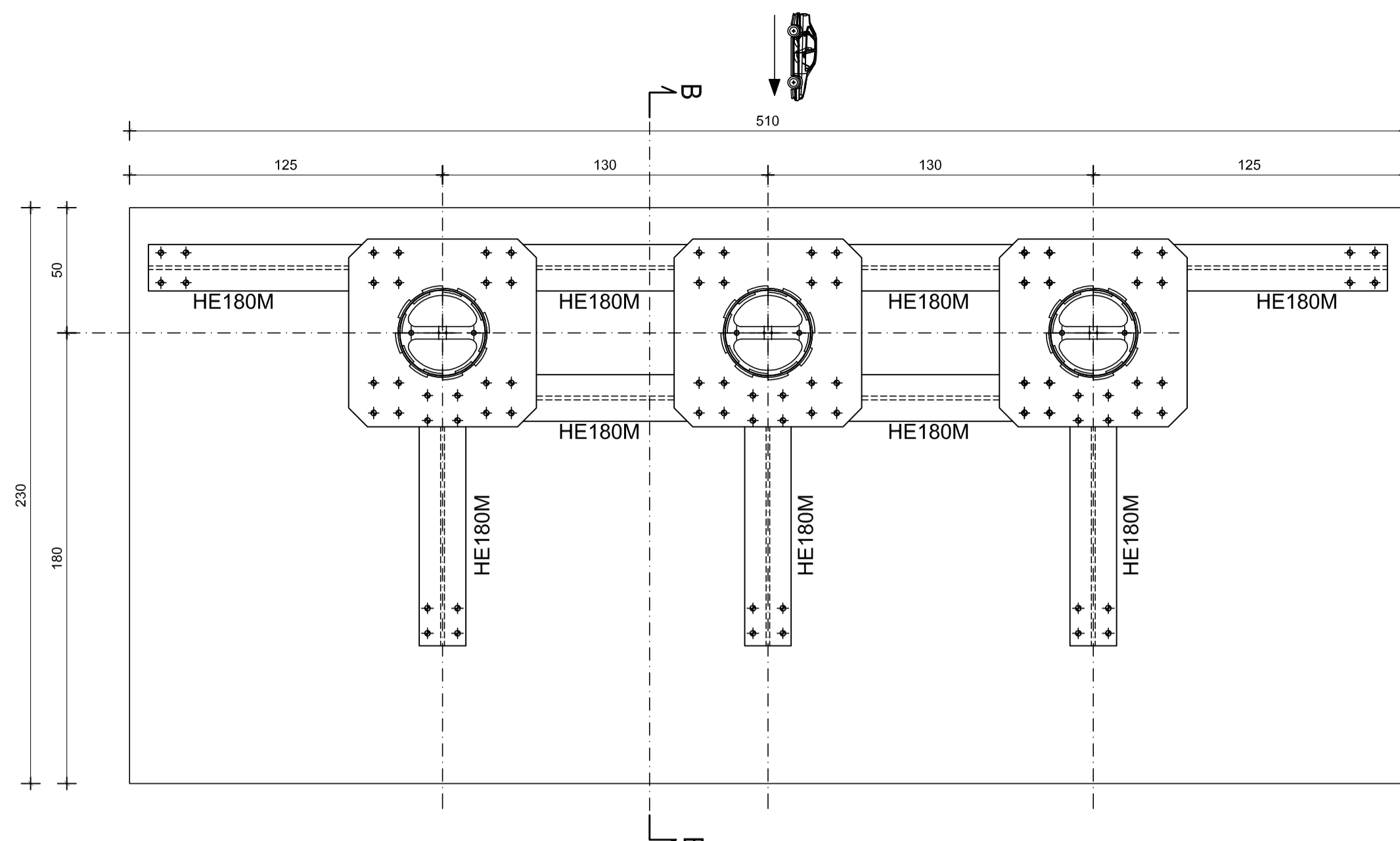


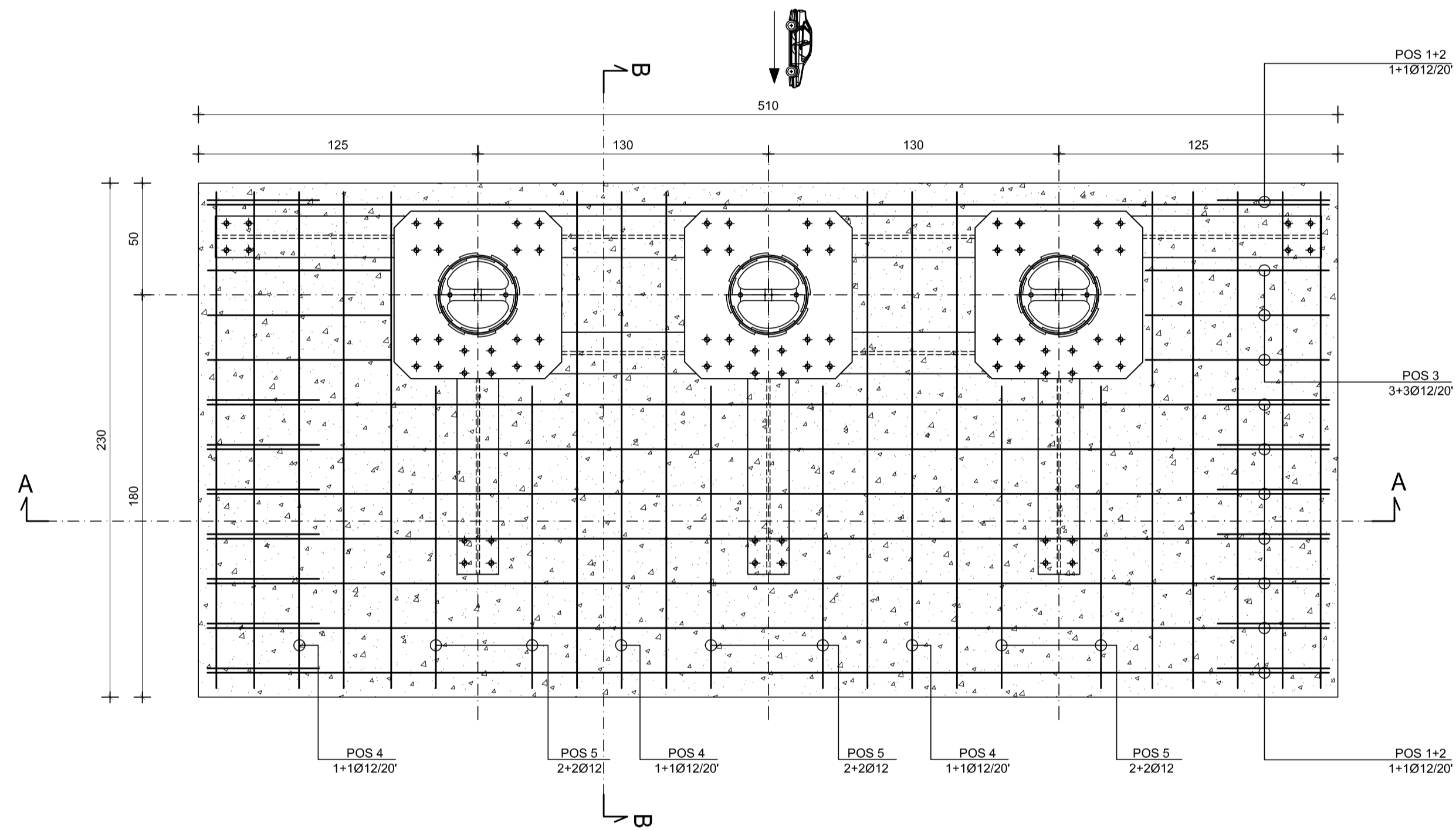
**CARPENTERY PLACEMENT PLAN**

SCALE 1:20

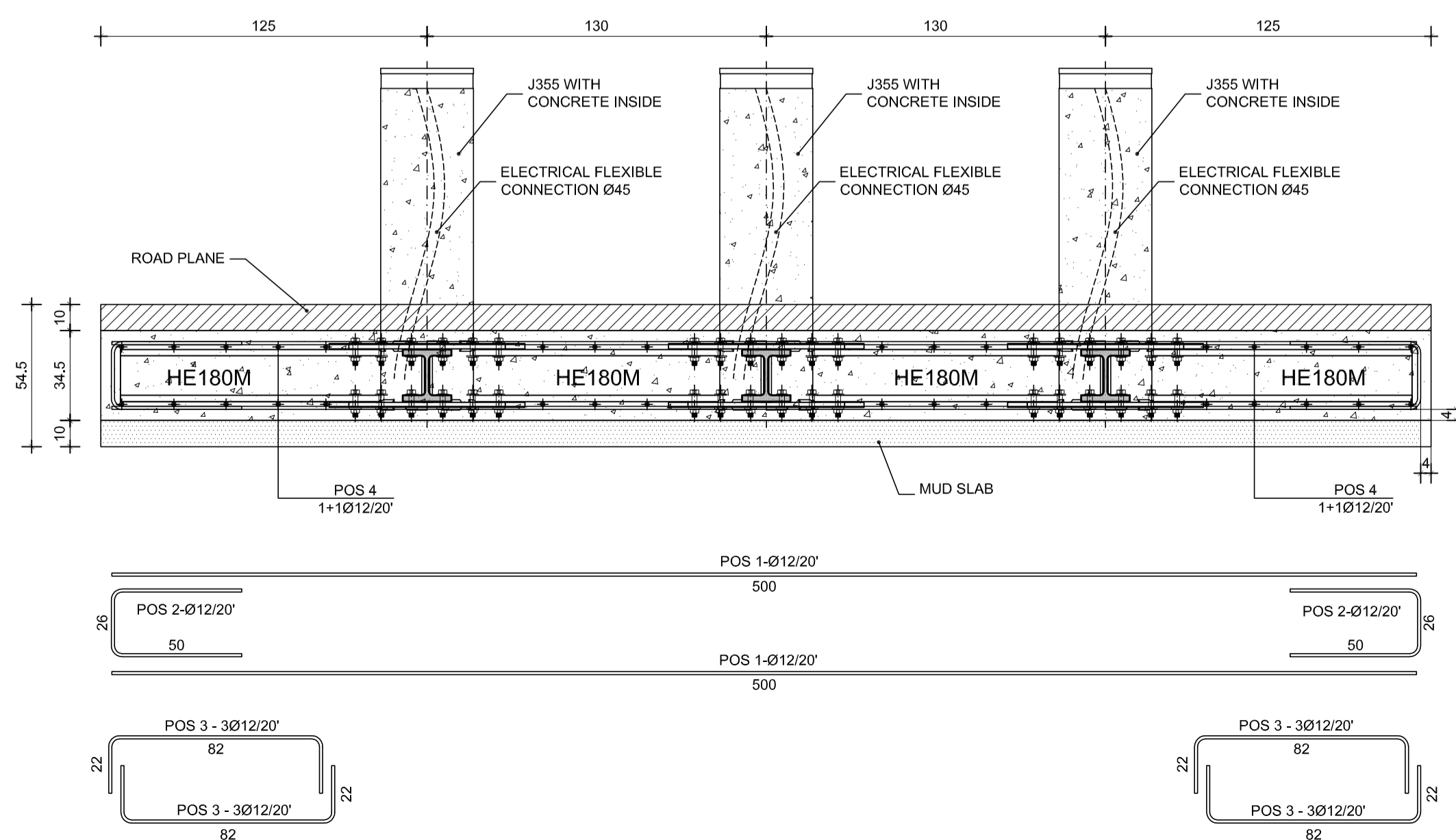


**REBAR PLACEMENT PLAN**

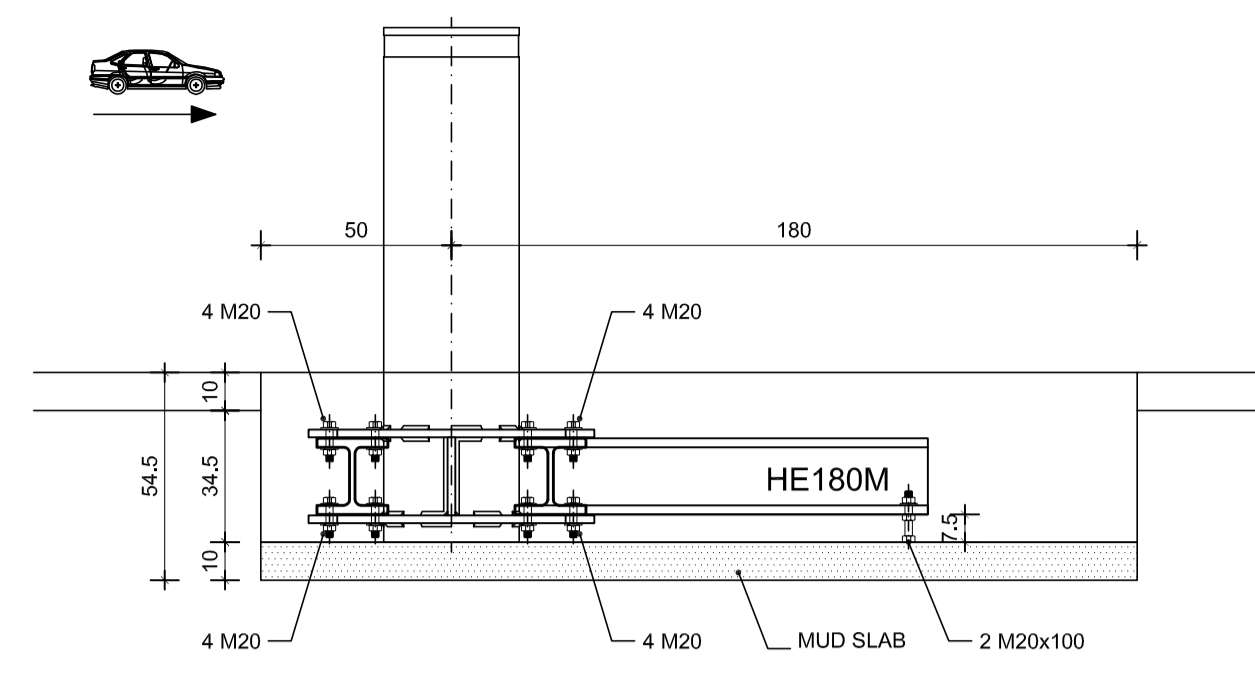
SCALE 1:20



**SECTION A-A**



**SECTION B-B**



**REBAR SCHEDULE (for 3 bollards)**

pos.	n°	φ	L (cm)	W (kg)
1	16	12	500	71.03
2	16	12	126	17.90
3	12	12	126	13.42
4	32	12	266	75.57
5	12	12	179	19.07
total weight of rebar				196.99

**VOLUME OF CONCRETE**

for mud slab and bollard	mc	1,44
for foundation	mc	4,04

**VOLUME OF DIGGING** mc 6,39

**WEIGHT OF 3 BOLLARDS** Kg 1125,00

**WEIGHT OF 9 HE 180 M** Kg 828,00

**(for 4 or more bollards) see rebar schedule + additional bollards from chart below**

n°	φ	L (cm)	W (kg)
16	12	500+	18,47
6	12	266	14,17
4	12	179	6,36
total weight of rebar			38,99

**VOLUME OF CONCRETE**

for mud slab and bollard	mc	0,39
for foundation	mc	1,03

**VOLUME OF DIGGING** mc 1,62

**WEIGHT OF BOLLARD** Kg 375,00

**WEIGHT OF 3 HE 180 M** Kg 276,00

**MATERIALS + SPECIFICATION**

**CONCRETE**

Resistance class	Type of cement	water/cement ratio (weight)	Consistence slump (mm)	Exposure class (EN206-1)	max. aggregate diameter	min. rebar cover (EC2)	additives
MODERATE EXPOSURE	C25/30 Portland 325/425	0.60	S4-160/210	XC2	20-25 mm	4.0 cm	thinner
SEVERE EXPOSURE	C30/37 Portland 325/425	0.55	S4-160/210	XD1	20-25 mm	4.0 cm	thinner
MUD SLAB CONCRETE	C12/15 Portland 325			X0	20-25 mm		

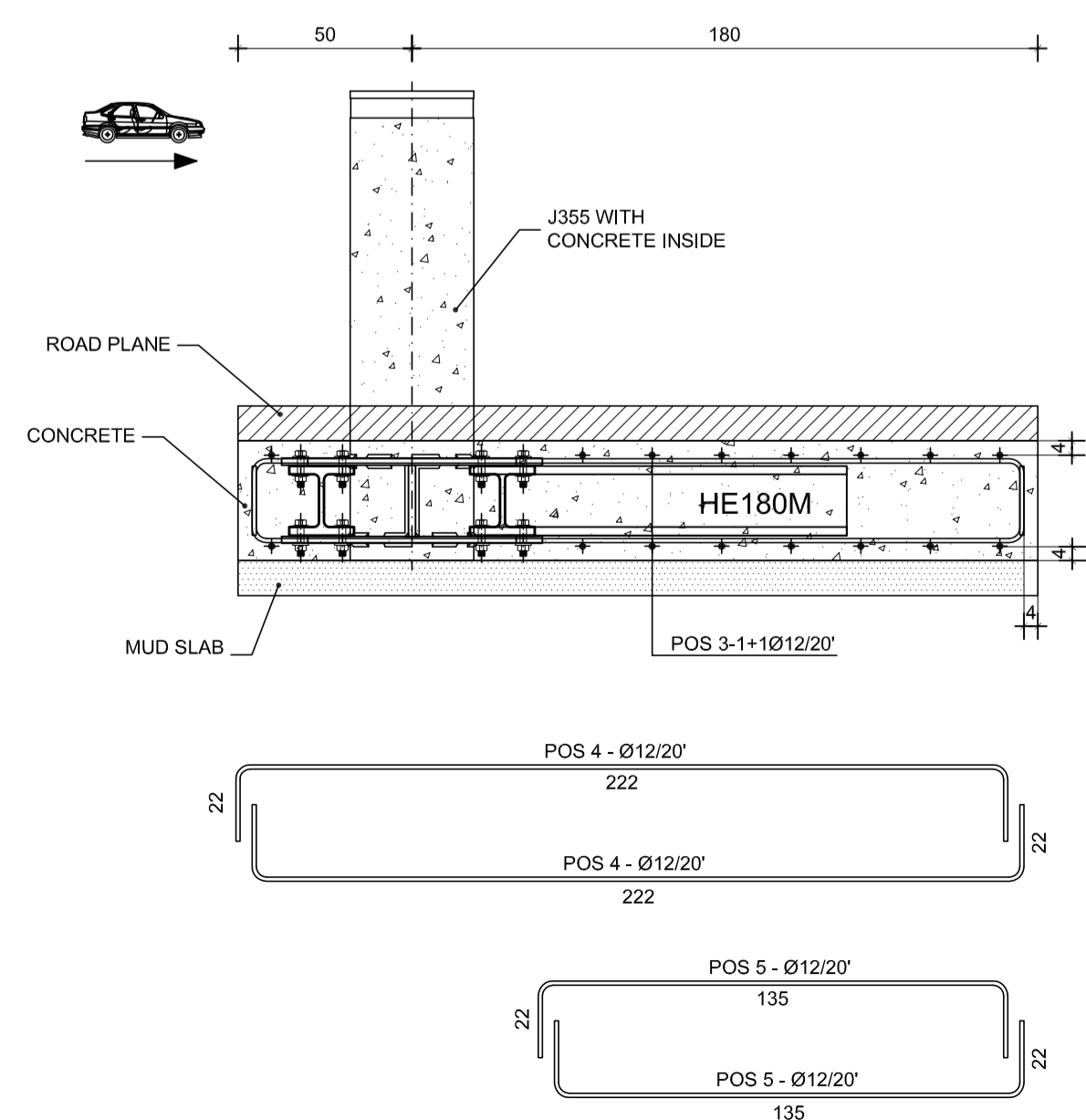
**MATURATION RULES (UNI EN 13670-1:02)**  
 Formwork removal time 48 hours  
 Max resistance 28 days

**REBAR**  
 IRON B450C or N20

CONCRETE COVERS MUST BE GUARANTEED BY SUITABLE MESH SPACERS

ALL DIMENSIONS MUST BE CHECKED ON SITE BEFORE TO BEGINNING WORK

**SECTION B-B**



**FAAC** Via Calari 10, Zola Predosa, Bologna, Italy  
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Description	Code	Revision
<b>J355 F M50 FOUNDATION</b>	<b>532173</b>	<b>A</b>