

Date	<b>30/10/2023</b>
Job	<b>3604</b>
Project	<b>DATA CENTER MIL04 - Vellezzo Bellini (PV)</b>
Client	<b>INFRASTRUCTURE ITALIA LAND 4 Srl</b>
Supplier	<b>Ausonia</b>

**3604 ES W SME Ausonia 04 - Submittal MC.30 DP Ø2470-2500 SP5+4 rev.07**

**NOTES**

Submittal approved with comments.

Proposed material submittal is approved with following comments:

- Storage Tank Maximum height is 2700mm, please see attached Structural drawing of Storage Tank concrete encasement and Fire Brigade Requirements for this Project.

<b>L22</b>
<b>Status B</b>
Data/Date
Rev.
<b>JOB</b>

*Paolo Ianni*

**Note to Fire Brigades Design Requirements:**

**Storage tank:**

- a) Two refilling points will be provided:
  - on storage tank according your requirements
  - on separate filling box provided with Guillemain cap, drip tray with liquid detection and alarm sensor
- b) Confirmed
- c) Confirmed
- d) Grounding points will be provided as per attached dwg DPI30Ø2470-2500 rev10 . The ground connection carried out by the General Contractor

**Daily tank:**

All confirmed

**Engine fuel line:**

Confirmed

**EPO:**

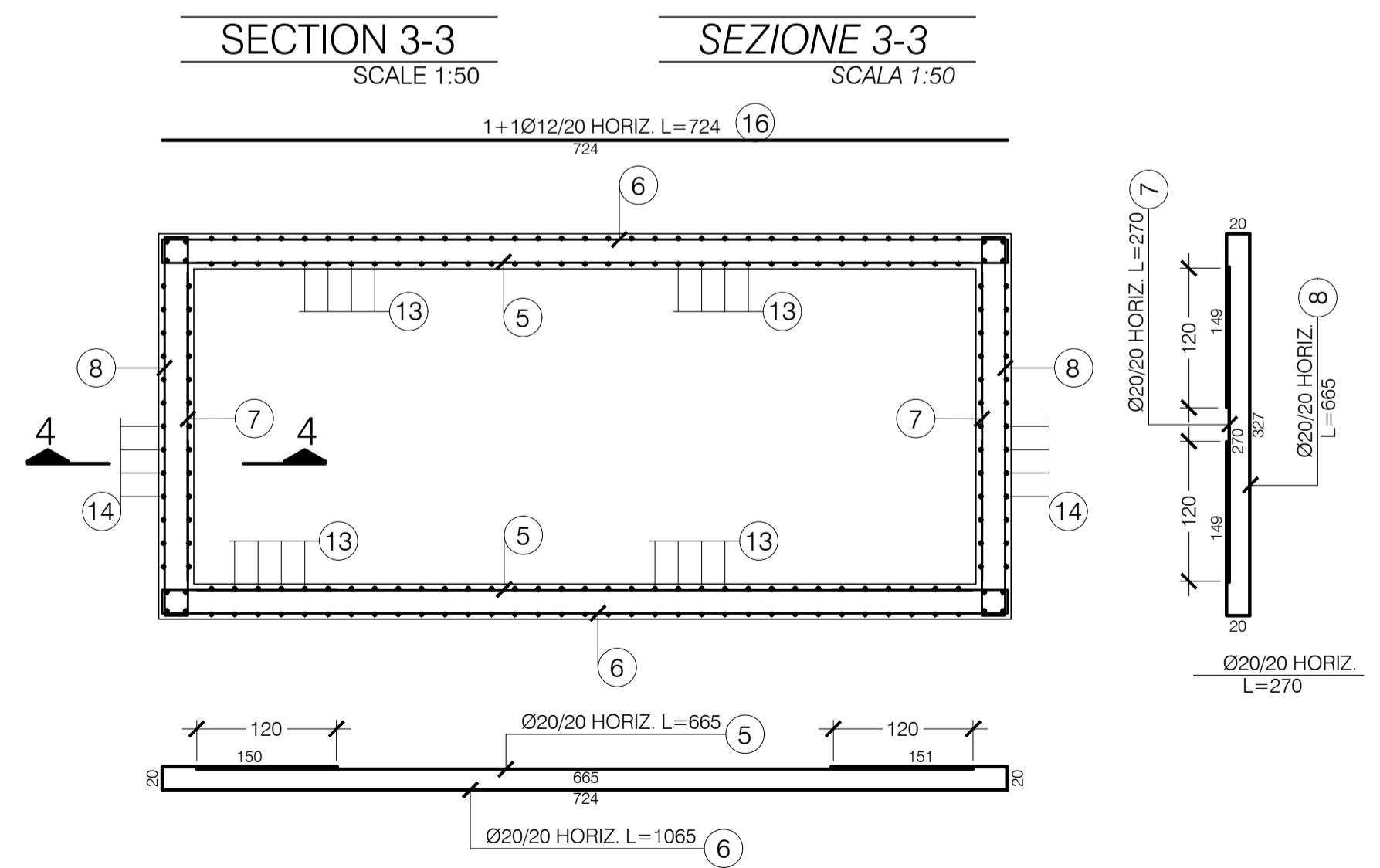
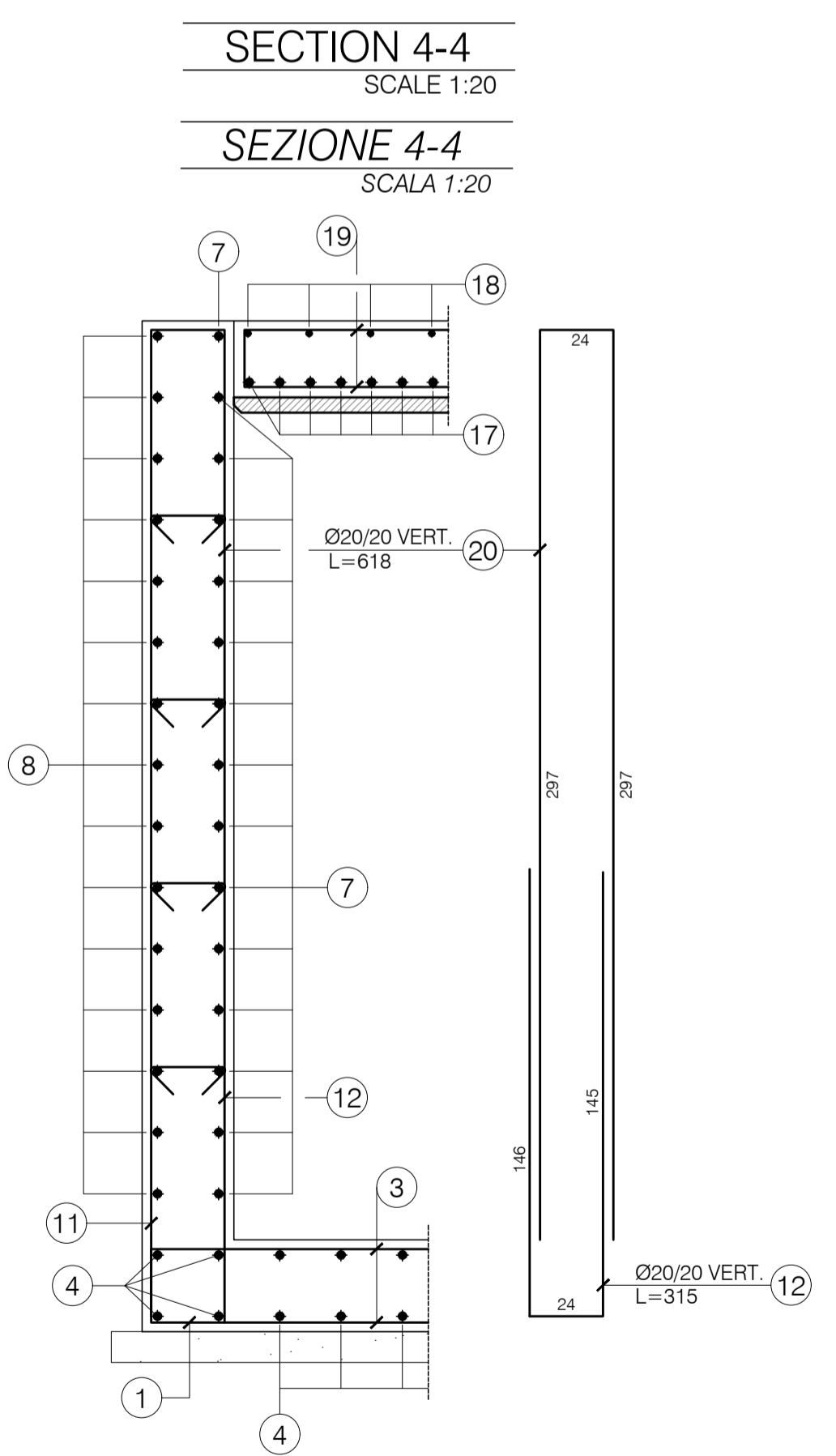
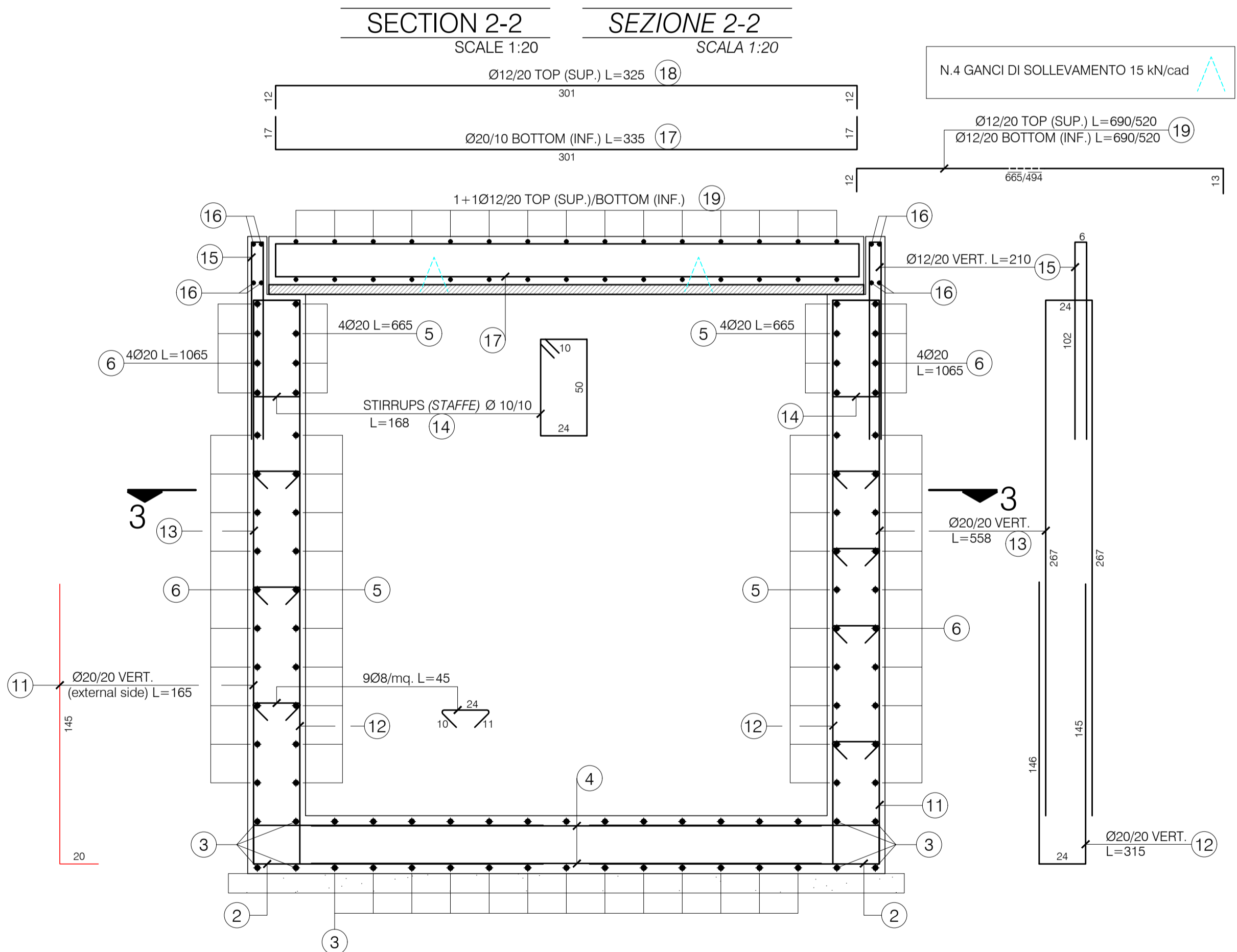
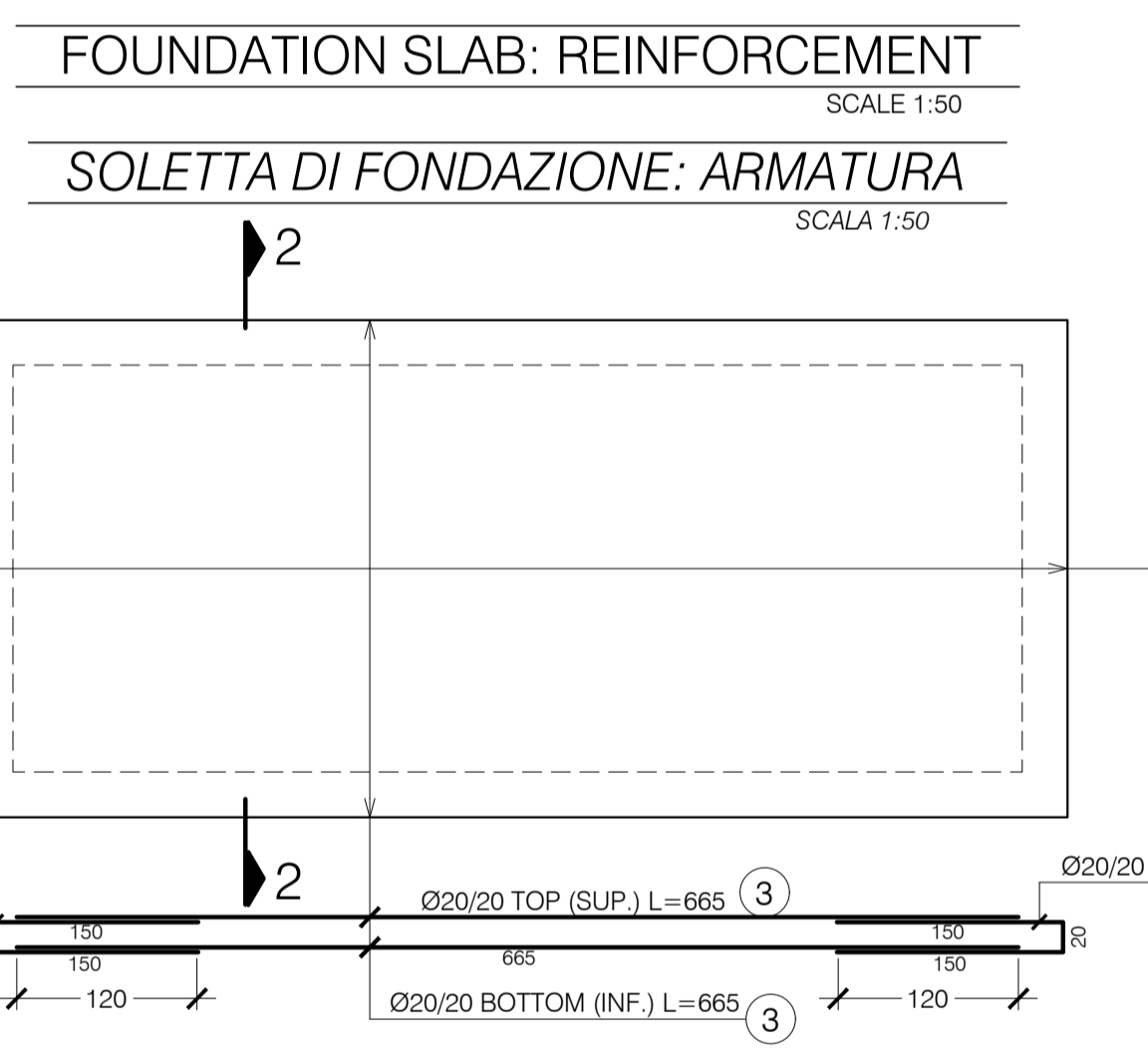
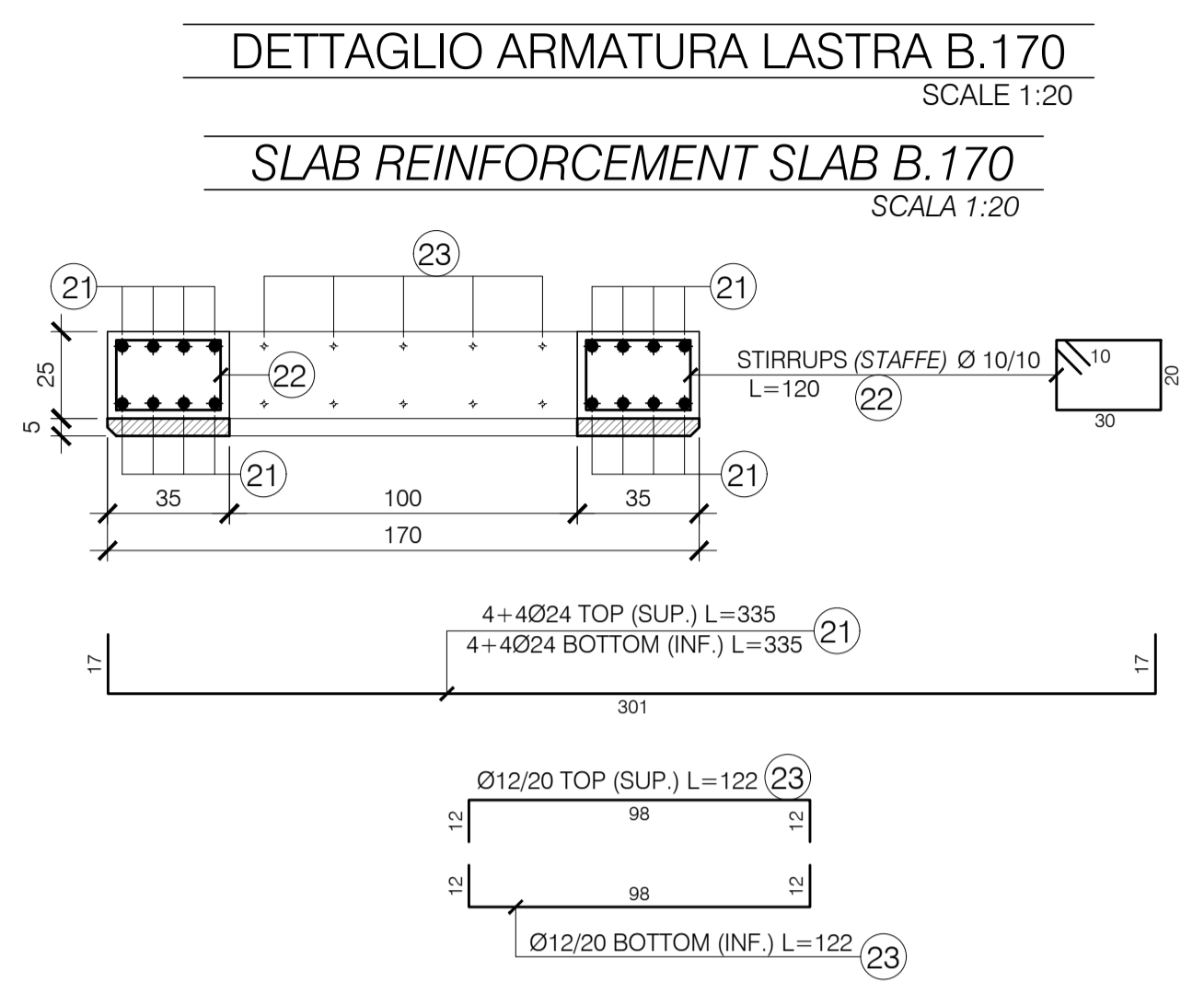
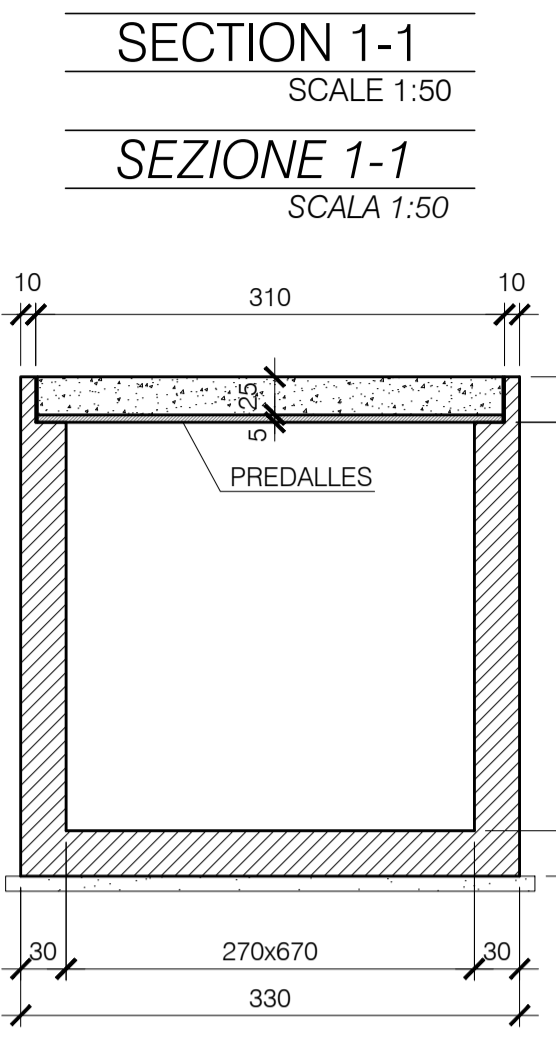
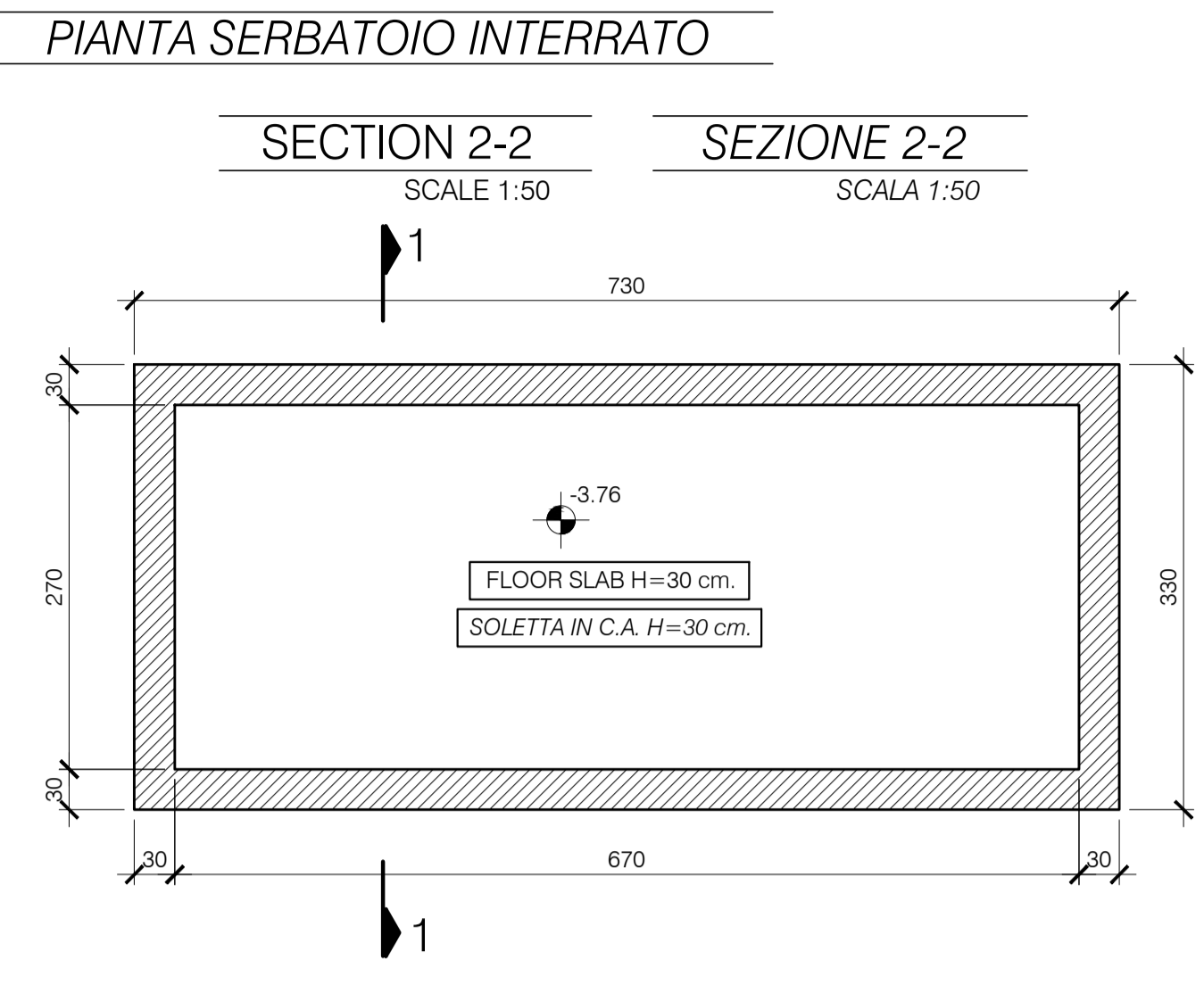
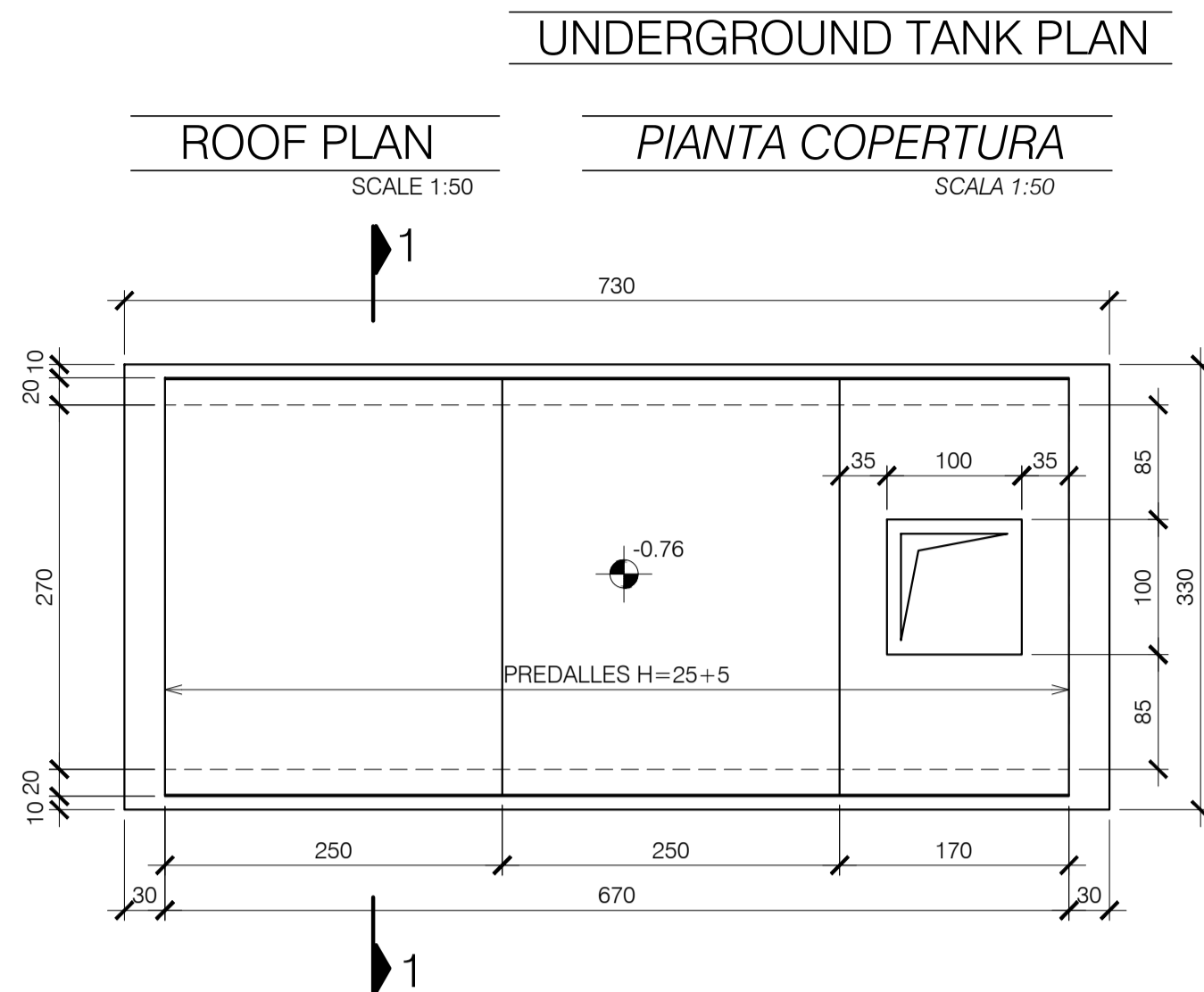
Confirmed

No comment.

<b>L22</b>
<b>Status A</b>
Data/Date
Rev.
<b>JOB</b>

*Paolo Ianni*

18/11/2023



<b>NOMINAL LIFE</b> Vn=50 years USE CLASS Cu=II	
<b>GENERAL NOTES</b>	
STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.	
<b>MATERIALS PROPERTIES</b>	
<b>CONCRETE</b> ACCORDING TO UNI EN 206 - UNI 11104	
<b>LEAN CONCRETE</b>	C12/15
CLASS:	X0
EXPOSURE CLASS:	
<b>CONCRETE FOR FOUNDATIONS</b>	
CLASS:	C28/35
EXPOSURE CLASS:	XC2
MINIMUM CONSISTENT CLASS:	S4
MAXIMUM NOMINAL DIMENSIONS OF THE AGGREGATES:	32 mm
COVER BAR:	30 mm
<b>STEEL</b>	
<b>REINFORCING STEEL BARS</b>	
ORDINARY STEEL GRADE:	B450C
TENSILE STRENGTH:	f <sub>tk</sub> ≥ 540 N/mm <sup>2</sup>
YIELD STRENGTH:	f <sub>yk</sub> ≥ 450 N/mm <sup>2</sup>
<b>STRUCTURAL BOLT CLASS 8.8 (SB - EN 15048)</b>	
TENSILE STRENGTH:	f <sub>tk</sub> ≥ 800 N/mm <sup>2</sup>
YIELD STRENGTH:	f <sub>yk</sub> ≥ 640 N/mm <sup>2</sup>
<b>VITA NOMINALE</b> Vn=50 anni <b>CLASSE D'USO</b> II	
<b>NOTE GENERALI</b>	
DISEGNI STRUTTURALI SONO DA UTILIZZARE CONGIUNTAMENTE A DISEGNI ARCHITETTONICI, MECCANICI, IDRAULICI ED ELETTRICI.	
<b>PROPRIETA' MATERIALI</b>	
<b>CALCESTRUZZI</b> CONFORMI ALLE NORME UNI EN 206 - UNI 11104	
<b>MAGRONE</b>	
CLASSE DI RESISTENZA:	C12/15
CLASSE DI ESPOSIZIONE:	X0
<b>CALCESTRUZZO PER FONDAZIONI</b>	
CLASSE DI RESISTENZA:	C28/35
CLASSE DI ESPOSIZIONE:	XC2
CLASSE MINIMA DI CONSISTENZA:	S4
DIMENSIONE NOMINALE MASSIMA DEGLI AGGREGATI:	32 mm
COPRIFERRO:	30 mm
<b>ACCIAI</b>	
<b>ACCIAIO PER C.A.</b>	
ACCIAIO ORDINARIO:	B450C
TENSIONE CARATTERISTICA DI ROTTURA:	f <sub>tk</sub> ≥ 540 N/mm <sup>2</sup>
TENSIONE CARATTERISTICA DI SNERVAMENTO:	f <sub>yk</sub> ≥ 450 N/mm <sup>2</sup>
<b>BULLONI classe 8.8 (assiemi SB - EN 15048)</b>	
TENSIONE CARATTERISTICA DI ROTTURA:	f <sub>tk</sub> ≥ 800 N/mm <sup>2</sup>
TENSIONE CARATTERISTICA DI SNERVAMENTO:	f <sub>yk</sub> ≥ 640 N/mm <sup>2</sup>

S.P.S. s.r.l. - STUDIO PROGETTI STRUTTURALI  
DIRETTORE TECNICO  
S.P.S. STUDIO ASSOCIATO  
Dott. Ing. ARTURO DONADIO  
ALBO INGEGNERI MILANO N° 13575

REV.	DATA / DATE	DESCRIZIONE / DESCRIPTION
-	29/09/23	Prima emissione RIB44

PROGETTISTA / DESIGNER:  
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info@l22.it

STRUTTURE:  
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segreteria@spsai-mi.it T. 02/6694887

COMMITTENTE / CLIENT:  
**STACK**  
INFRASTRUCTURES  
INFRASTRUCTURE ITALIA LAND 4 S.r.l.  
Via del Bosco Rinnovato, 6 Palazzo U4 20090 Assago (MI)

PROGETTO / PROJECT:  
MIL 04  
Alzaia Naviglio Pavese snrc,  
Vellezzo Bellini (PV)

PROGETTISTA / DESIGNER:  
L22 - Marco Amosso - iscritto all'Ordine  
degli Architetti di Torino n° 4157

OGGETTO / OBJECT:  
RIB44 - MIL 04 - A

TITOLO / DESCRIPTION:  
Formwork and reinforcement  
underground tank  
Carpenteria e armatura serbatoio  
interrato

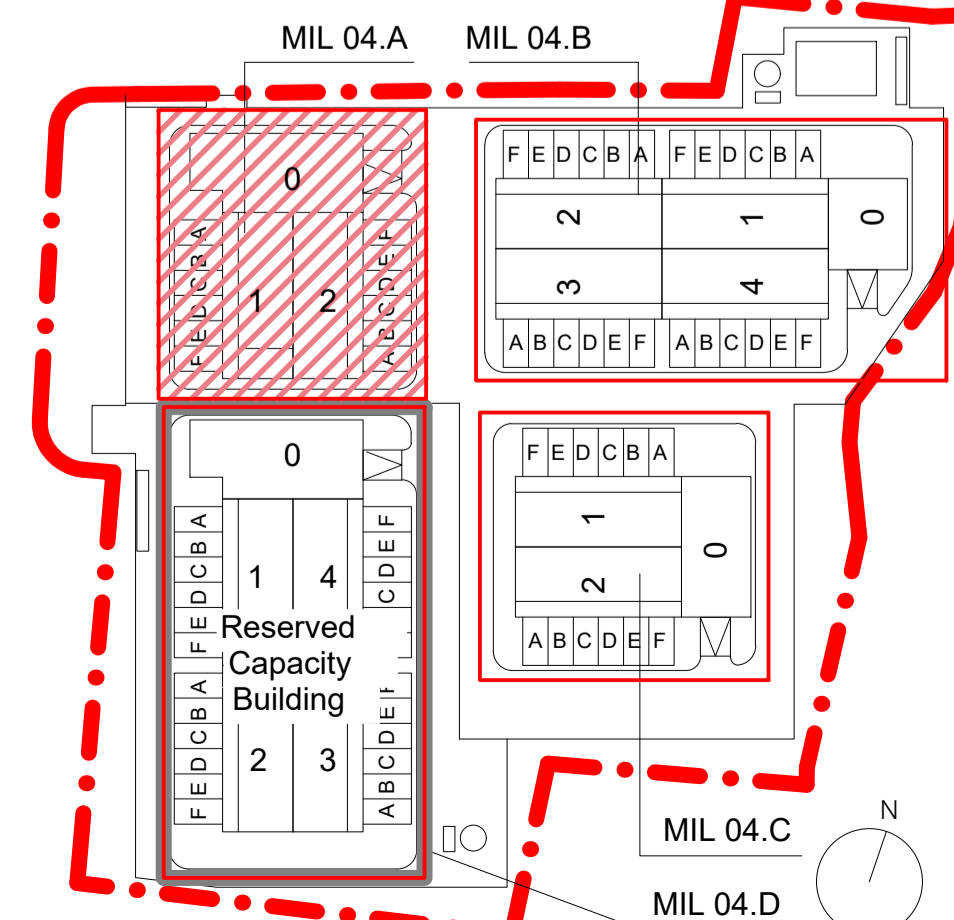
DISEGNATO DA: CONTROLLATO DA:  
DRAWN BY: S.B. CHECKED BY: A.C.

DATA / DATE: 29/09/23  
SCALA / SCALE: 1:50-20

NOME FILE / FILE NAME:  
3604\_ETAO042-E

COMMESSA / JOB: 3604  
FORMATO / SHEET: A1+

TAVOLA / DRAWING:  
**ETA0042**



## MIL04 Stack Vellezzo site

### Fire Brigades Design Requirements

#### STORAGE TANK

The storage tanks must be equipped with:

- a) A filling pipe securely attached to the tank, with the free end sealed, located in a dedicated filling point positioned to prevent the fuel, in case of spillage, from area dispersion;
- b) A vapor vent pipe with an internal diameter equal to half the diameter of the filling pipe and in any case not less than 25 mm, discharging outside the buildings at a height not less than 2.5 m from the external accessible floor and at a distance not less than 1.5 m from windows and doors; the end of the pipe must be protected with a flame arrestor system;
- c) An overflow prevention device designed to interrupt the flow of fuel when 90% of the geometric capacity of the tank is reached during filling;
- d) Adequate grounding;
- e) An unmovable and visible identification plate, even for underground tanks, indicating:
  - The name and address of the Manufacturer;
  - The year of construction;
  - The capacity, material, and thickness of the tank.

#### DAILY TANK

The daily tank must be equipped with:

- a) An overflow pipe leading to the storage tank. This conduit must be free of any valves or stopcocks and should not have any obstructions that hinder the natural flow towards the storage tank;
- b) A vapor vent pipe with an internal diameter equal to half the diameter of the filling pipe and in any case not less than 25 mm, discharging outside the buildings at a height not less than 2.5 m from the external accessible floor and at a distance not less than 1.5 m from windows and doors; the end of the pipe must be protected with a flame arrestor system;
- c) Liquid spillage containment system; the system can include a drainage pipe leading to the storage tank or an outer tank of 110% capacity;

#### FUEL LINE

The filling system of the daily tank must also be equipped with the following safety devices that operate automatically when the fuel level in the tanks exceeds the maximum allowed:

- a) Pump shutdown device;
- b) Flow interception device;
- c) Optical and acoustic alarm device (Generator Control Panel);

These devices should also activate in case of liquid spillage into the containment system; alternatively, the system can include a drainage pipe leading to the storage tank or another tank of similar capacity, without any valves or stopcocks, and without obstructions hindering the natural flow.

Furthermore, there must be a manual liquid fuel flow interception device located outside the room, easily and safely accessible, and adequately marked.

#### ENGINE FUEL LINE

Engine supply fuel line from Daily Tank must be equipped with valve that automatically stops the diesel flow once engine stopped.

#### EPO

Emergency Power Off to shut off generator in case of emergency. This device must be located outside the Generator enclosure.