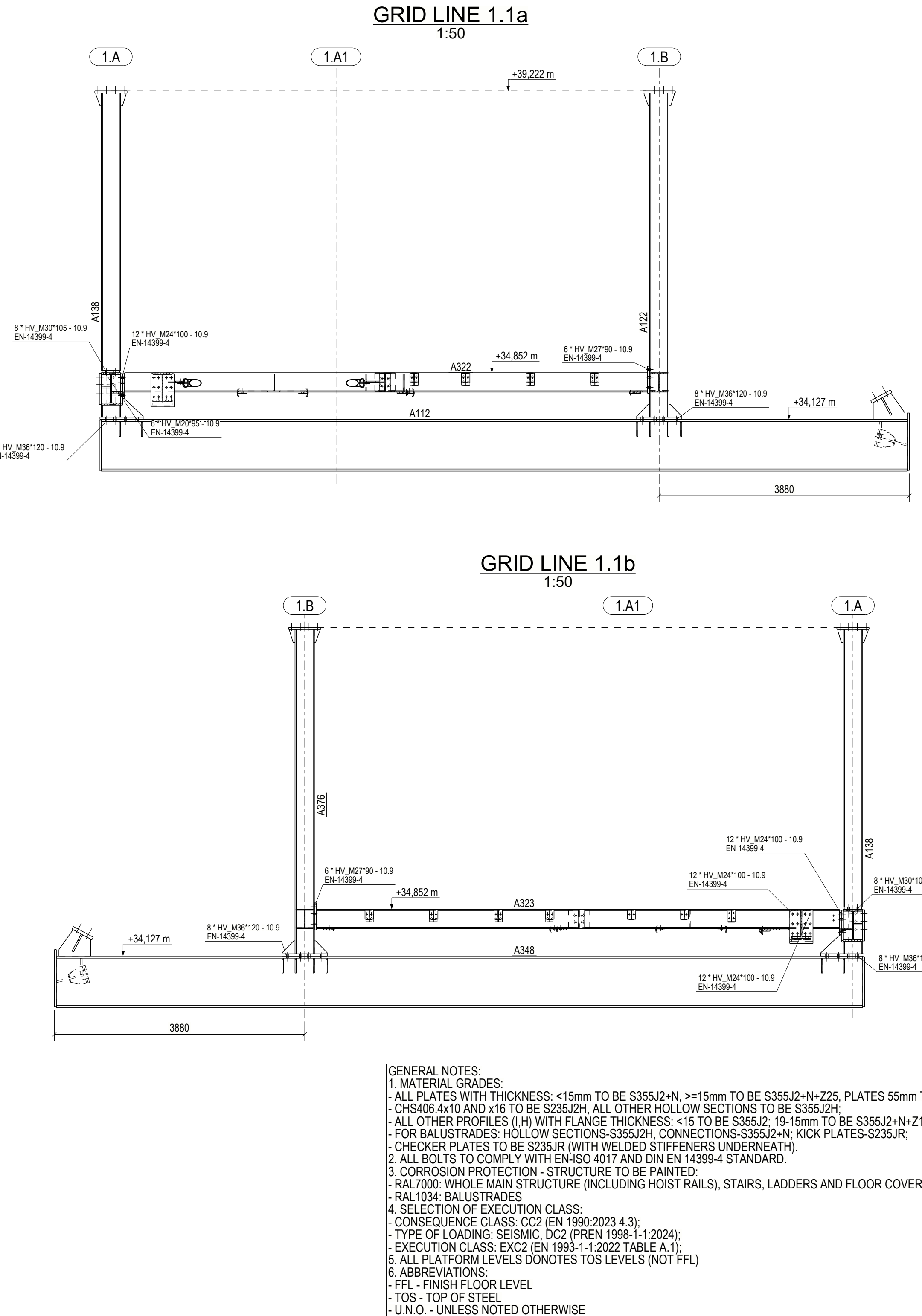
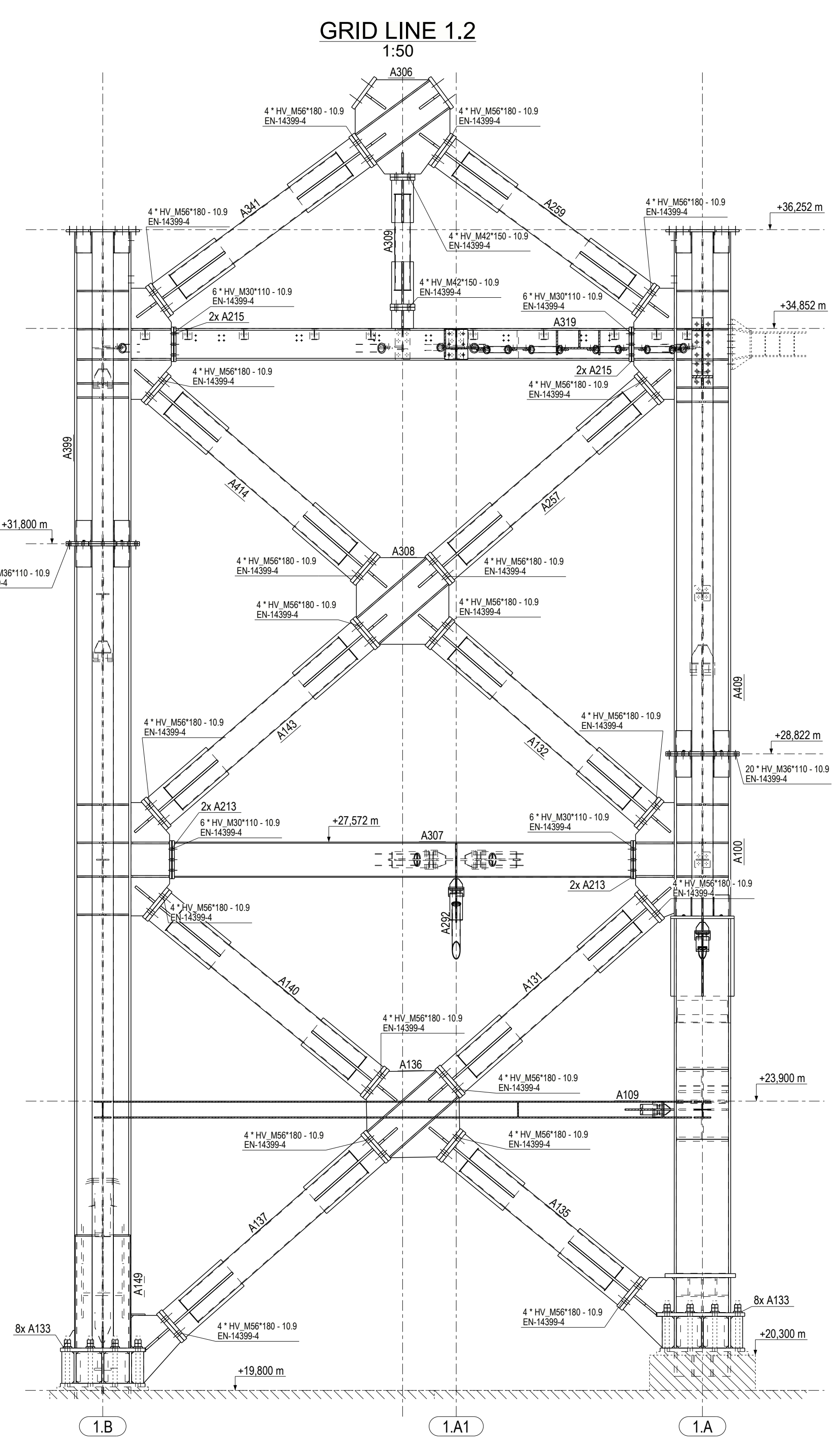
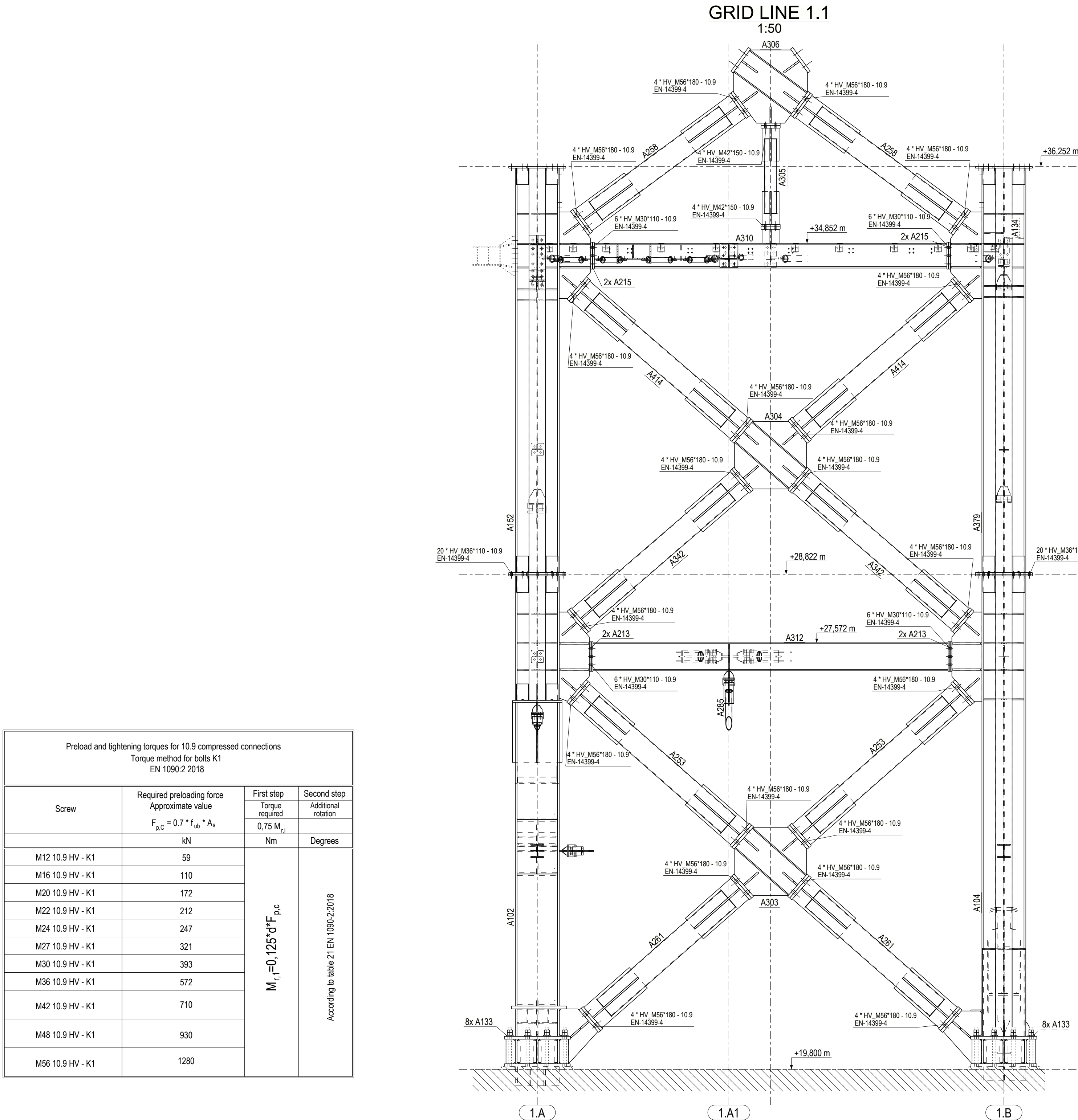
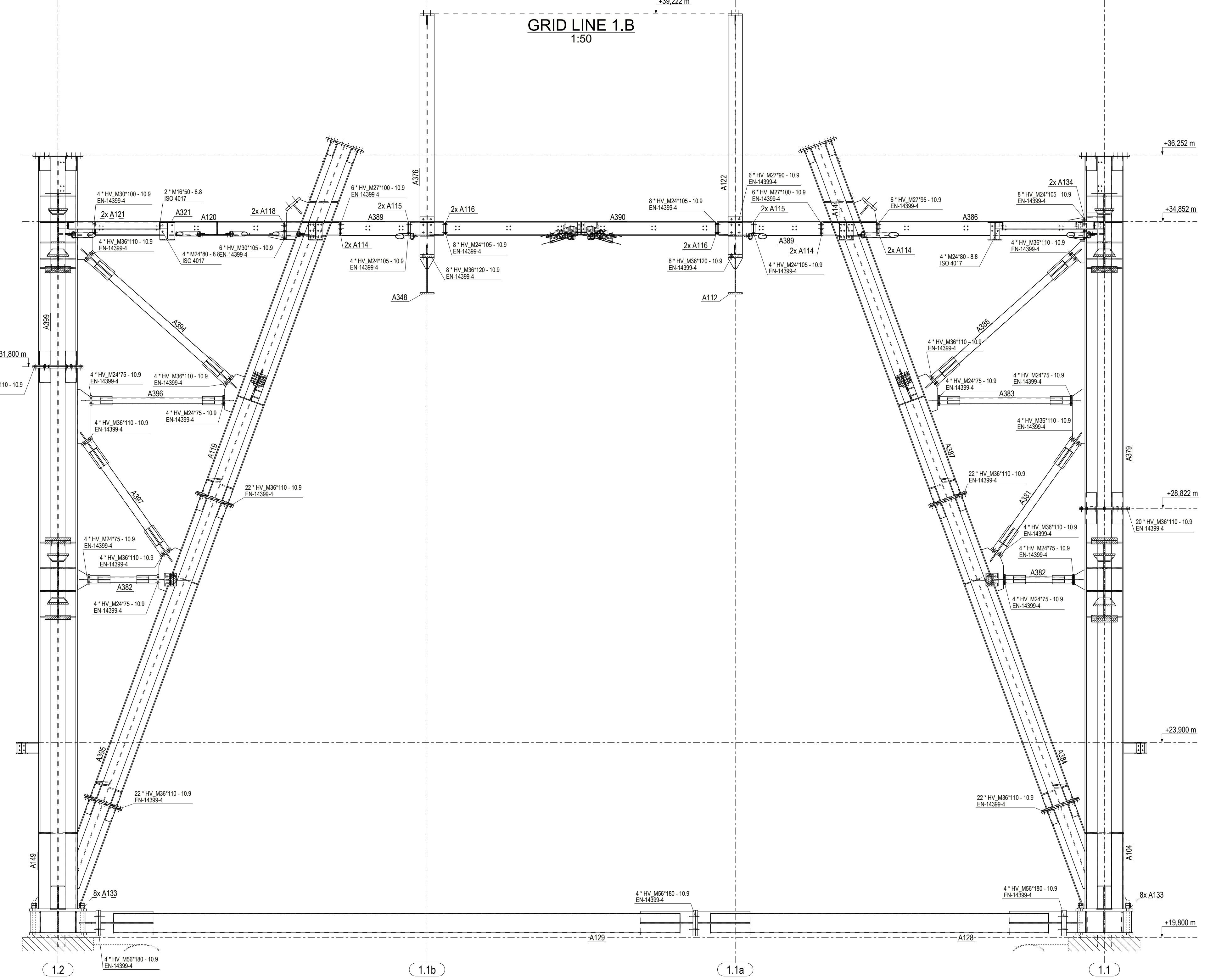
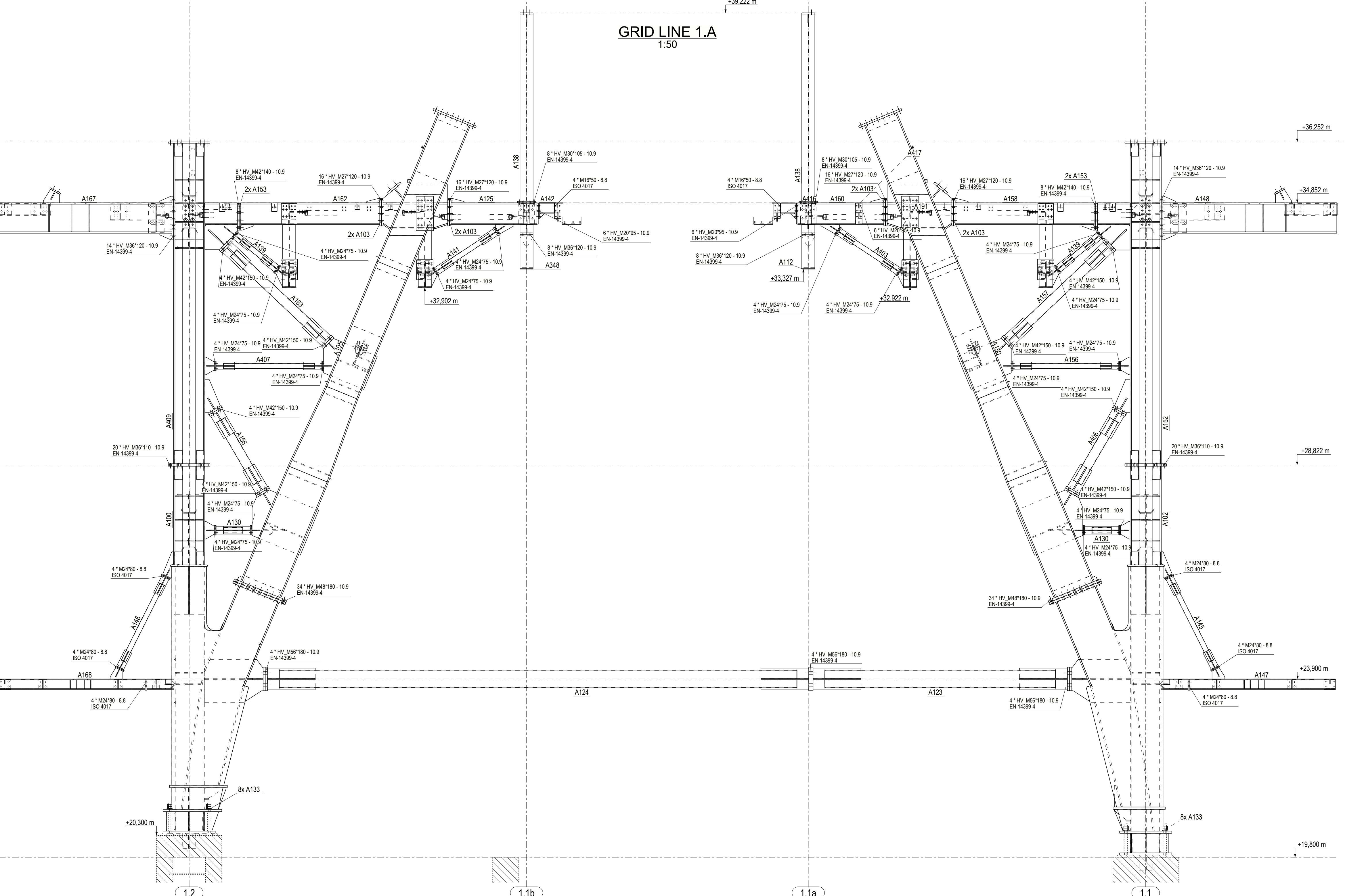




Preload and tightening torques for 10.9 compressed connections				
Torque method for bolts K1				
EN 1090-2:2018				
Screw	Required preloading force Approximate value $F_p = 0.7 \cdot f_u \cdot A_s$ (0.75 M _n)	First step	Second step	Additional rotation
		Torque required (Nm)	Torque required (Nm)	
M12 10.9 HV-K1	59	M _n = 0.25 * F _p c	According to table 21 EN 1090-2:2018	Degrees
M16 10.9 HV-K1	110			
M20 10.9 HV-K1	172			
M22 10.9 HV-K1	212			
M24 10.9 HV-K1	247			
M27 10.9 HV-K1	321			
M30 10.9 HV-K1	393			
M36 10.9 HV-K1	572			
M42 10.9 HV-K1	710			
M48 10.9 HV-K1	930			
M56 10.9 HV-K1	1280			

- GENERAL NOTES:
1. MATERIAL GRADES:
 - ALL PLATES WITH THICKNESS: <15mm TO BE S355J2-N, >15mm TO BE S355J2-N+Z25, PLATES 55mm THICK TO BE S355J2-N+Z35;
 - CHS406.4x10 AND x16 TO BE S235J2H, ALL OTHER HOLLOW SECTIONS TO BE S355J2H;
 - ALL OTHER PROFILES (LH) WITH FLANGE THICKNESS: <15 TO BE S355J2, 15-16mm TO BE S355J2-N+Z15, >19mm TO BE S355J2-N+Z25
 2. FOR BALUSTRADES: HOLLOW SECTIONS S355J2H, CONNECTIONS S355J2H, KICK PLATES S235J2R, CHECKER PLATES TO BE S235J2R (WITH WELDED STIFFENERS UNDERNEATH).
 3. ALL BOLTS TO COMPLY WITH EN ISO 4017 AND DIN EN 14399-4 STANDARD.
 4. CORROSION PROTECTION - STRUCTURE TO BE PAINTED:
 - RAL7000: WHOLE MAIN STRUCTURE (INCLUDING HOIST RAILS), STAIRS, LADDERS AND FLOOR COVERING;
 - RAL1034: BALUSTRADES
 5. SELECTION OF EXECUTION CLASS:
 - CONSEQUENCE CLASS: CC2 (EN 1990:2023 4.3);
 - TYPE OF LOADING: SEISMIC: DOZ (PREN 1996-1:2024);
 - EXECUTION CLASS: EXC2 (EN 1993-1-1:2022 TABLE A.1);
 - ALL PLATFORM LEVELS DONOTES TO5 LEVELS (NOT FFL)
 6. ABBREVIATIONS:
 - FFL - FINISH FLOOR LEVEL
 - TOS - TOP OF STEEL
 - U.N.O. - UNLESS NOTED OTHERWISE