

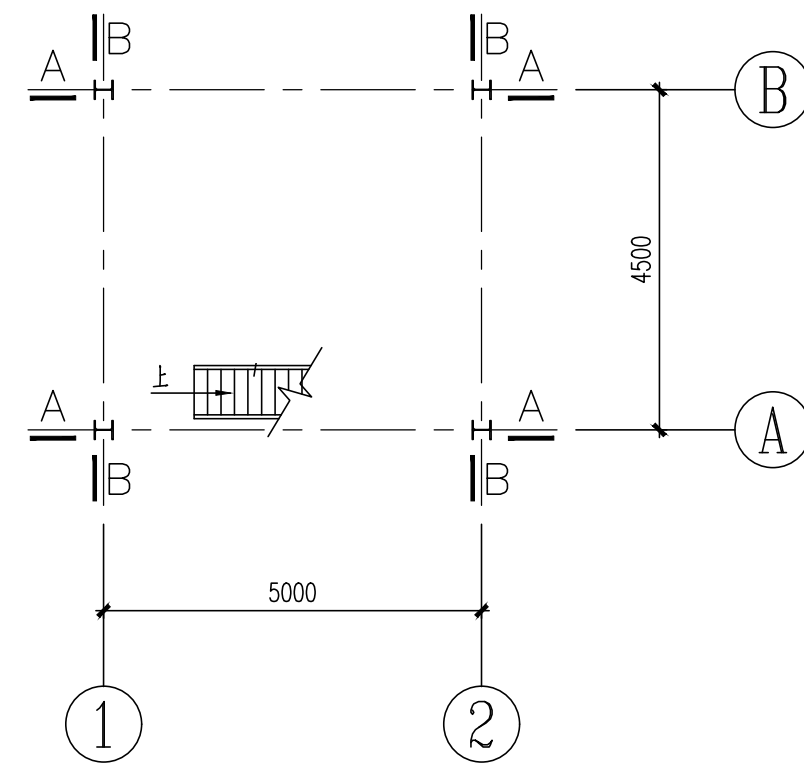
THE WATER TOWER PROJECT OF KIRIBATI

CONSTRUCTION DRAWING DESIGN

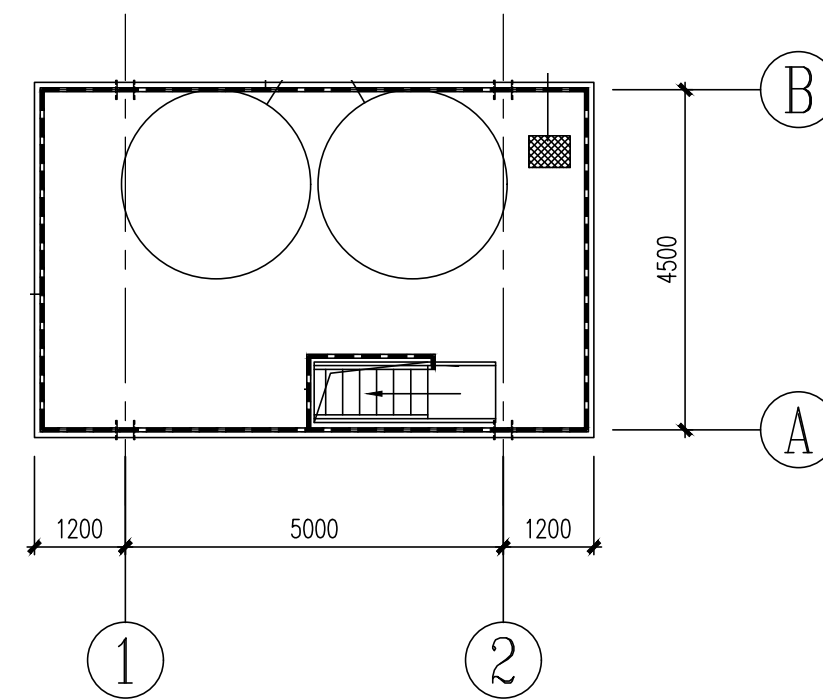
STRUCTURAL WORKING DRAWING

Drawing List

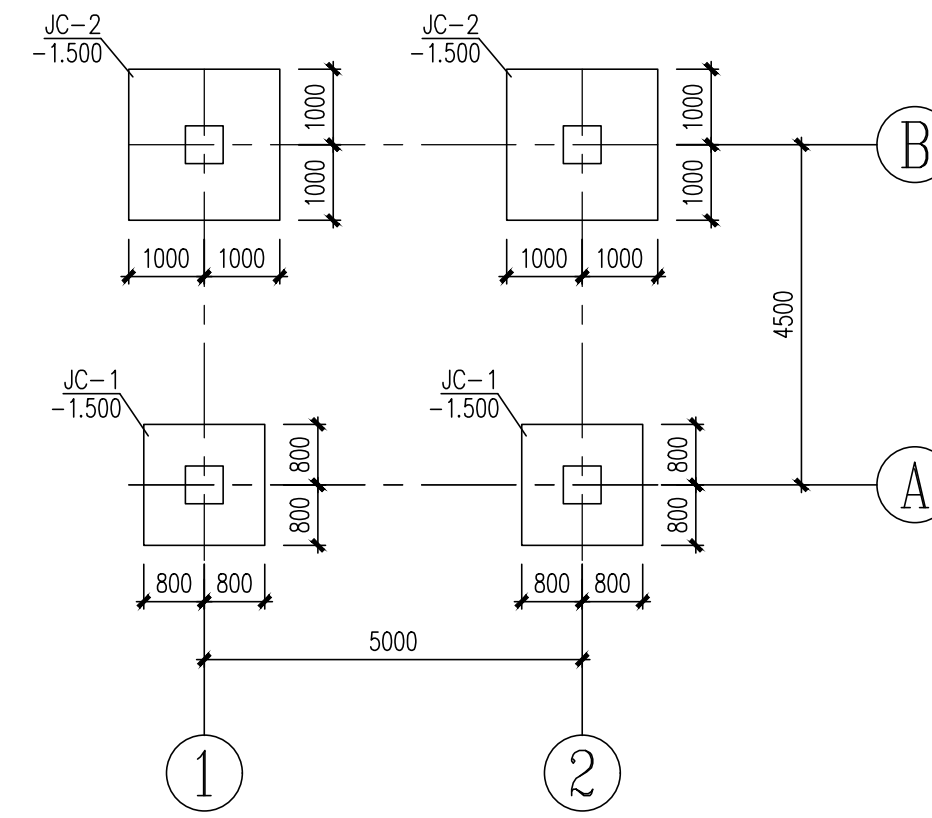
Number	Number the drawing paper	Name of the drawing	Drawing format
1	STJ-TJ-00	Drawing List	A2
2	STJ-TJ-01	General Instructions for Building Structural Design I	A2
3	STJ-TJ-01	General Instructions for Building Structural Design II	A2
4	STJ-TJ-02	PLan,Foundation Drawing	A2
5	STJ-TJ-03	Component Plan Drawing	A2
6	STJ-TJ-04	Component Facade Drawing	A2
7	STJ-TJ-05	Node Drawing	A2



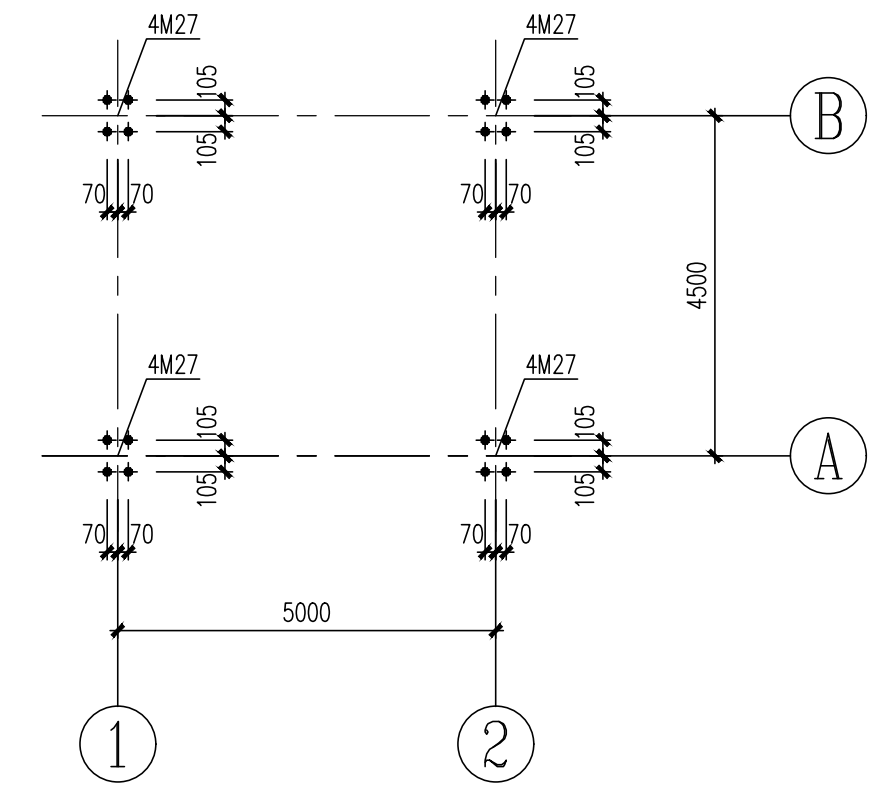
Tower plane



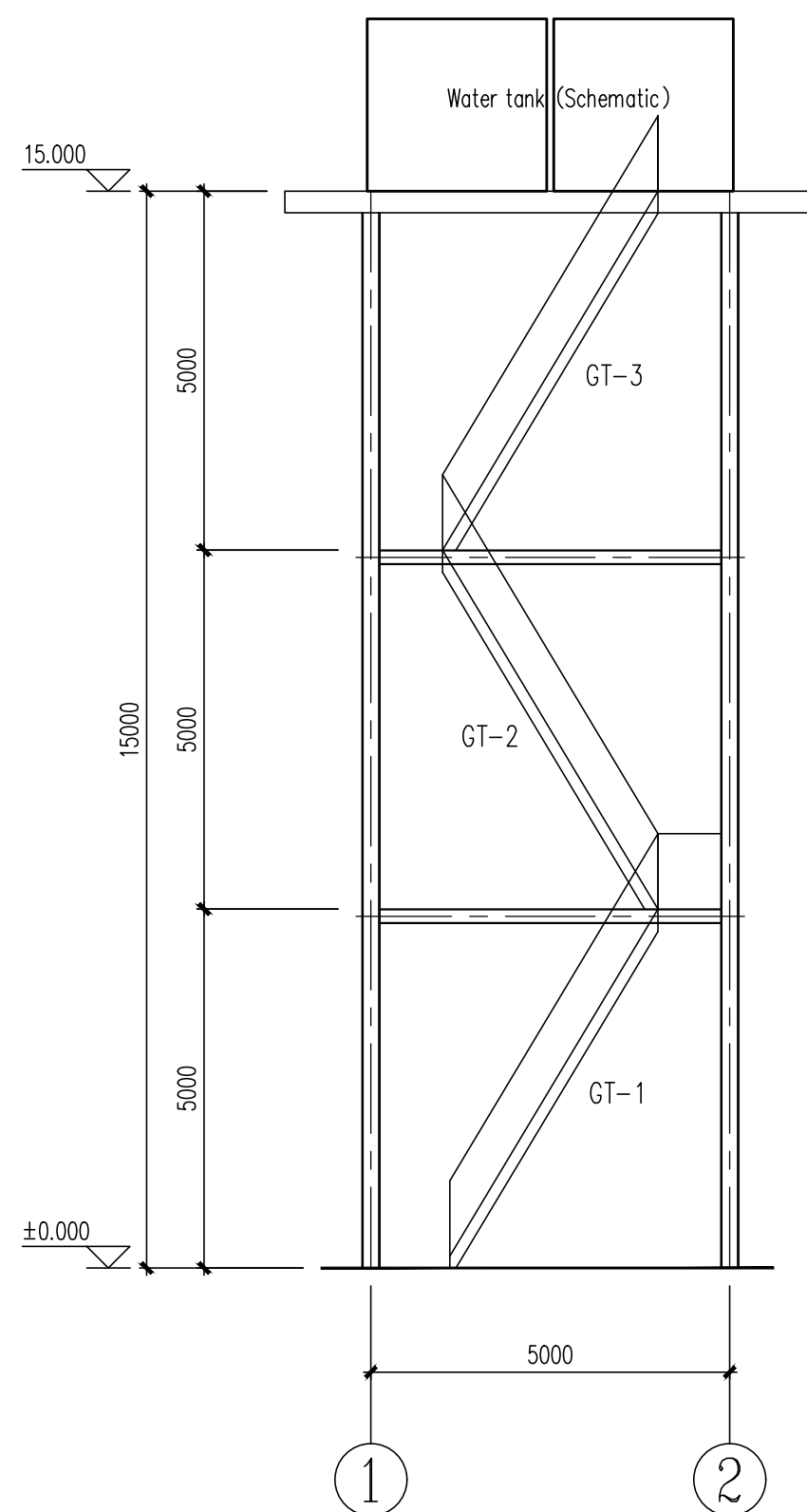
Top floor plan of the tower



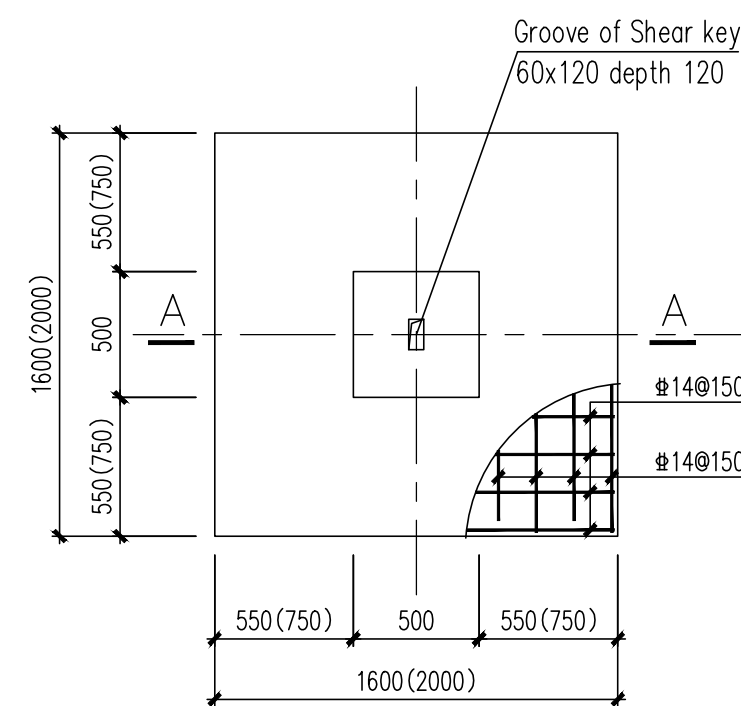
Tower foundation plan



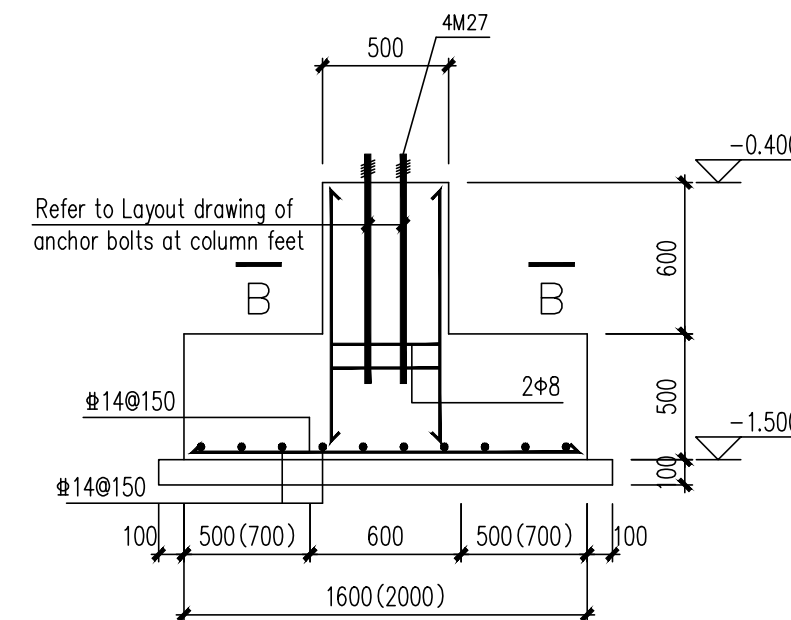
Layout drawing of anchor bolts at column feet



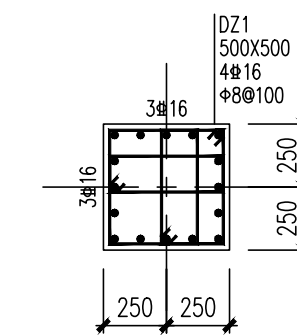
Tower facade



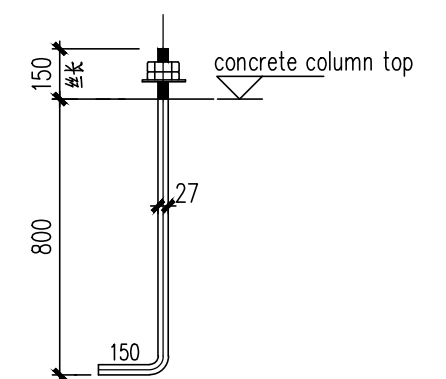
JC-1



A-A reinforcement drawing



B-B

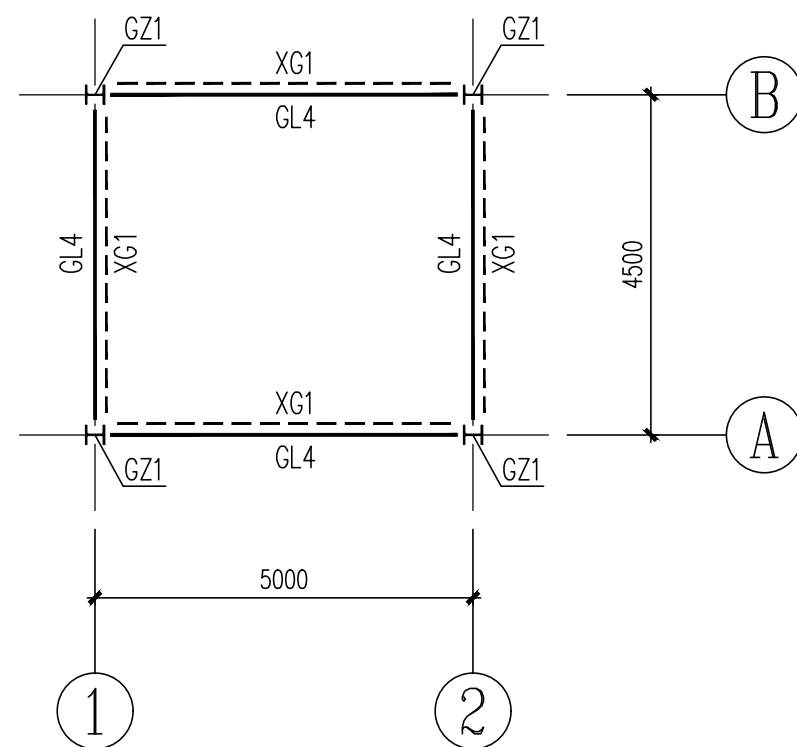


M27 Detailed of anchor bolts (Q355NHB)

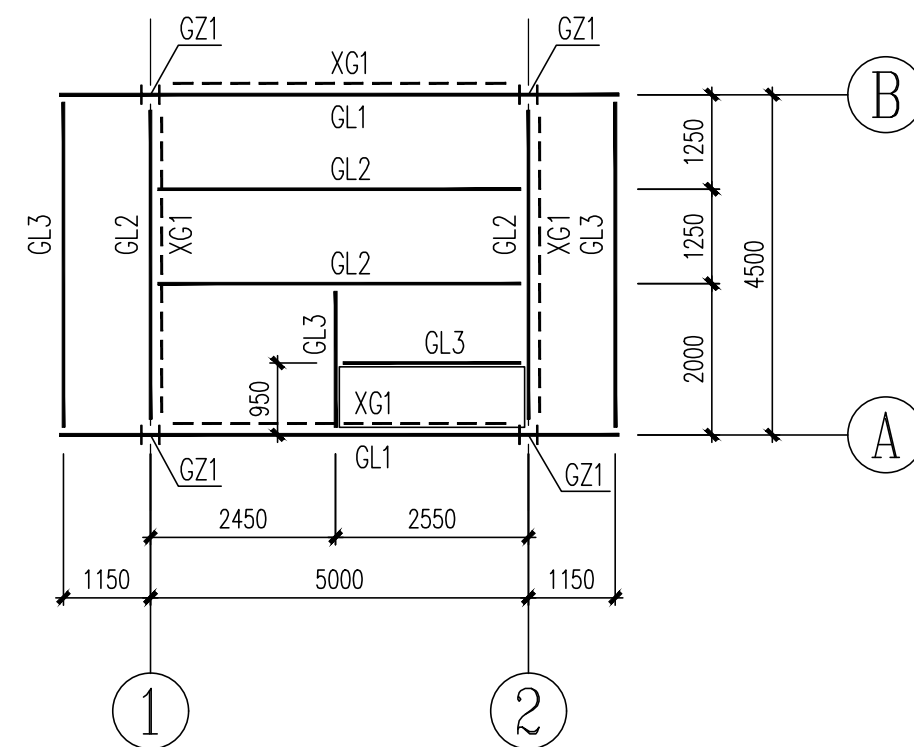
Basic design description:

1. The foundation adopts an independent foundation under the column, and the characteristic value of the bearing capacity of the foundation in the bearing stratum shall not be less than $f_{ak}=150$ kpa. Engineering treatment is required when it cannot be met.
2. When mechanical excavation is adopted, the bottom of the pit should be protected from disturbance, and 300mm of original soil should be retained above the designed elevation of the base and removed manually. The foundation pit must not accumulate water. After passing the acceptance inspection, the foundation construction should be carried out immediately.
3. During the foundation construction, close cooperation with various trades should be maintained to properly arrange reserved holes, embedded parts and embedded pipelines.
4. After the foundation construction is completed, the foundation pit (trench) should be cleared in a timely manner. Layer backfilling should be carried out promptly and compacted to the designed

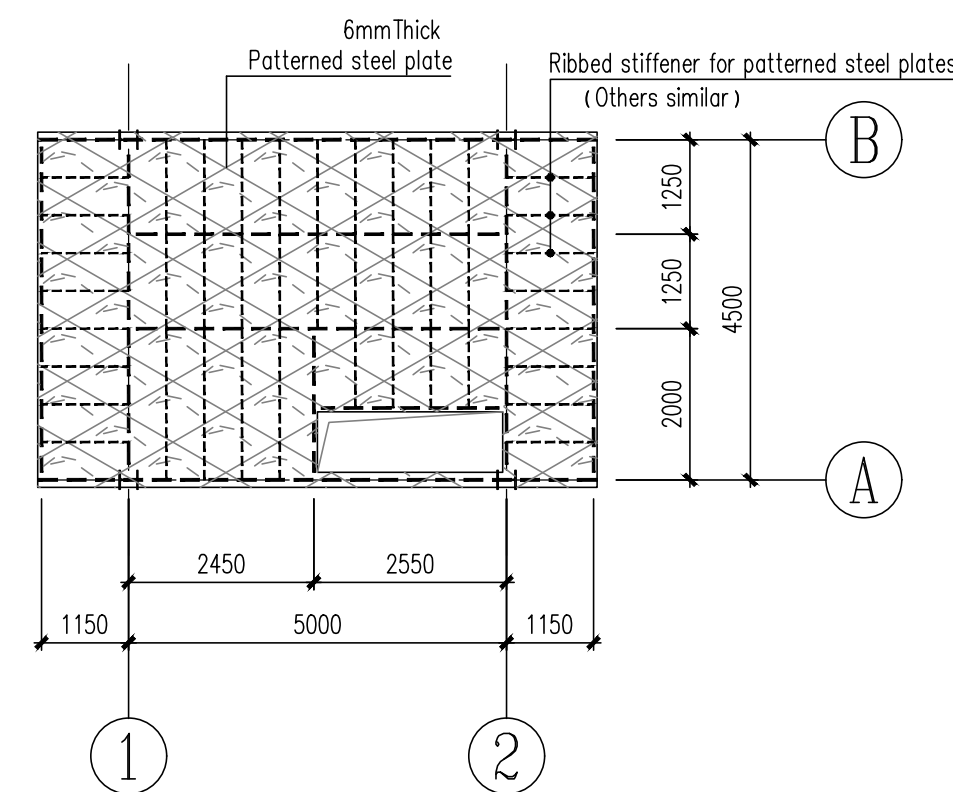
- indoor and outdoor elevations before proceeding with the construction of the superstructure. The backfill material can adopt graded sand and gravel, with a compaction coefficient of ≥ 0.94 .
5. This drawing should be designed with the cooperation of an electrical professional for lightning protection and grounding.



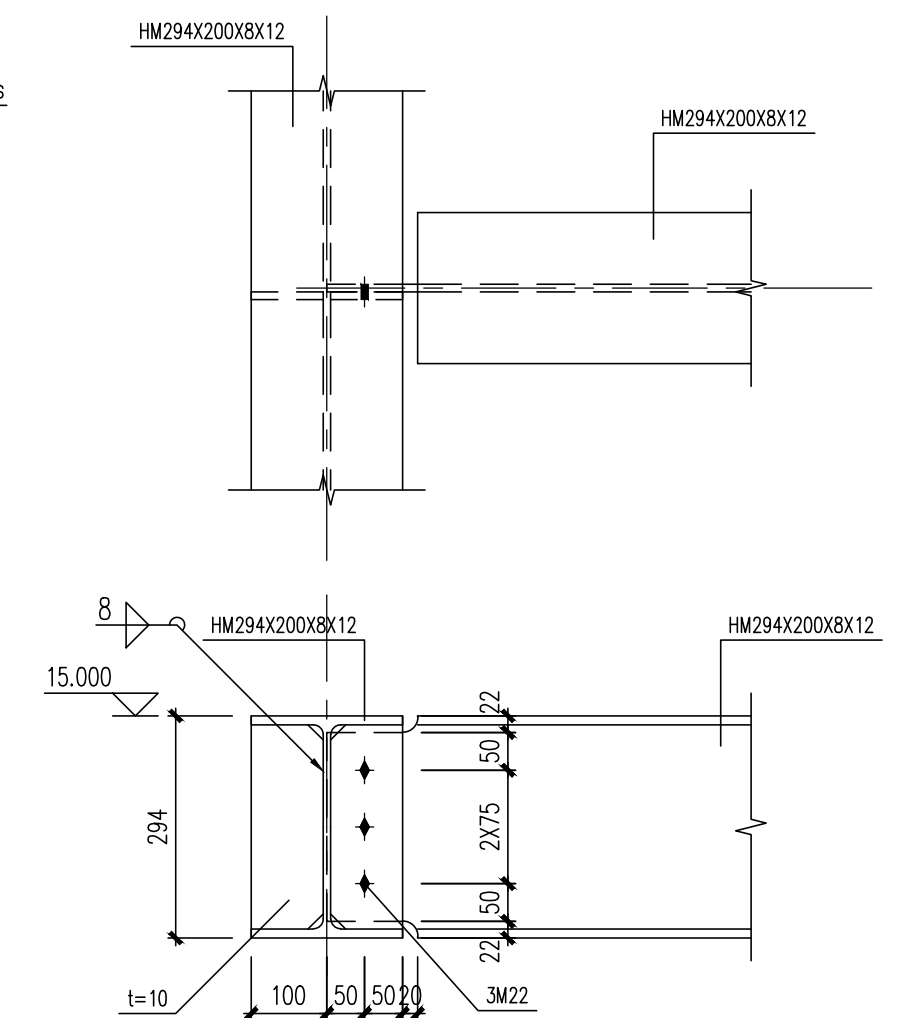
10.000m Planar component drawing 1:100



15.000m Planar component drawing 1:100



15.000m Platform deck covering 1:100



Connected node between GL2 and GL1
Connected node between GL2 and GL2

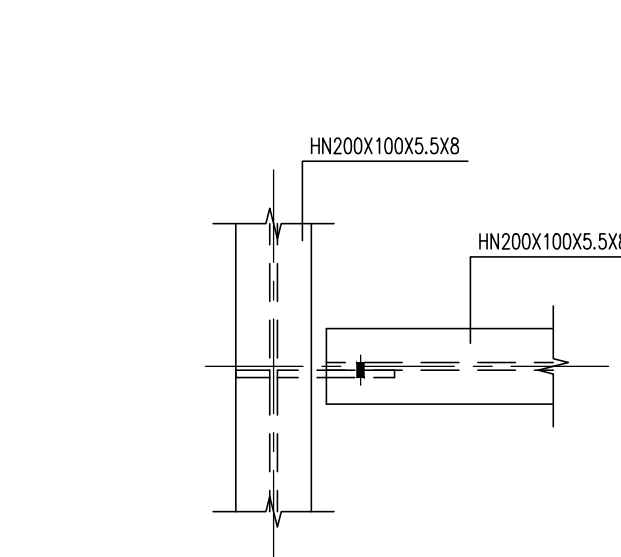
Cross-sectional Table of Steel Components

Component Number	Component Name	Sectional Dimension	Material	Notes
GZ1	Steel Column	HW250x250	Q235	Hot-rolled H-shaped Steel
XG1	Diagonal	2L80x6	Q235	Hot-rolled Angle Steel
GL1	Steel Beam	HM294x200x8x12	Q235	Hot-rolled H-shaped Steel
GL2	Steel Beam	HM294x200x8x12	Q235	Hot-rolled H-shaped Steel
GL3	Steel Beam	HN200x100x5.5x8	Q235	Hot-rolled H-shaped Steel
GL4	Steel Beam	2C200x76x5.2x9	Q235	Hot-rolled U-Steel

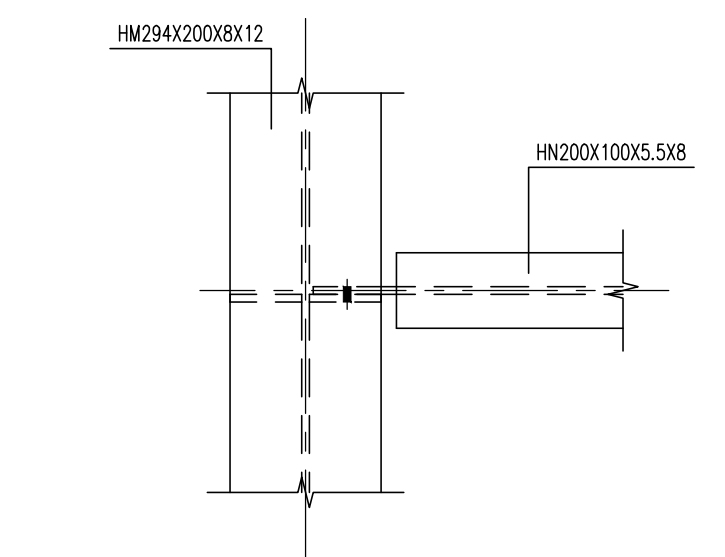
Explanation:

1. Materials: Unless otherwise specified, the steel plates and sections are Q235NHB steel, and the electrodes are E43 series electrodes.
2. The splicing connection of components adopts 10.9 grade friction type connection high-strength bolts, and the treatment of connection contact surfaces uses wire brushes to remove loose rust.
3. For fillet welds not specified in the figure, the minimum toe size is 6mm and they must all be fully welded.
4. The steel structure processing drawings should be deepened by qualified manufacturers, and the component cutting dimensions should be based on the secondary decomposition design at a 1:1 ratio.
5. The top platform of the tower can be fine-tuned according to the supporting conditions of the water tank.

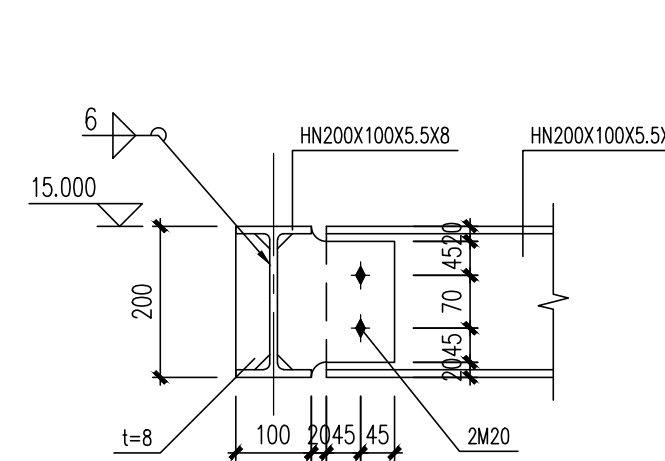
The construction method of the platform railing at the top of the tower frame can be found on page B26 of the atlas "Steel Ladder" 15J401, Type LG12.



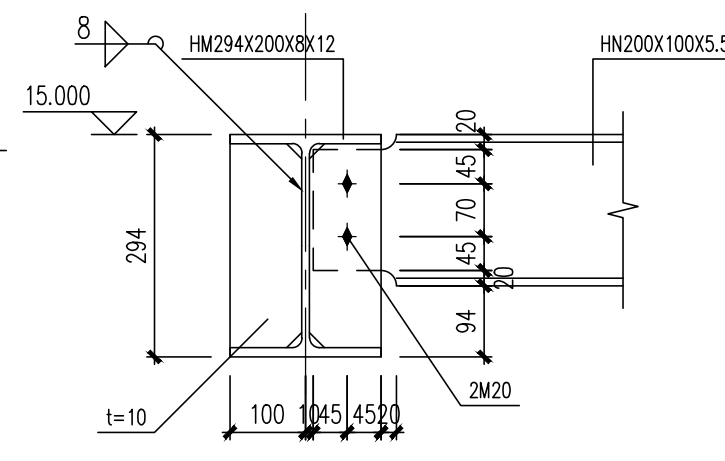
Connected node between GL3 and GL3



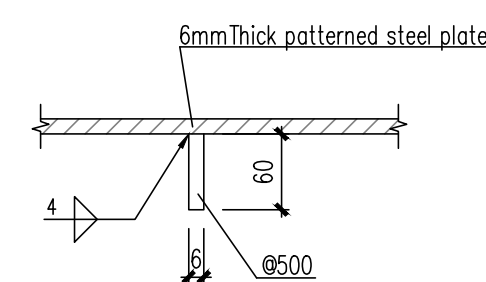
Connected node between GL3 and GL1
Connected node between GL3 and GL2



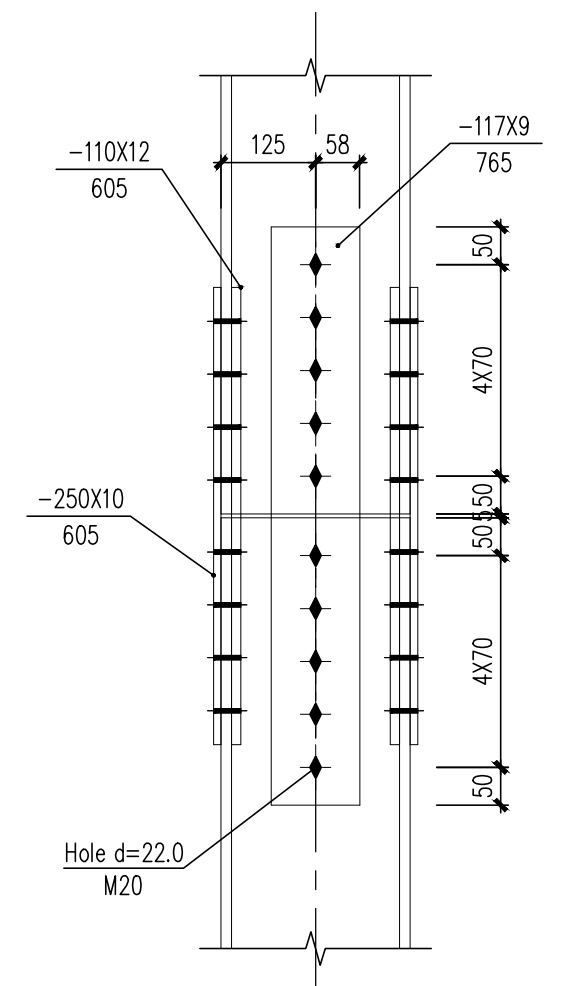
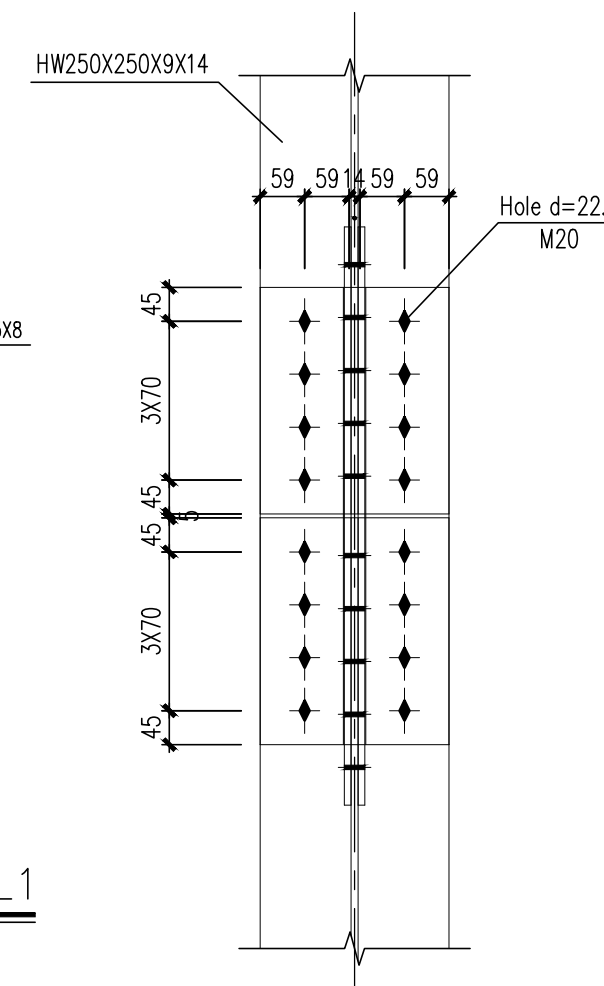
Connected node between GL3 and GL3



Connected node between GL3 and GL1
Connected node between GL3 and GL2

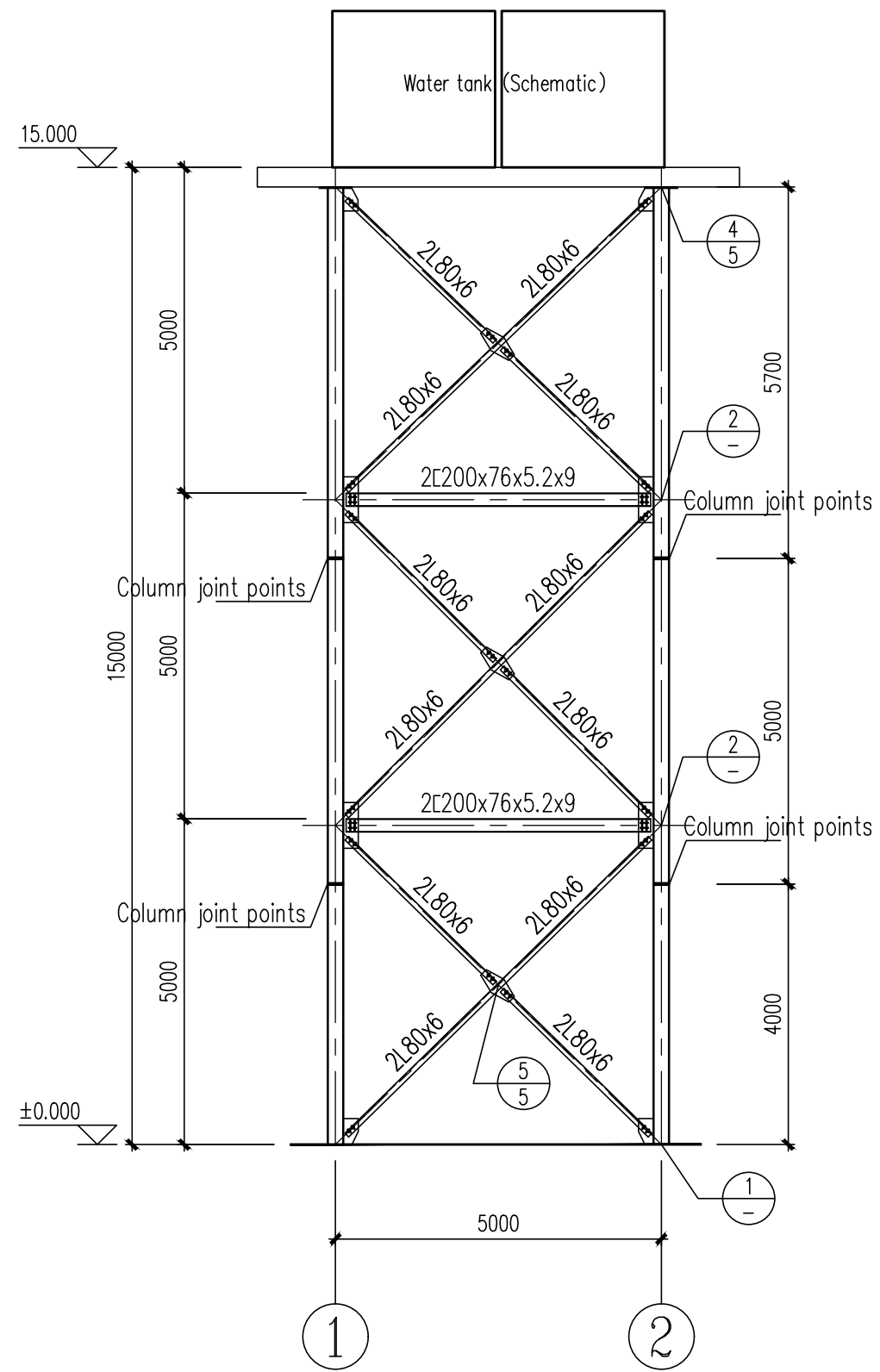


Connection of steel plate and stiffening plate

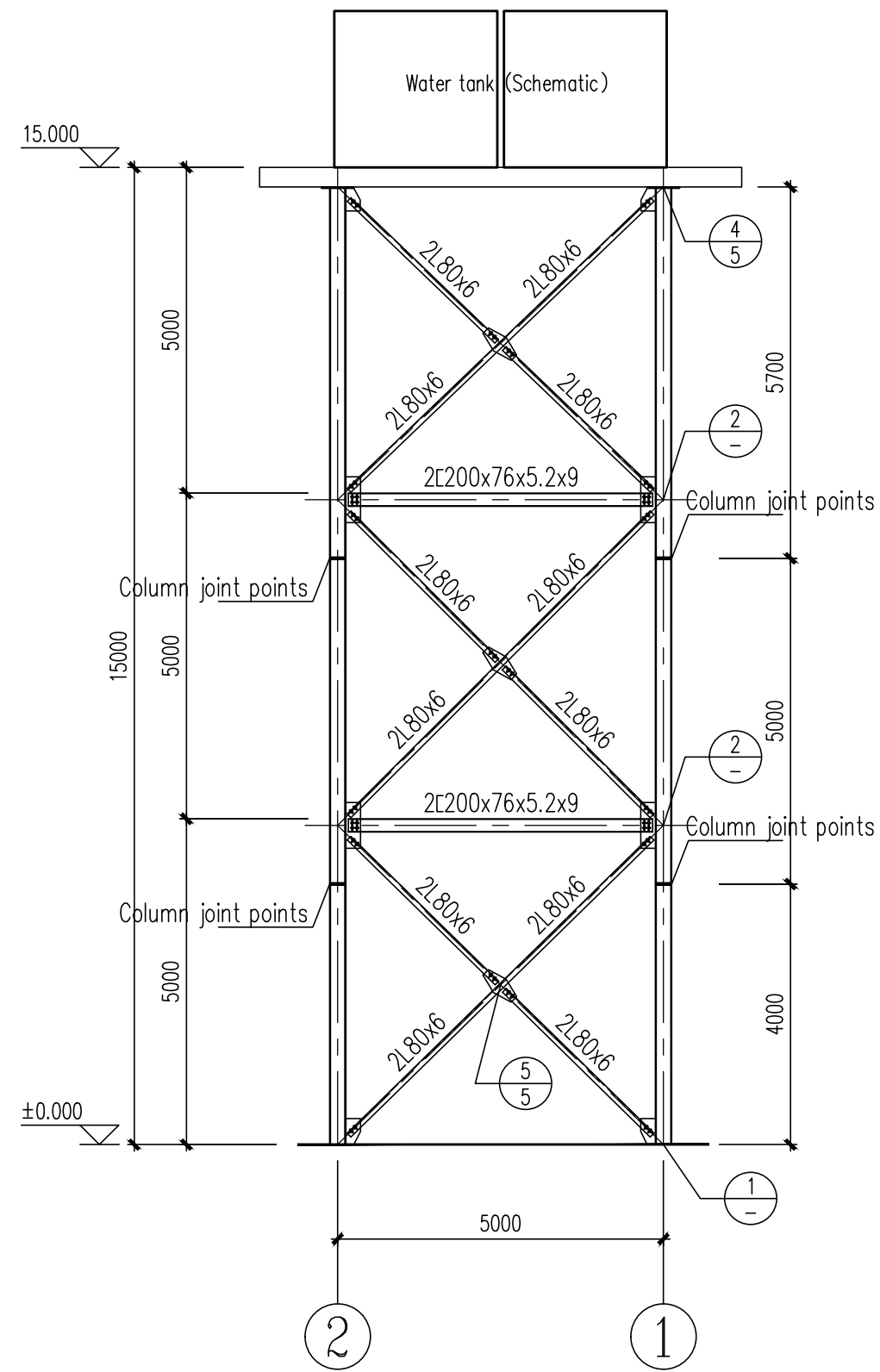


Steel column joint node

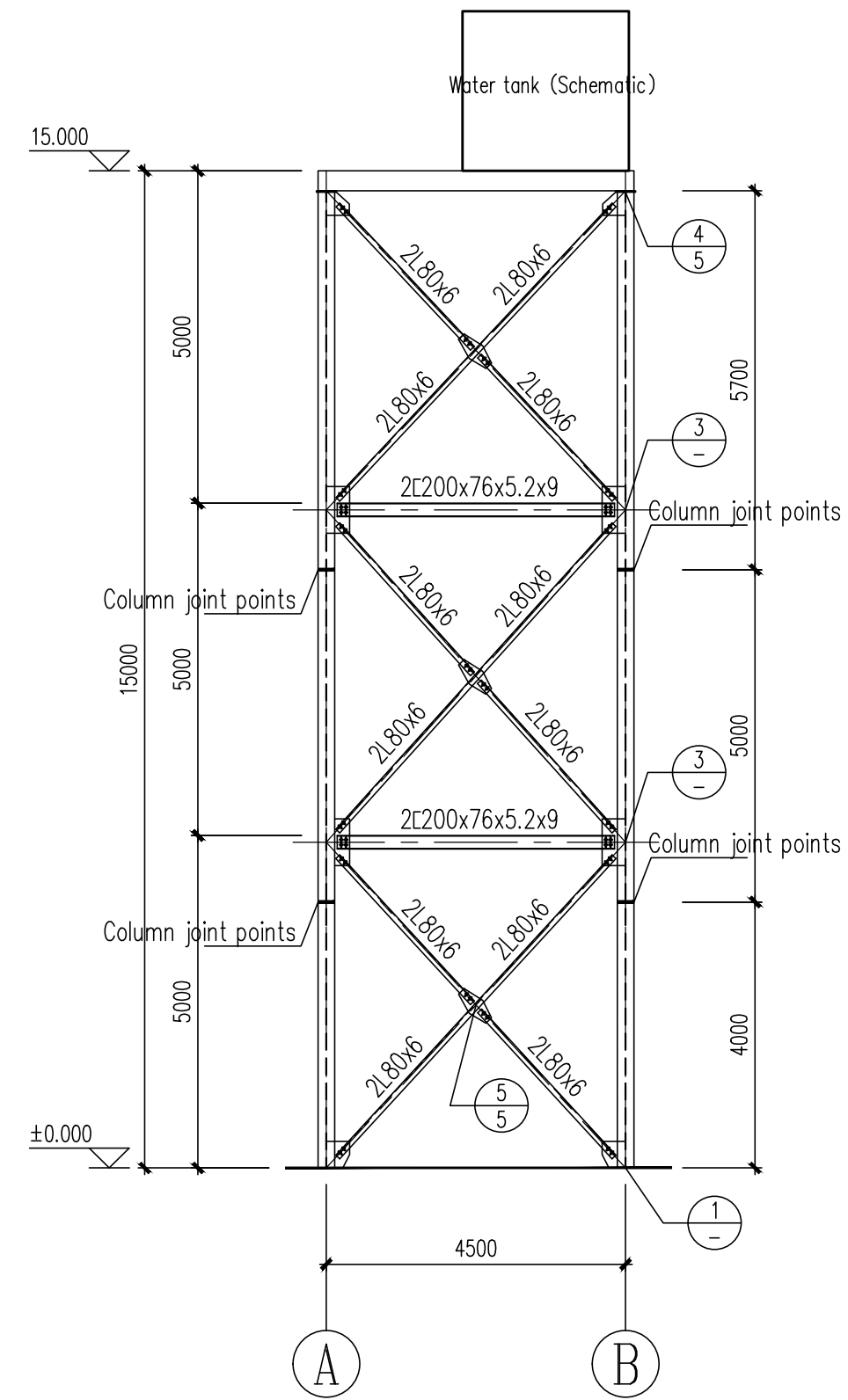
- Legend
- High-strength Bolt
 - Permanent Bolt
 - Mounting Bolt
 - Bolt Hole



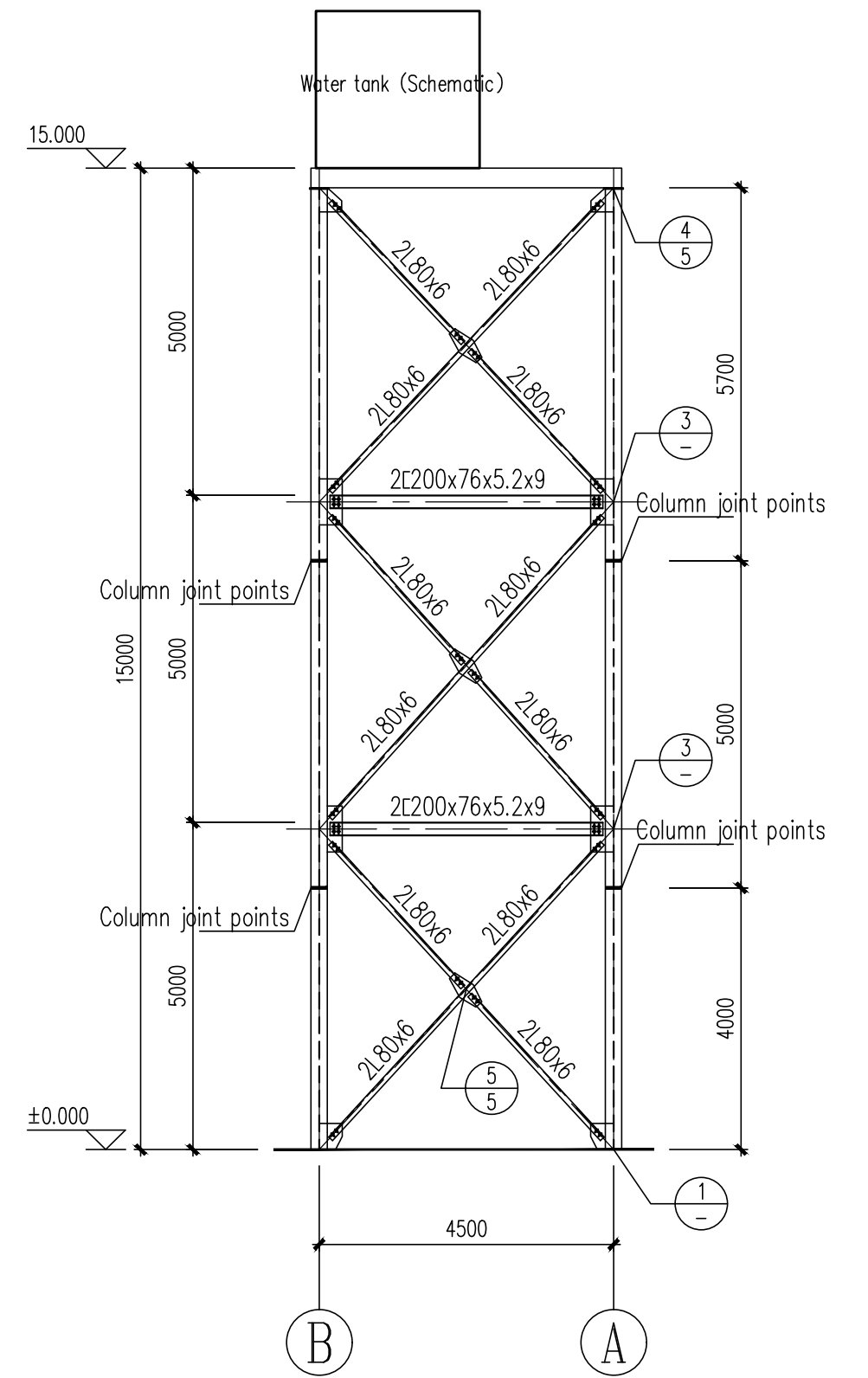
1~2 Axis Elevation component of facade 1:100



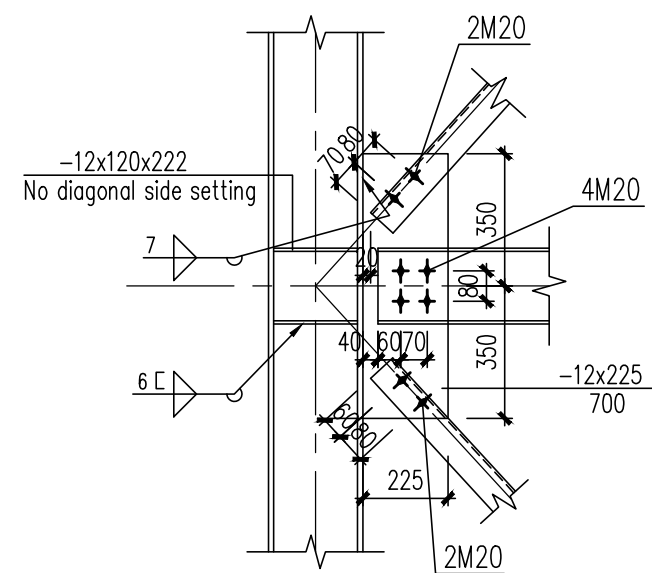
2~1 Axis Elevation component of facade 1:100



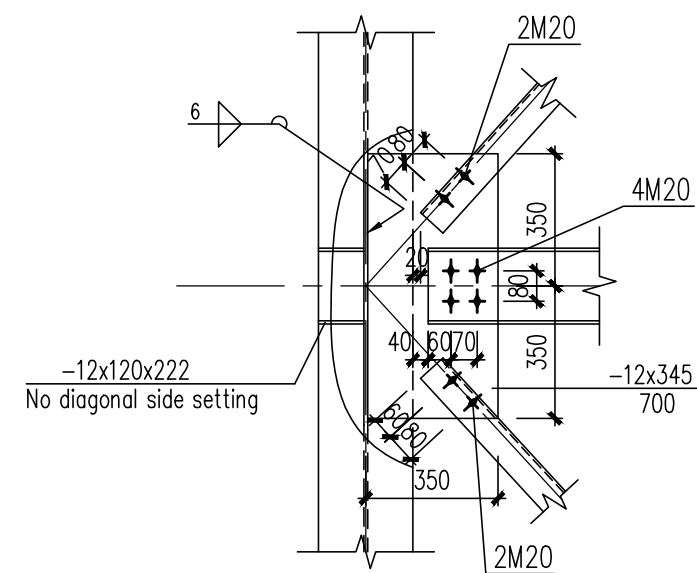
A~B Axis Elevation component of facade 1:100



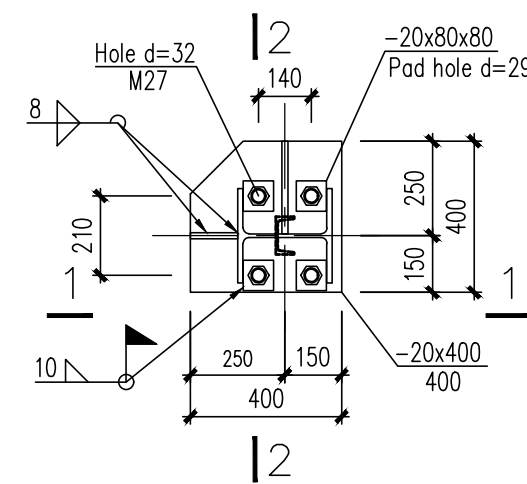
B~A Axis Elevation component of facade 1:100



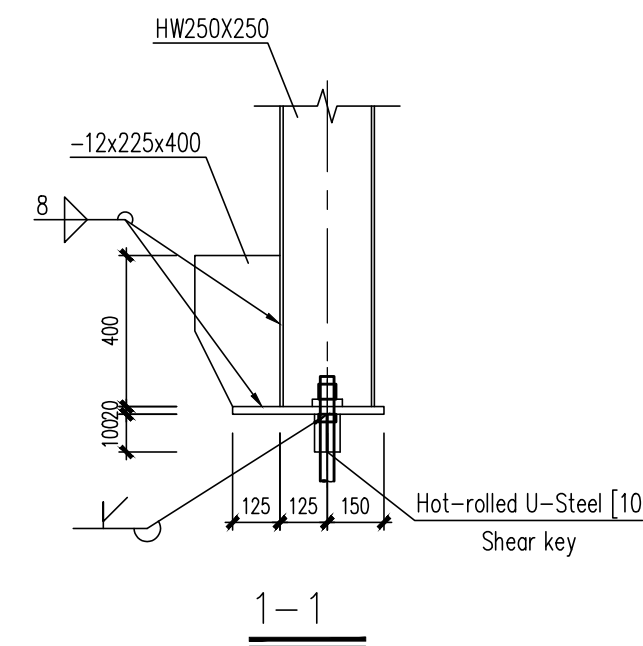
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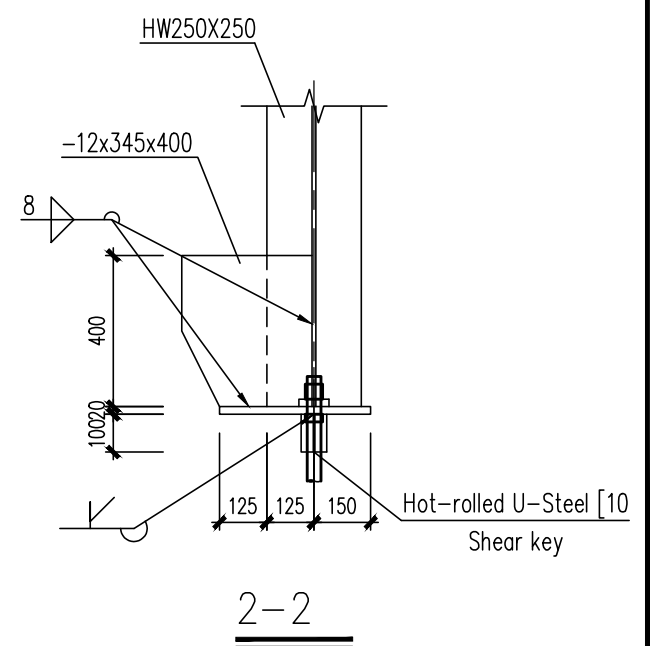
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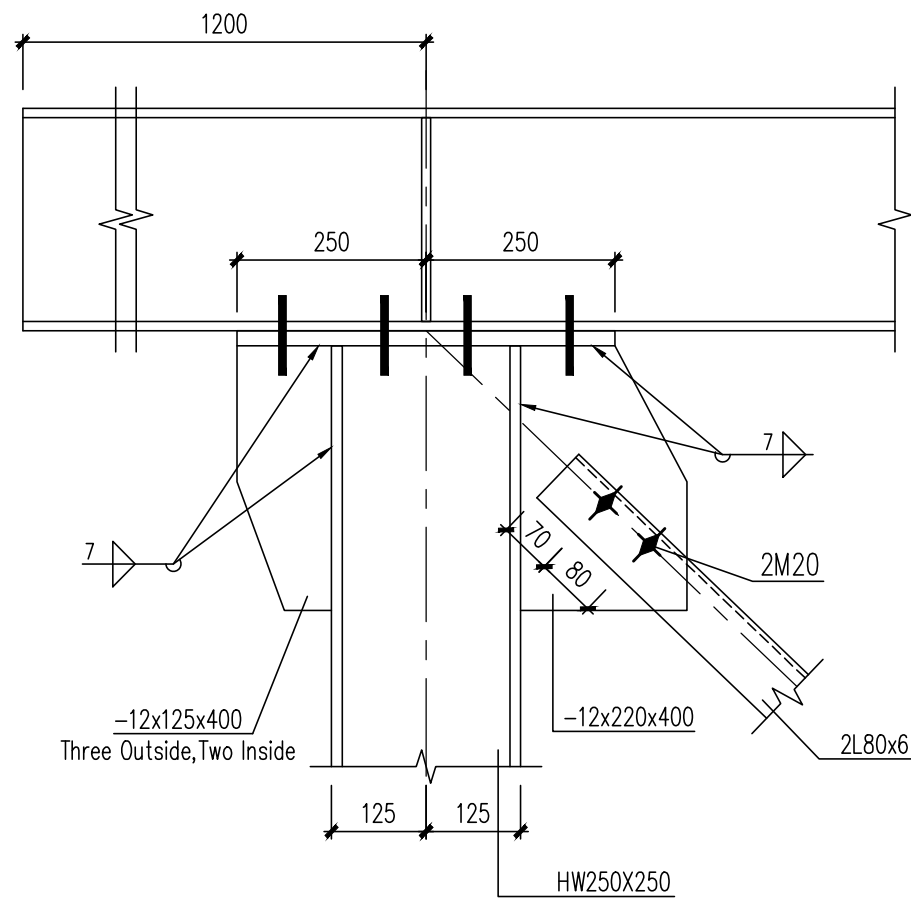
1



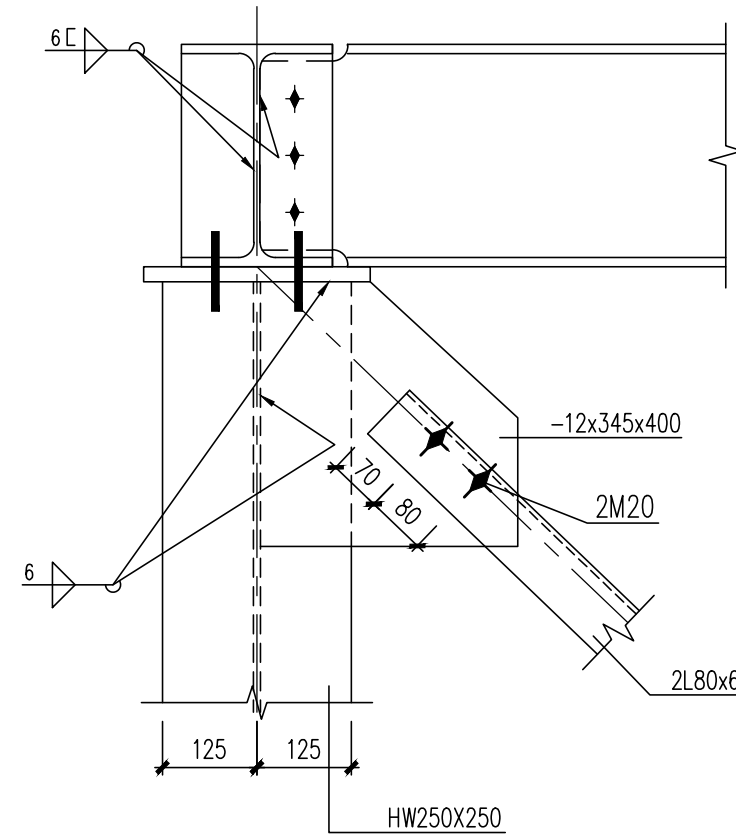
1-1



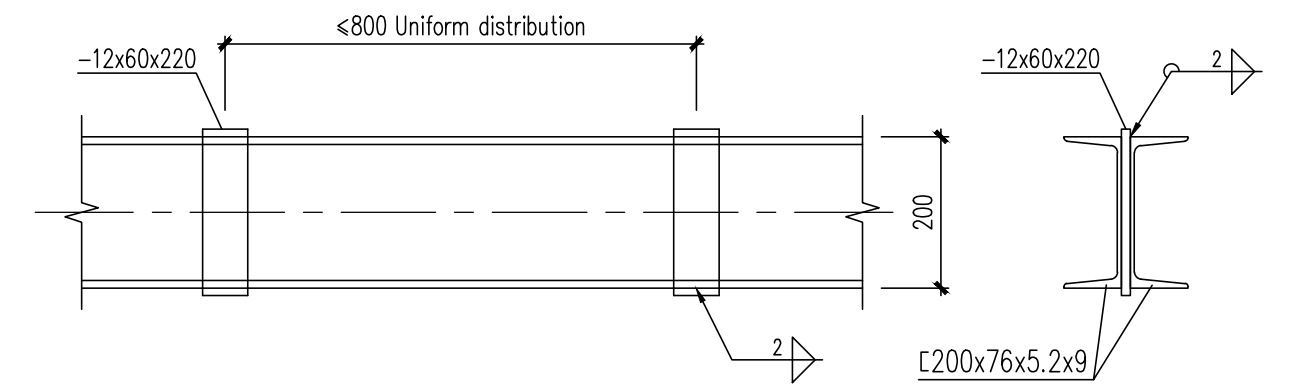
2-2



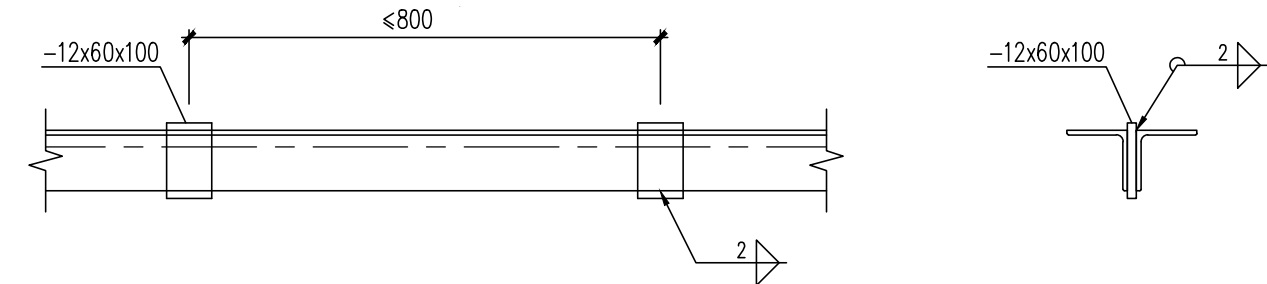
1-1



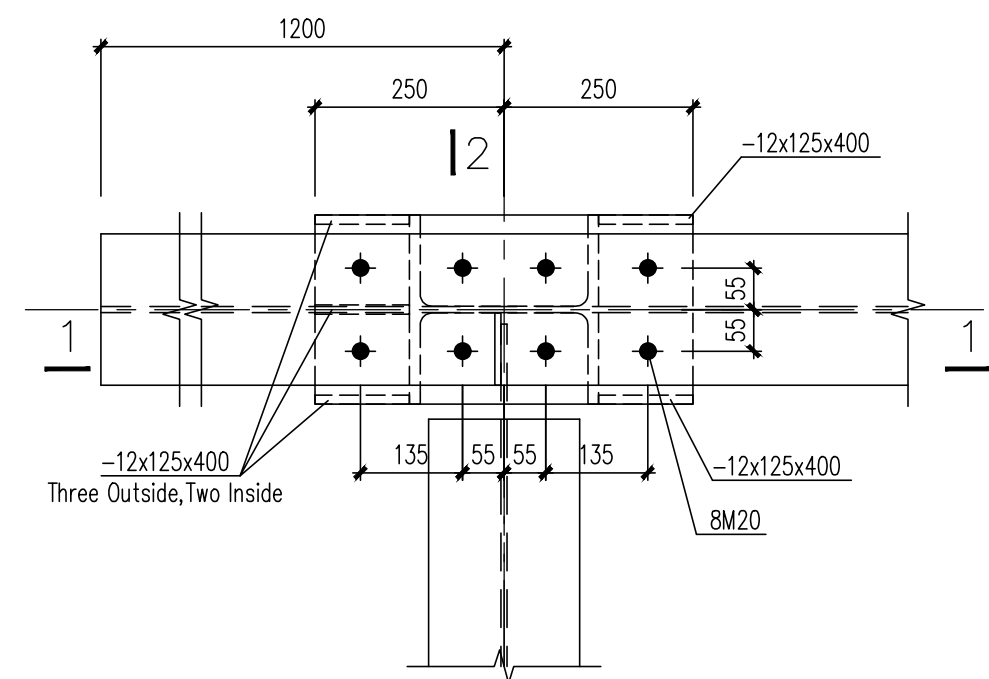
2-2



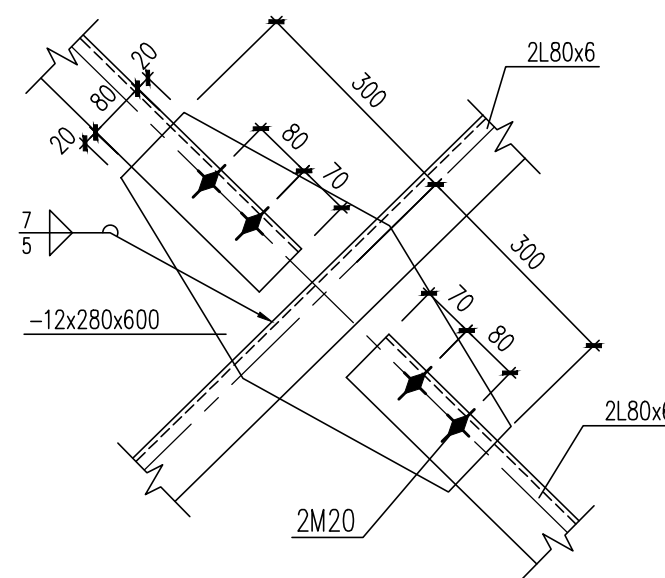
Fill Plate for Composite Section 1



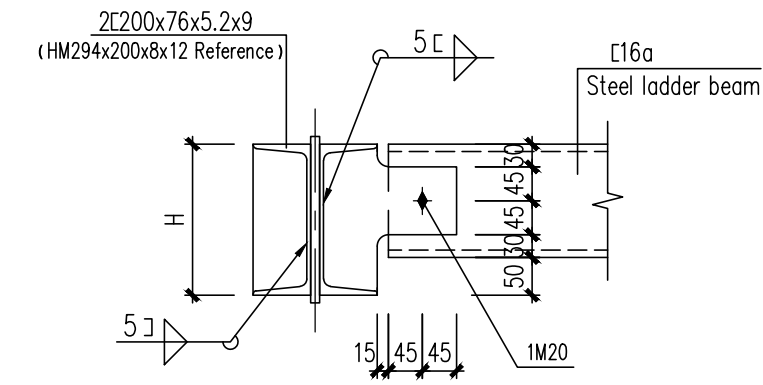
Fill Plate for Composite Section 2



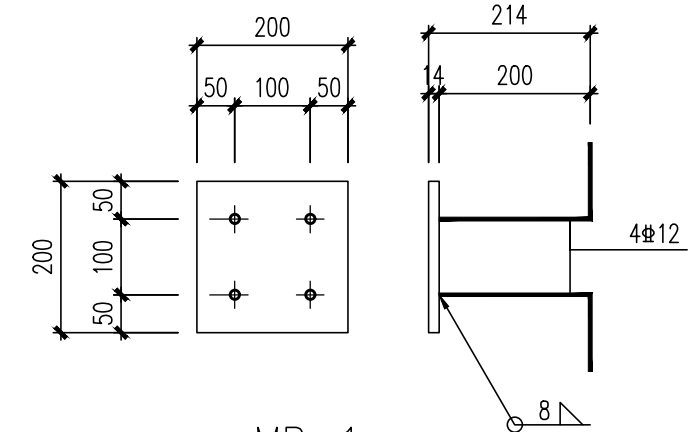
1-1



2-2



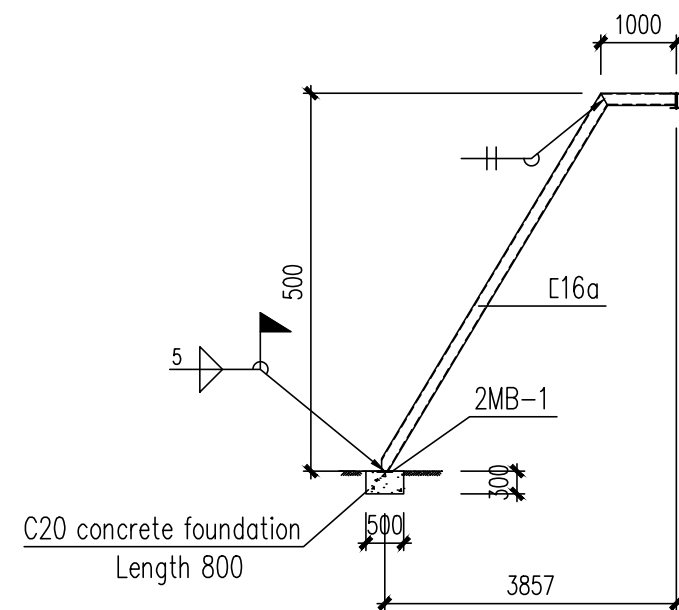
Steel ladder beam connection nodes



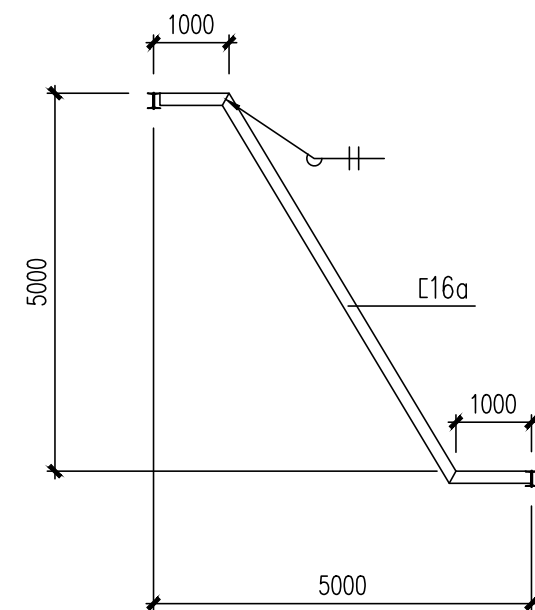
MB-1

Explanation:

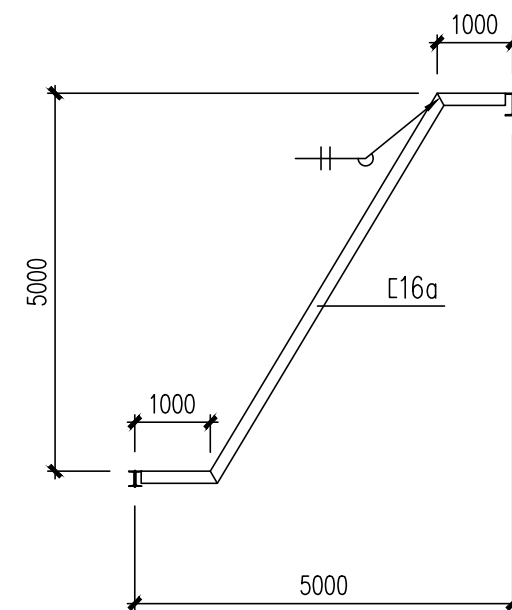
1. Materials: Unless otherwise specified, the steel plates and sections are Q235NHB steel, and the electrodes are E43 series electrodes.
2. The splicing connection of components adopts 10.9 grade friction type connection high-strength bolts, and the treatment of connection contact surfaces uses wire brushes to remove loose rust.
3. For fillet welds not specified in the figure, the minimum toe size is 6mm and they must all be fully welded.
4. The steel structure processing drawings should be deepened by qualified manufacturers, and the component cutting dimensions should be based on the secondary decomposition design at a 1:1 ratio.
5. The production of steel ladders should refer to pages A16-A17 and A24-A25 of the atlas "Steel Ladders" 15J401.



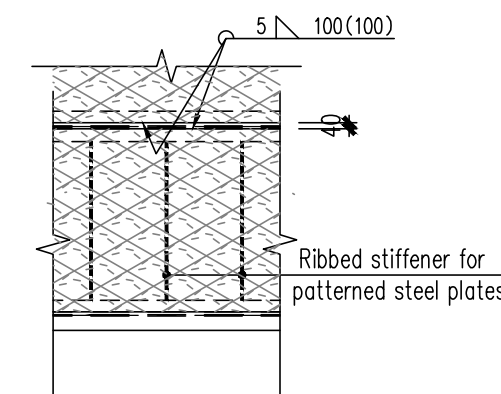
GT-1



GT-2



GT-3



Detail of platform patterned steel plate laying