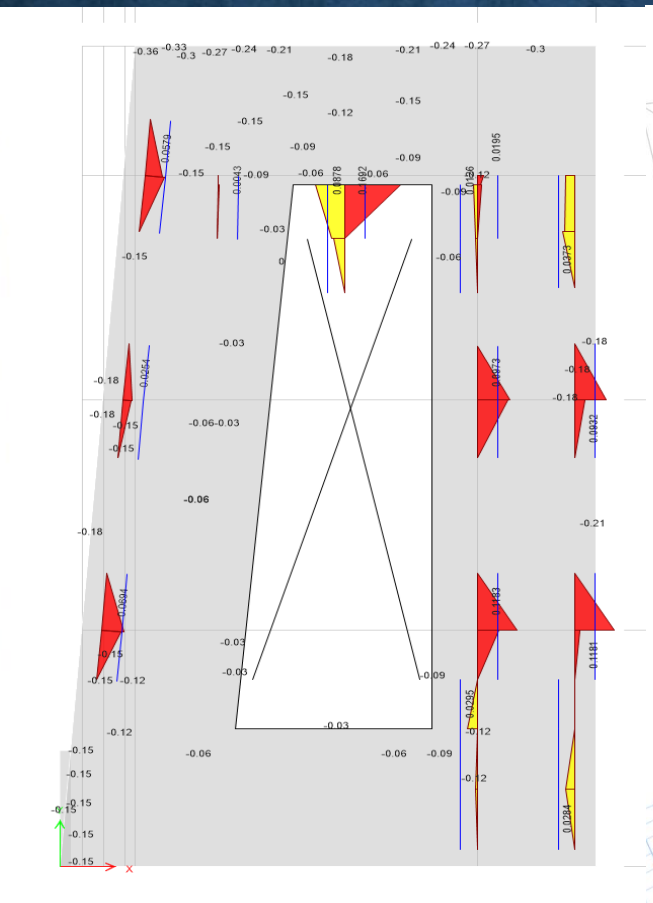
STRUCTURAL DESIGN OF A HIGH-PERFORMANCE GYM

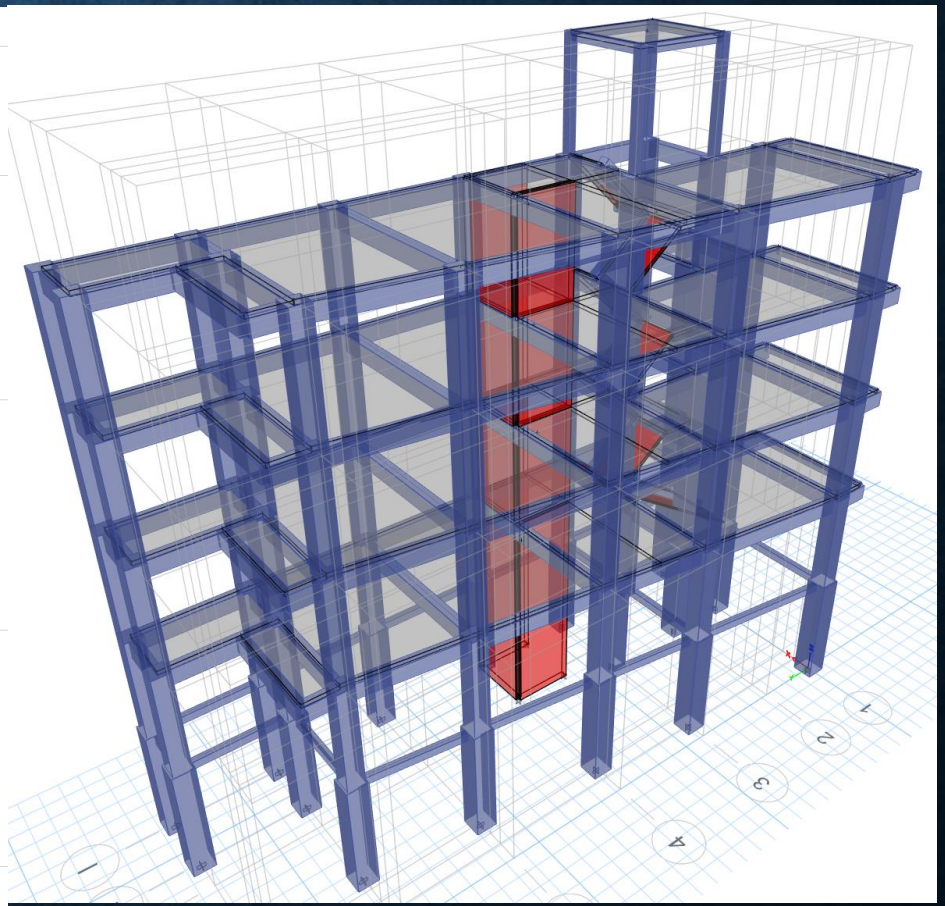


3188 m^2 steel industrial warehouse, 10 meters high, 30 meters wide and 87 meters long with mezzanine and pool.

STRUCTURAL DESIGN OF “GASPAR IXCAYA OFFICES AND APARTMENTS PROJECT, SAN PABLO LA LAGUNA, SOLOLÁ” AND “ROGELIO RESIDENCE OFFICES AND APARTMENTS PROJECT, LA ESPERANZA, QUETZALTENANGO”

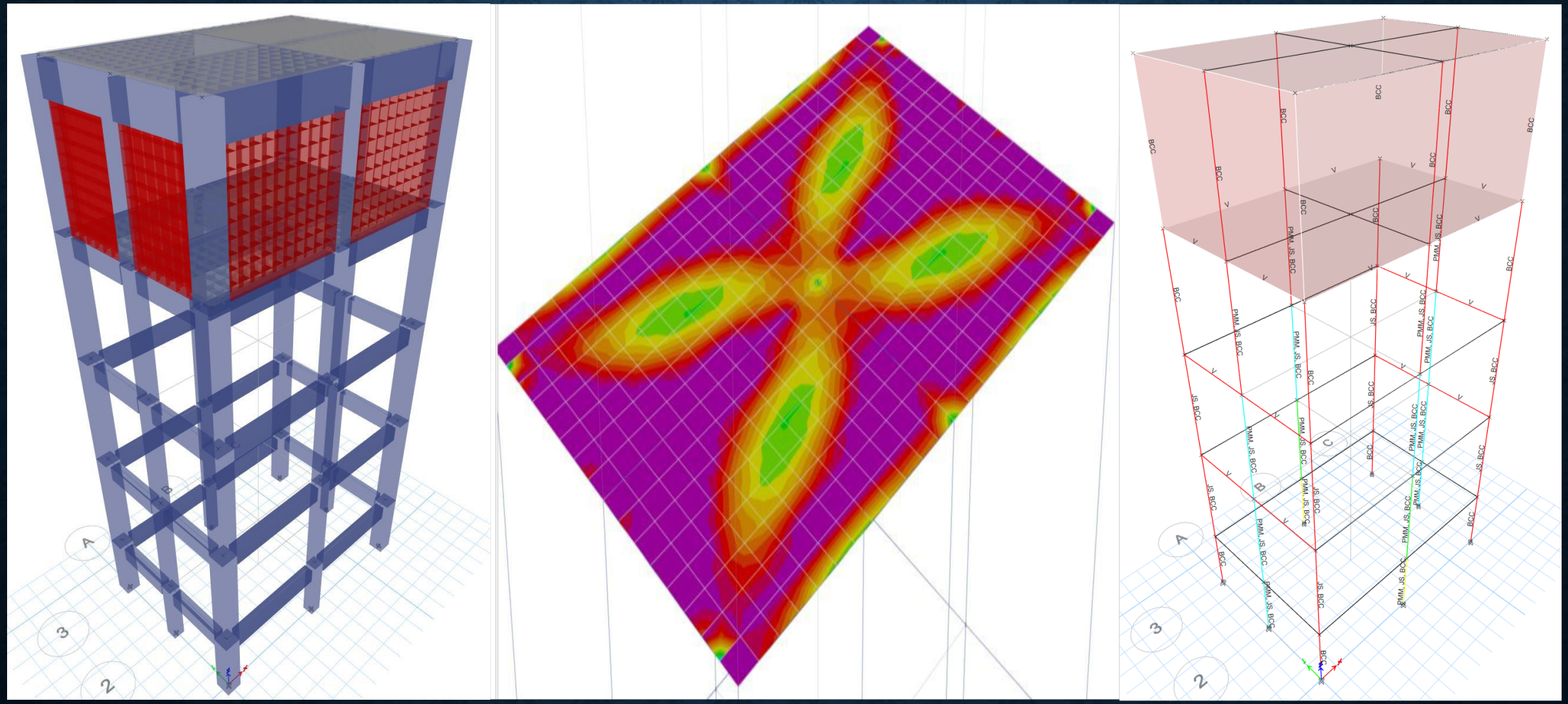






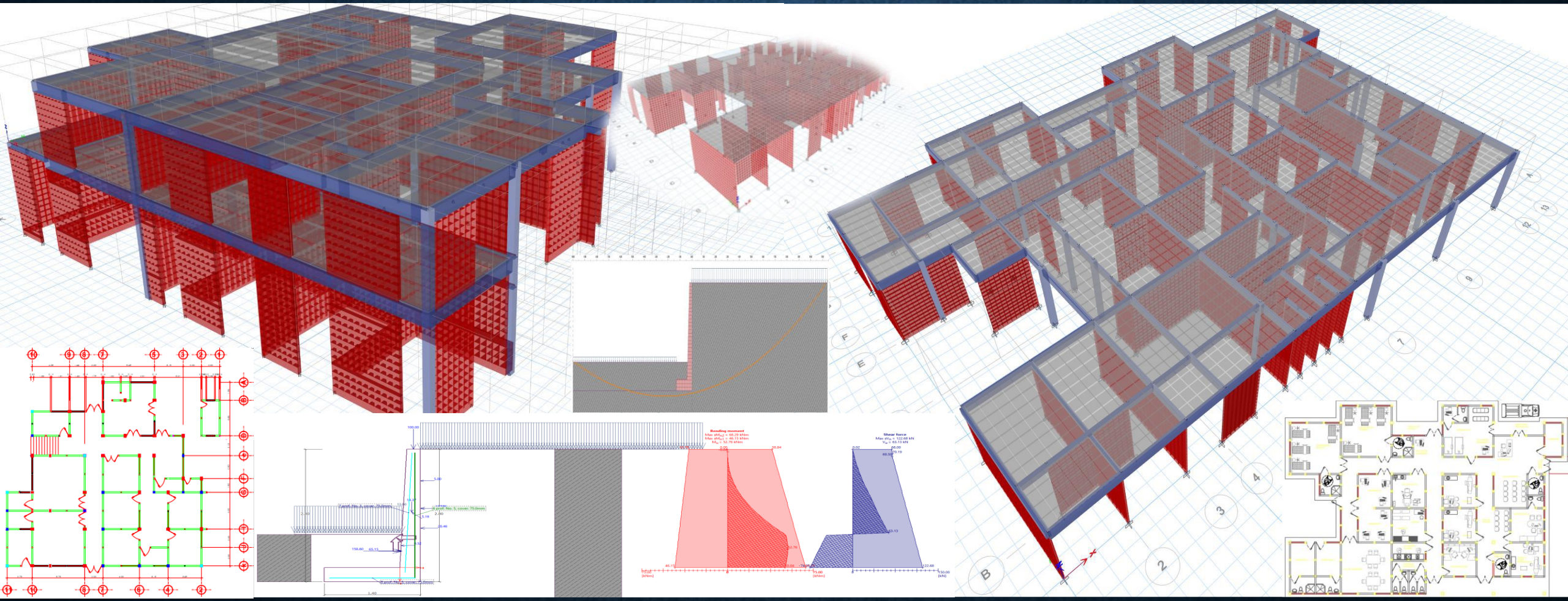
Design of 2 reinforced concrete frame buildings with 5 stories of approximately 100 m^2 per story.

ELEVATED RESERVOIR IN SUBDIVISION VILLAS DE SAN ANDRÉS, SALCAJÁ QUETZALTENANGO



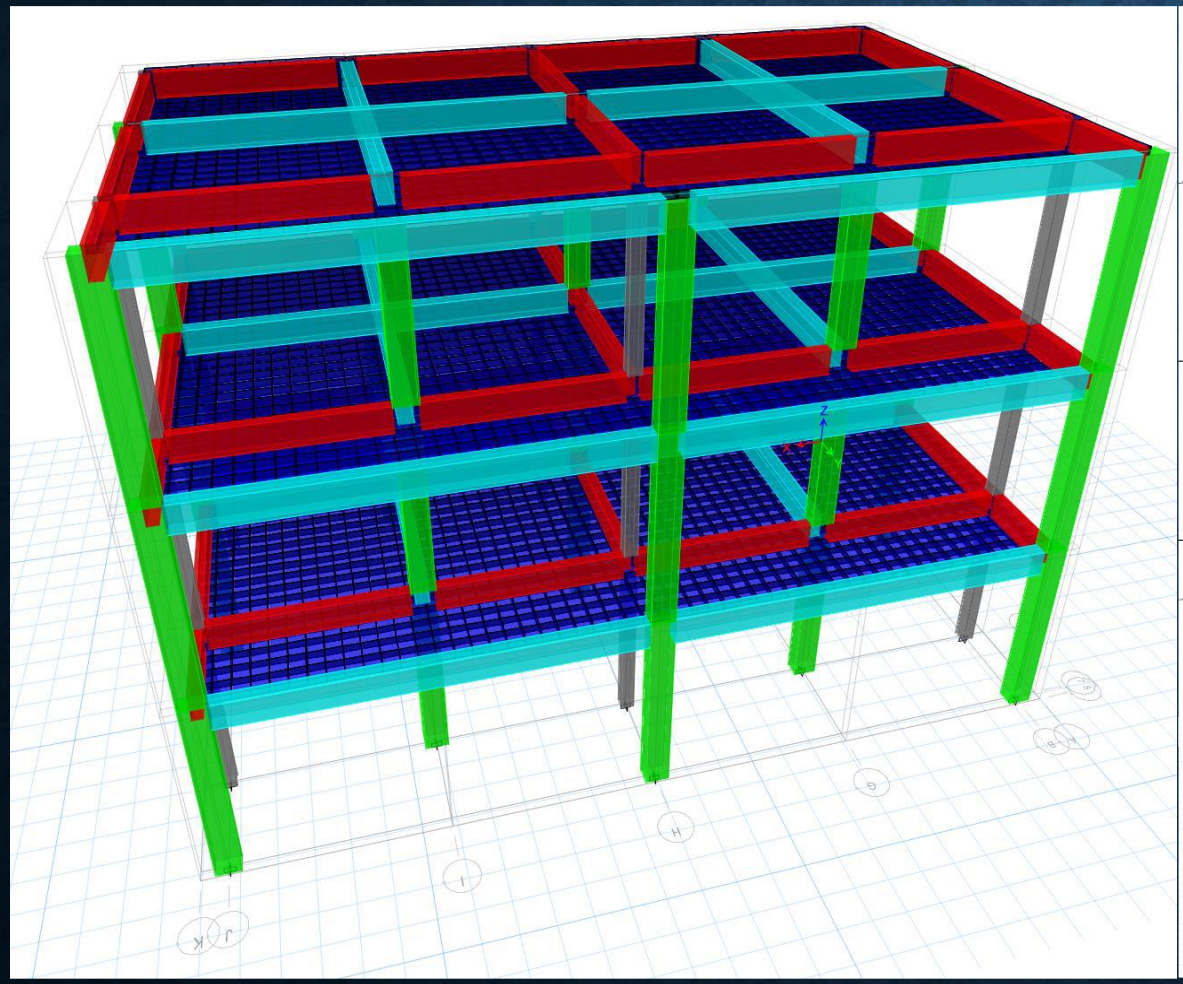
Dictum regarding the strengthening or demolition of an elevated masonry reservoir of approximately 12m in height.

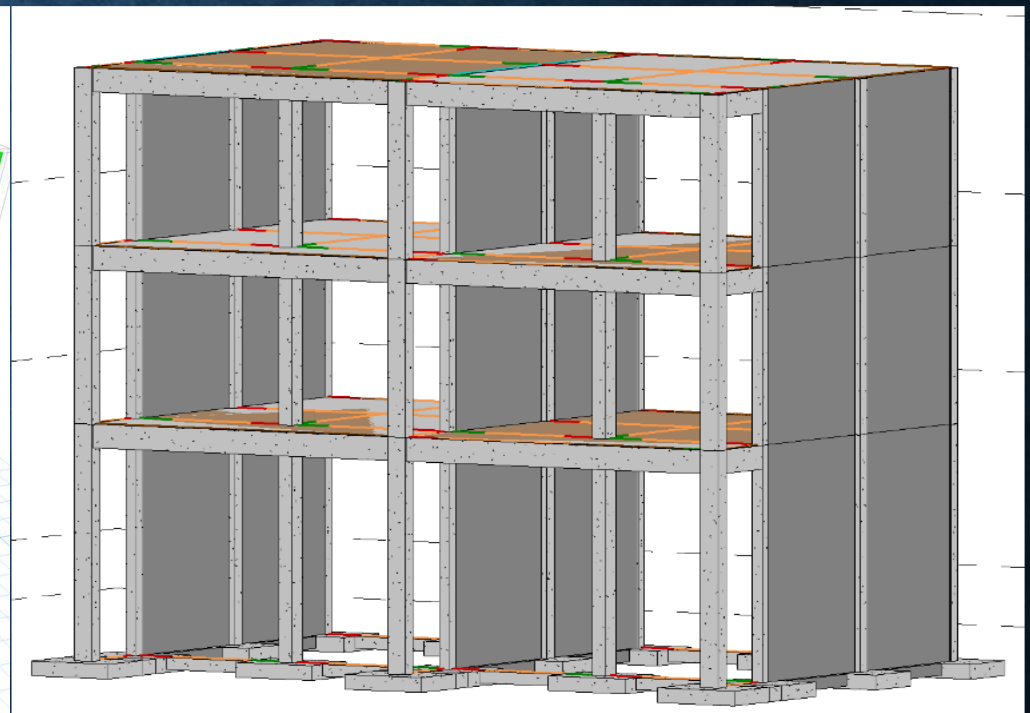
STRUCTURAL DESIGN OF THE PROJECTS “CONSTRUCTION OF HEALTH CENTER, VILLA CHOLA, CHICAMÁN, QUICHE” AND “CONSTRUCTION OF THE HEALTH POST, VILLA SAQUIXPEC, REINA USPANTAN ZONE, QUICHE”

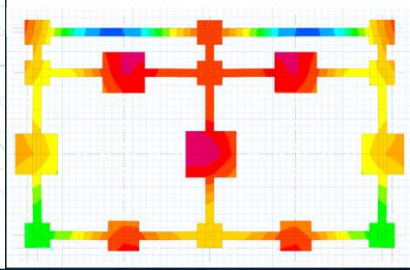


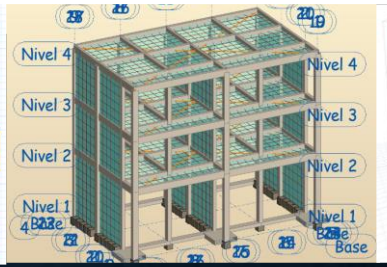
Approximate area of 600m^2 of construction and two stories. Retaining wall design.

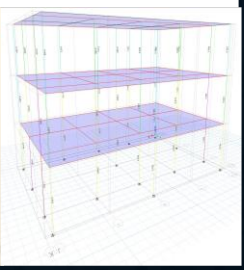
STRUCTURAL DESIGN OF THE PROJECT “ELEMENTARY SCHOOL IMPROVEMENT, VILLA CENTRO, TZANIXNAM, TOTONICAPAN, TOTONICAPAN”





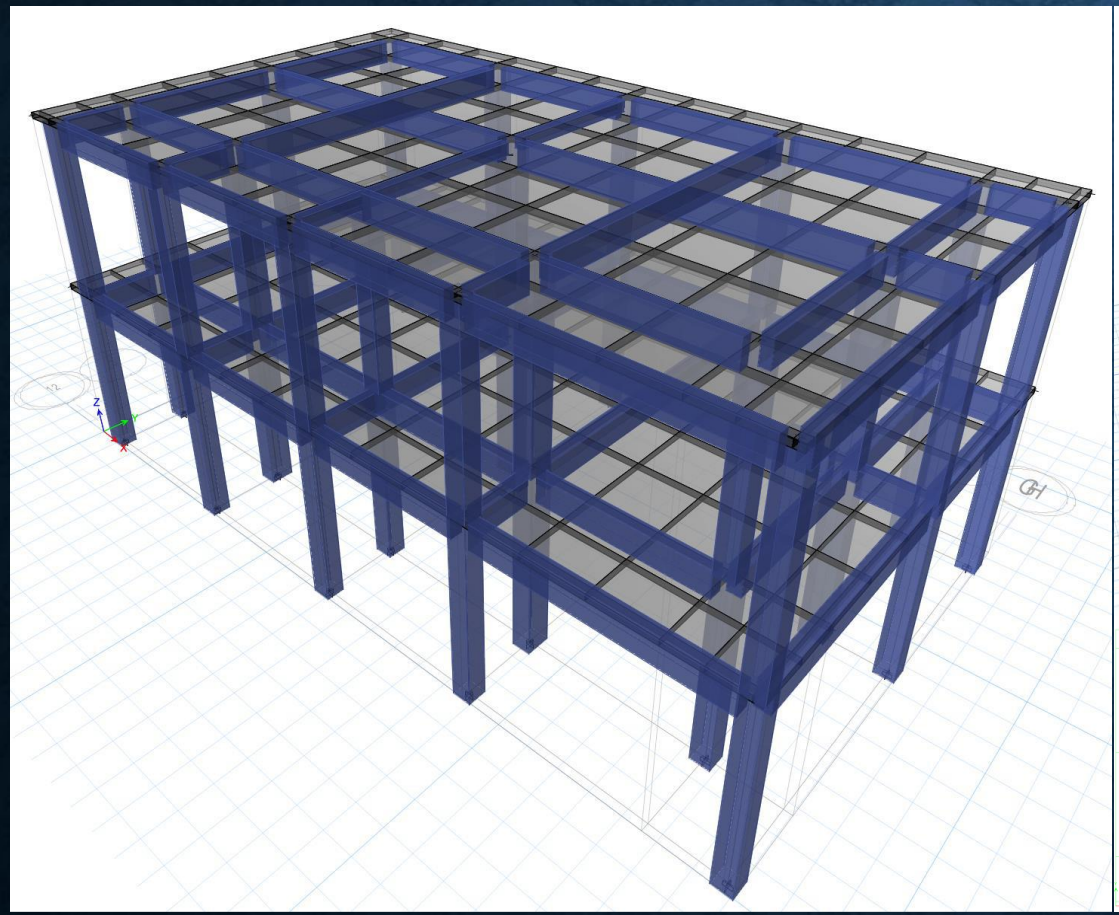


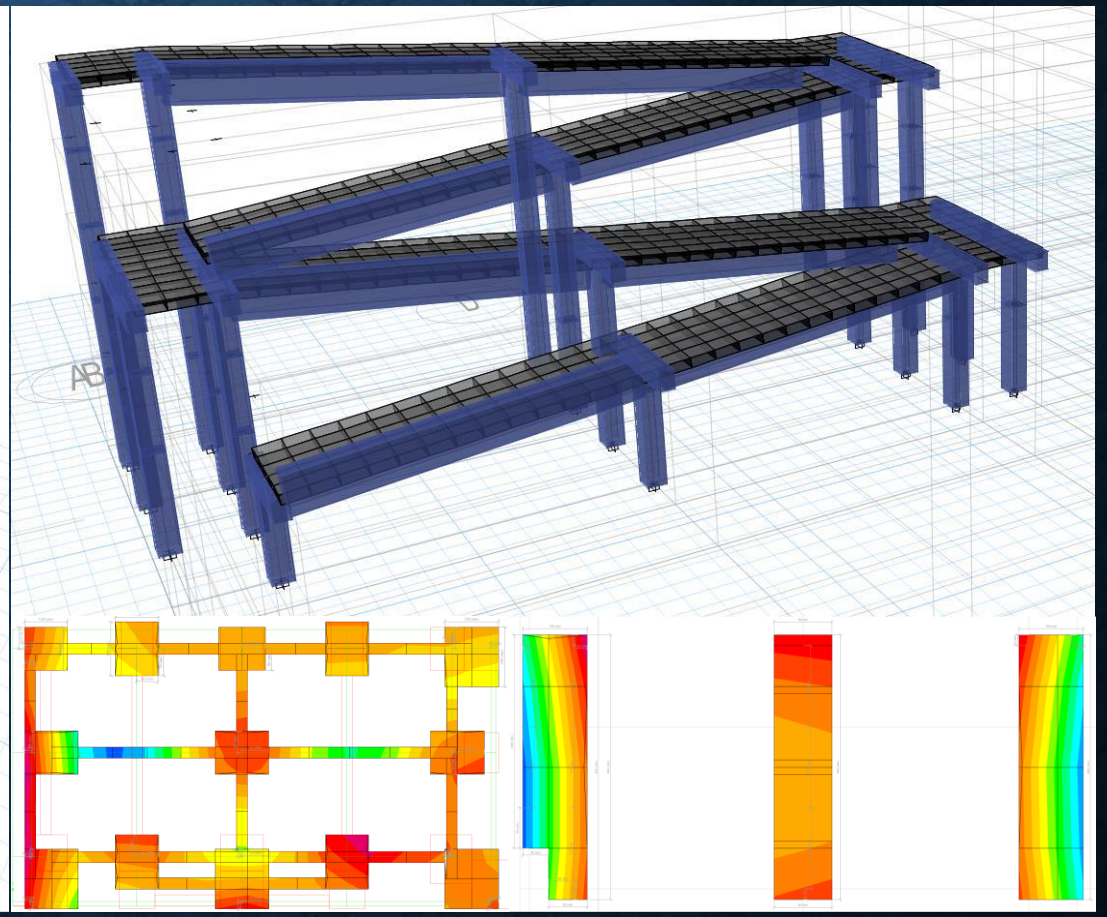




It consists of three stories with approximately 105m^2 of construction per story.

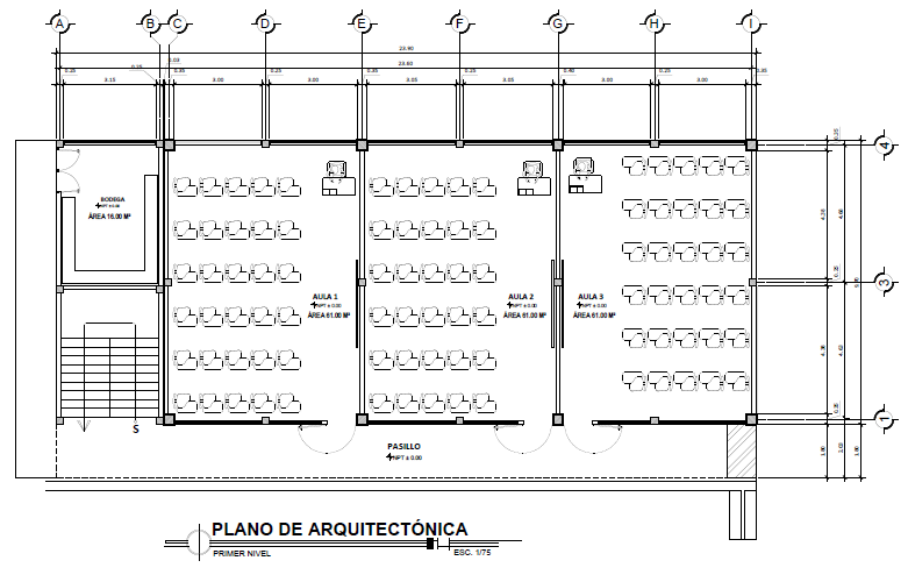
STRUCTURAL DESIGN OF THE PROJECT “EXTENSION OF ELEMENTARY SCHOOL, TIERRA BLANCA VILLAGE, USPANTAN, QUICHE”

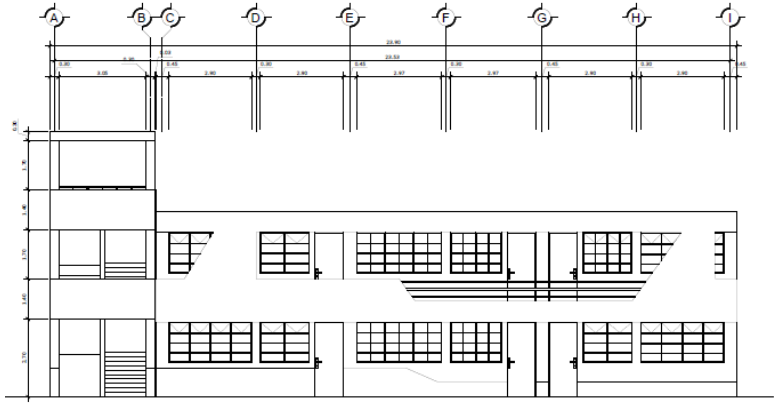


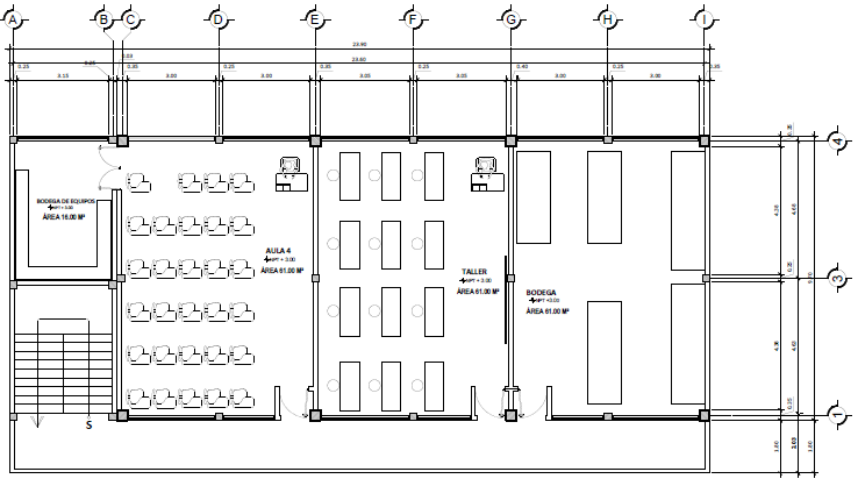


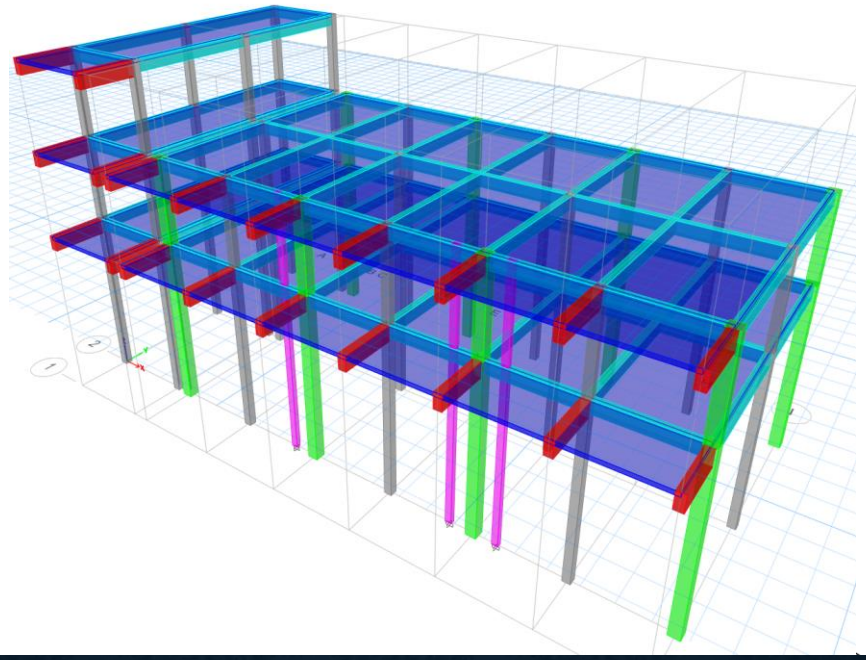
It consists of 2 stories with more than 400m^2 of construction.

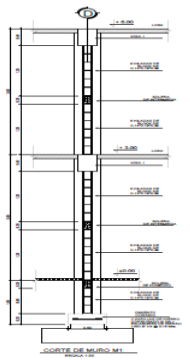
DICTUM ON THE PROJECT “EXTENSION OF E.O.U.M. ELEMENTARY SCHOOL, MUNICIPAL HEADQUARTERS, CONCEPCIÓN SOLOLÁ, SOLOLÁ”

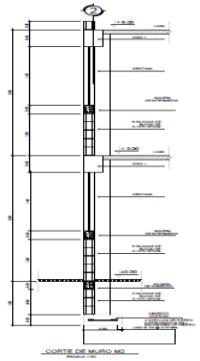


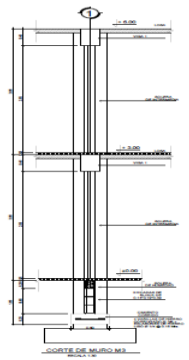


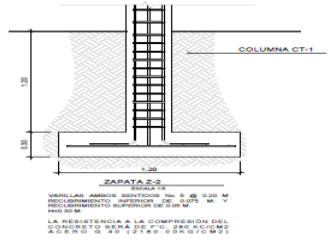


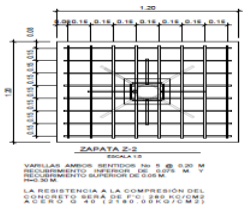






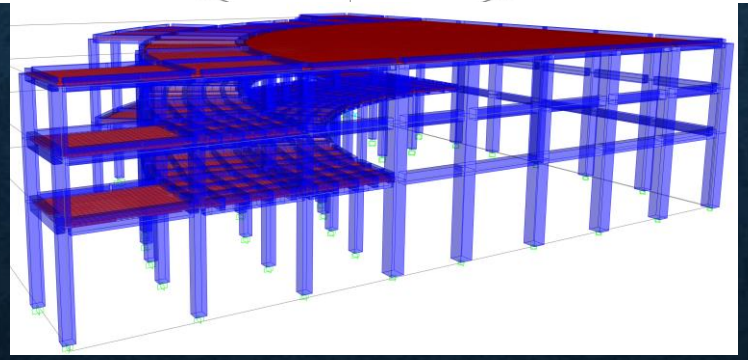






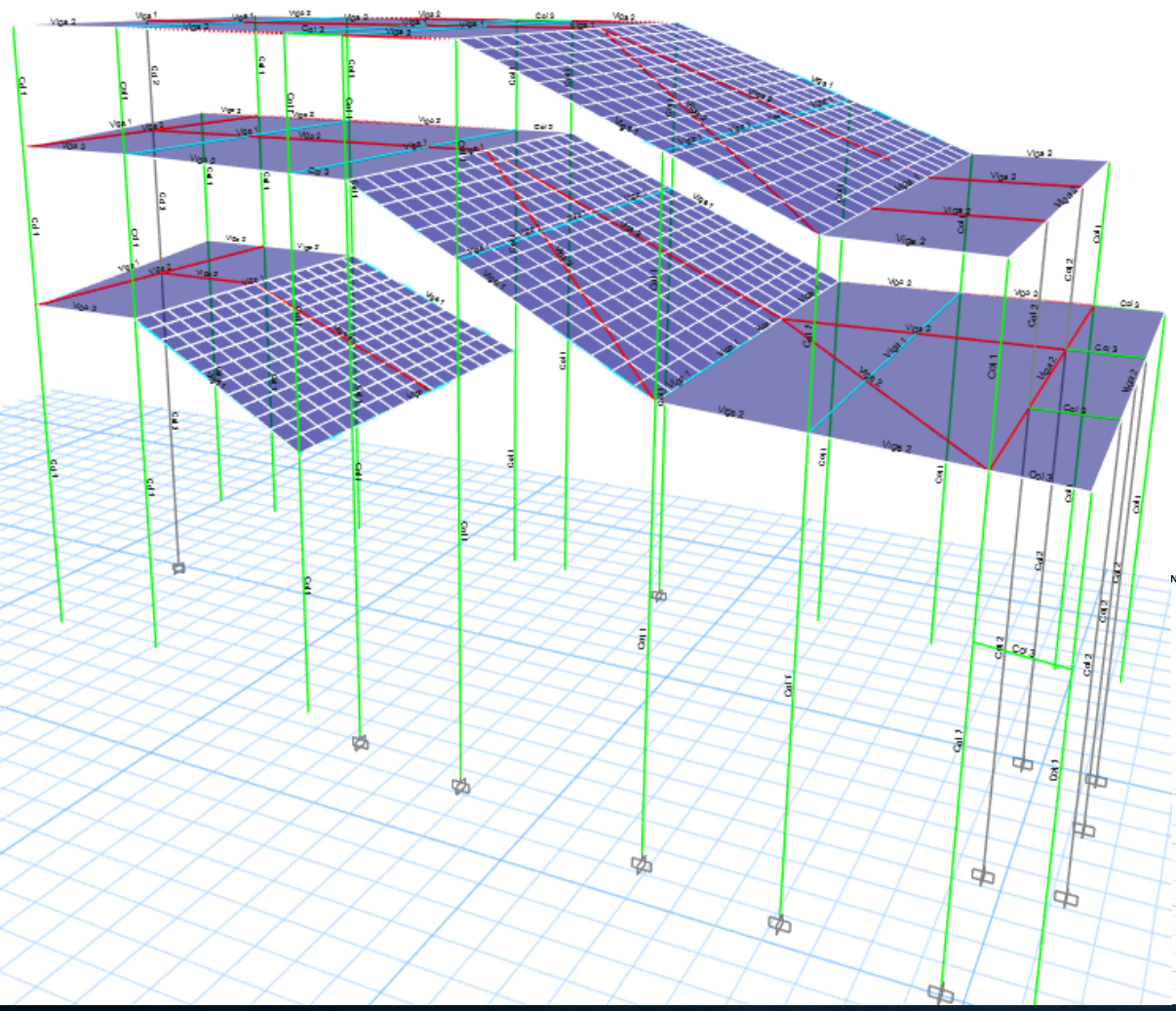
Finite element model created to assess soil stabilization.

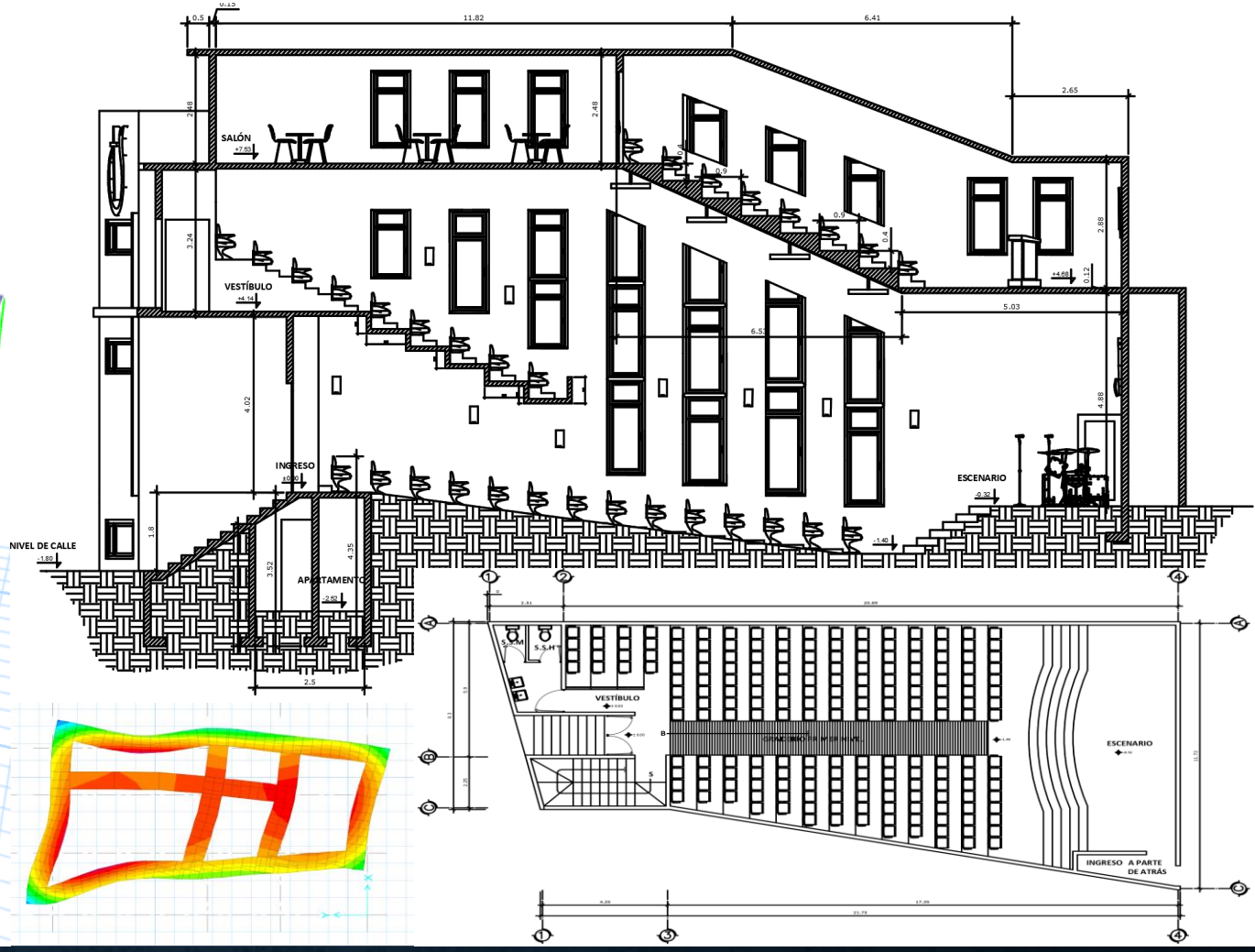
STRUCTURAL DESIGN OF THE PROJECT “GOSPEL MISSION CHURCH PLANNING, BARRIO MARROQUÍN, SALCAJÁ, QUETZALTENANGO”



It consists of 3 stories with approximately 910m^2 of space each and inclined slabs for seating box on upper stories like a stadium.

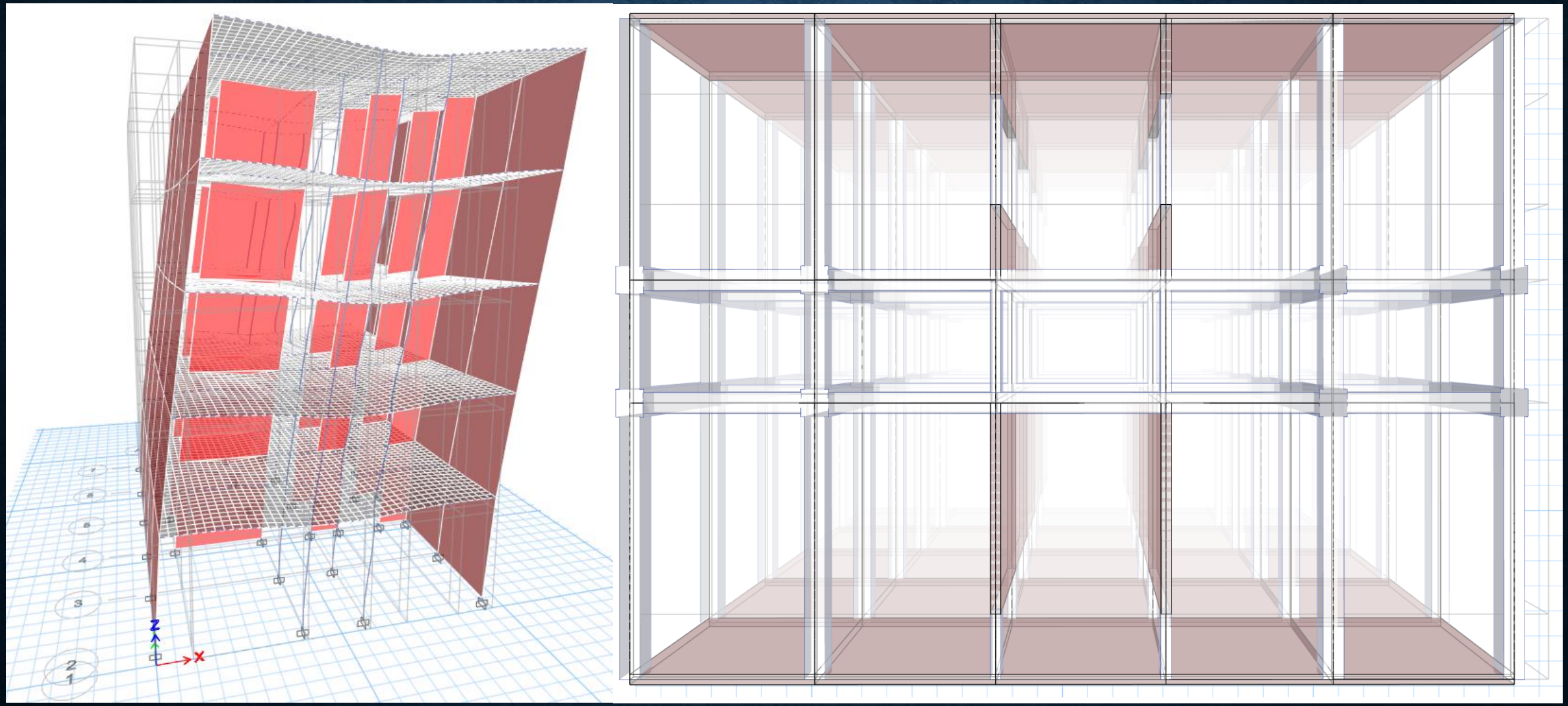
STRUCTURAL DESIGN OF THE PROJECT “COMPLETE GOSPEL CHURCH, SAN JOSÉ CHACAYA, SOLOLÁ”





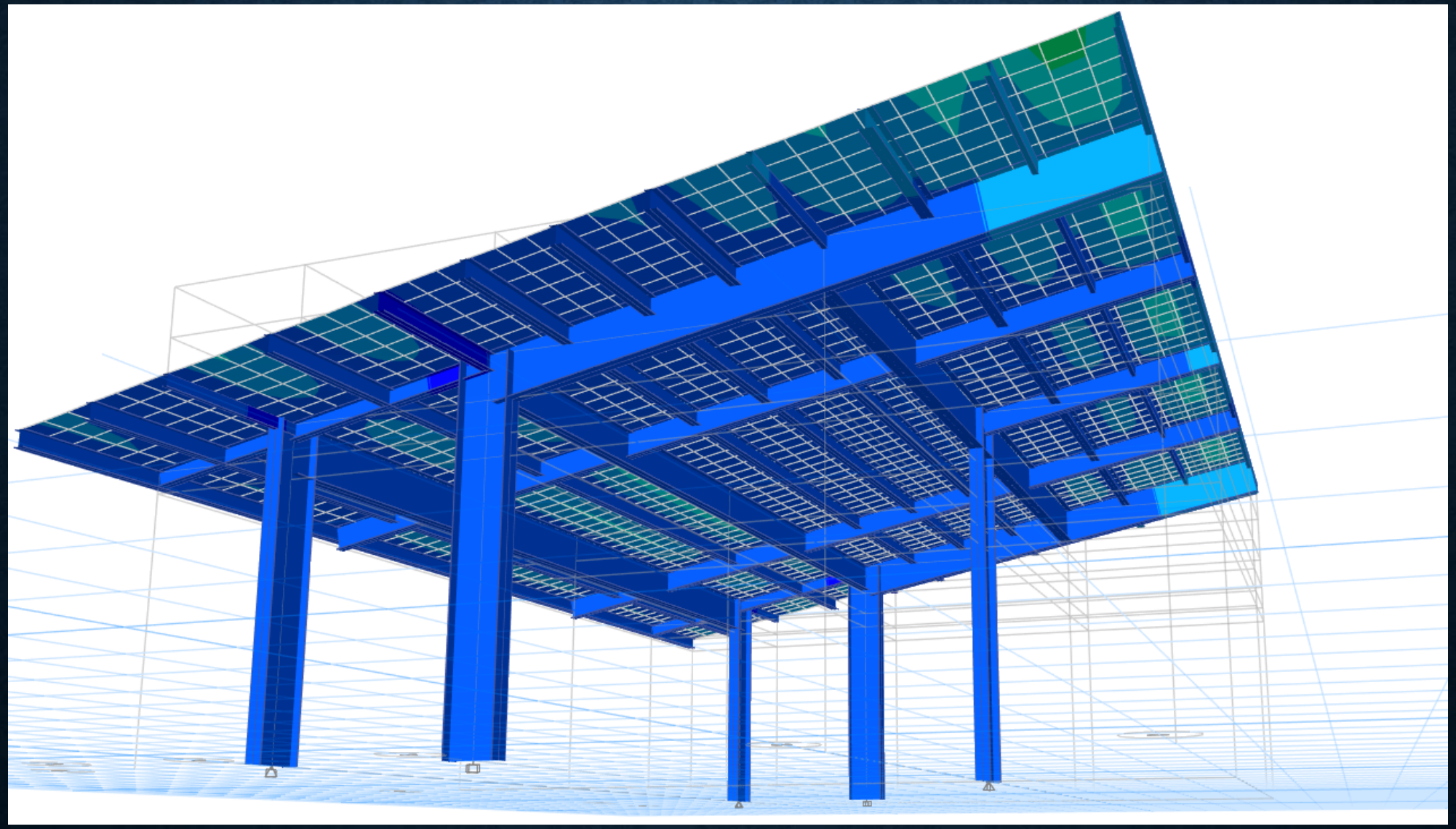
It consists of 3 stories with approximately 220m^2 of space each and an apartment as a basement.

STRUCTURAL DESIGN OF A 5-STORY MASONRY BUILDING IN QUETZALTENANGO FOR OFFICES AND HOUSING



Approximately 145m^2 per story of construction.

STRUCTURAL DESIGN OF A 13M X 9M SPORTS GRANDSTAND IN QUETZALTENANGO



The structure had 5 columns and a 5-meter cantilever.