

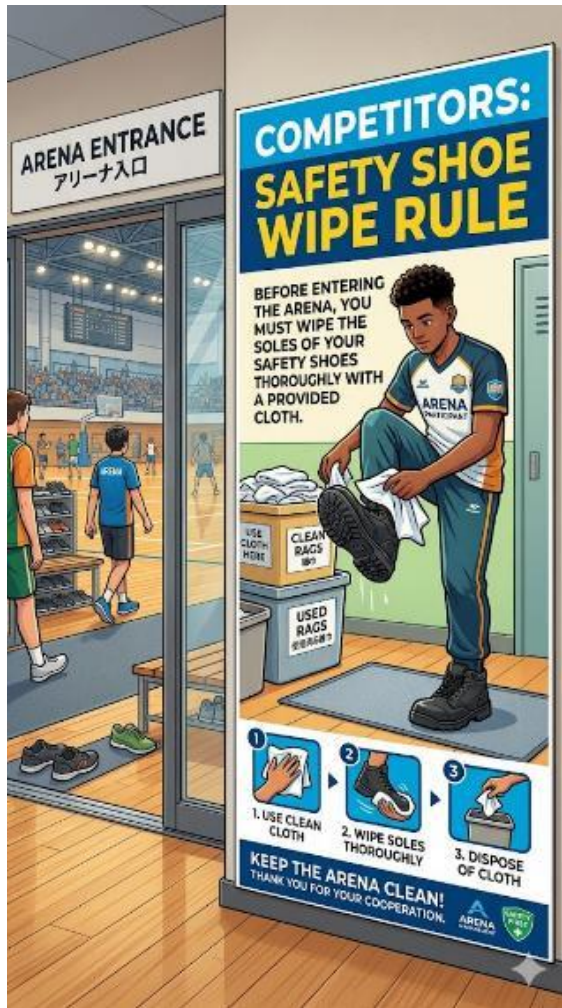
ASBC2026 Rules explanation

Indoor shoes



- **Indoor shoes, NECESSARY** at the arena

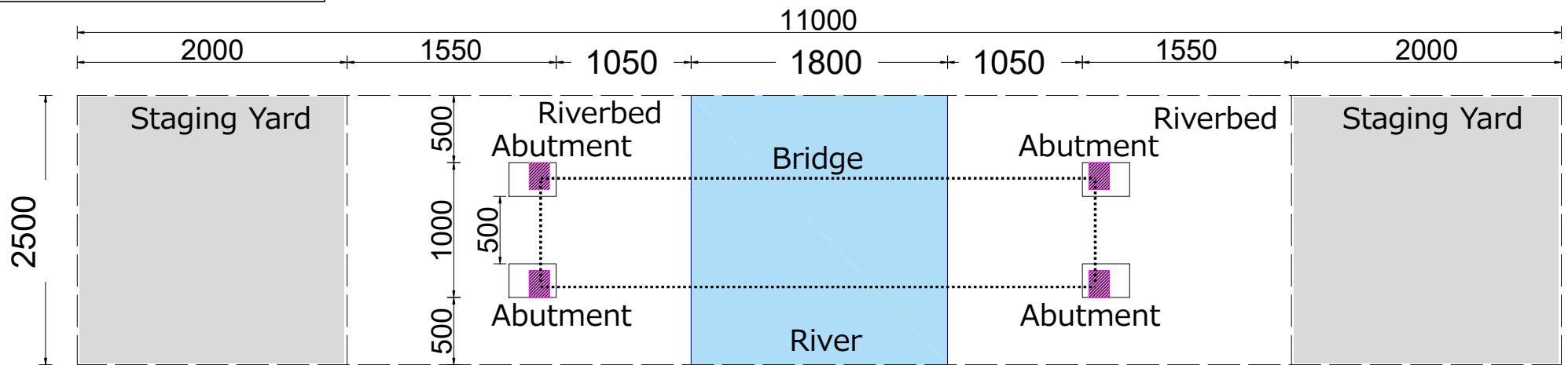
Wipe the sole of Safety shoes at the arena entrance 3



- Competitors must wear safety shoes during construction & loading.
- Please wipe the soles before entering the arena.

2.1 Basic Conditions

Construction site



Unit : mm

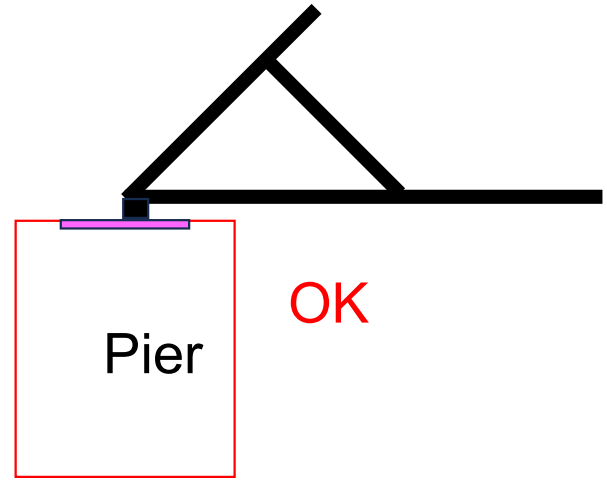
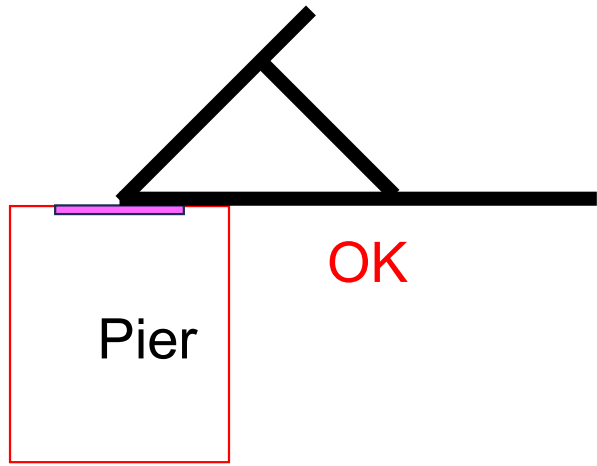
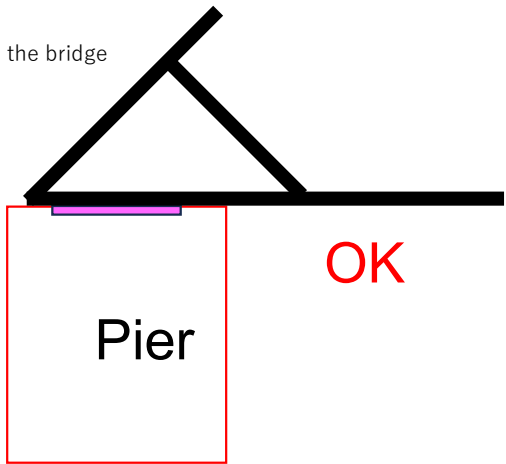
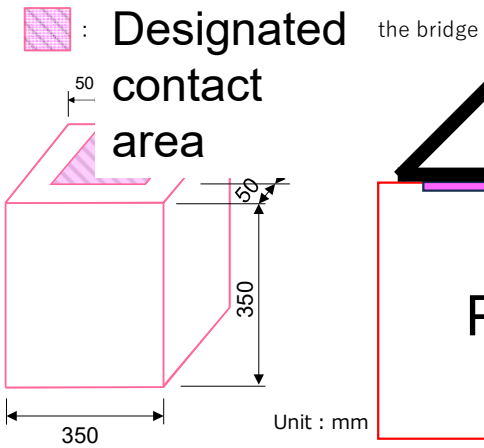
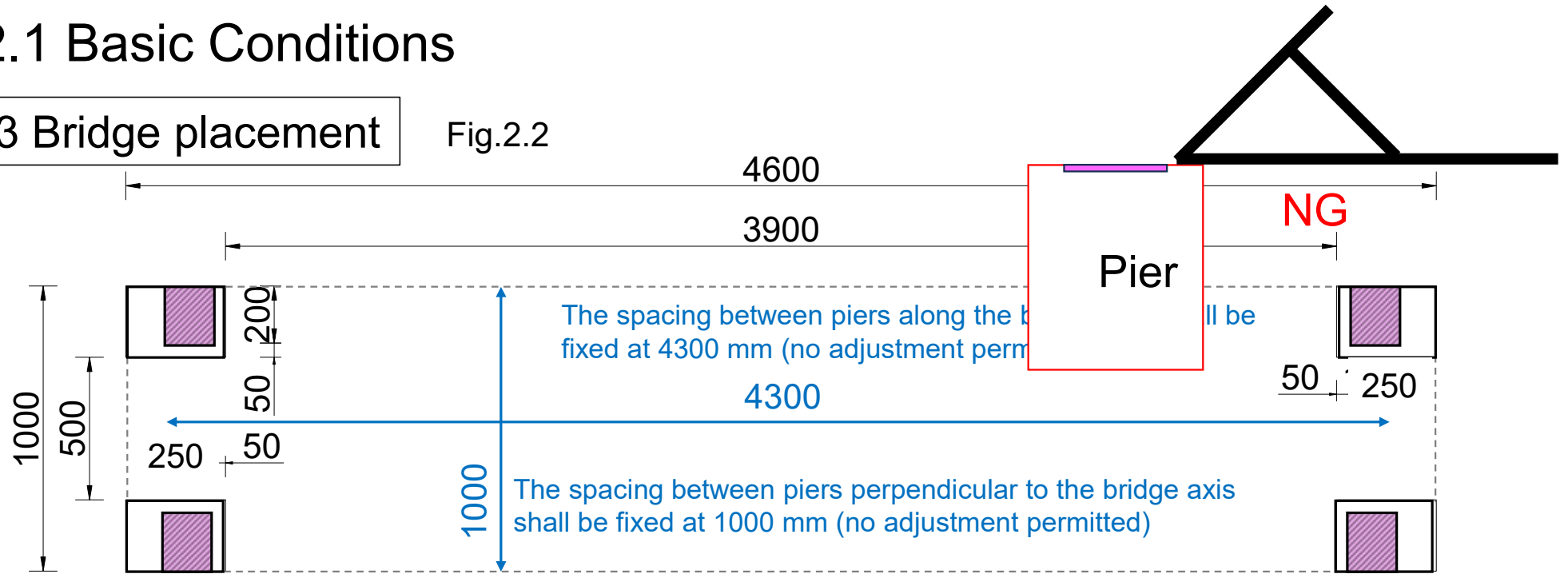
Staging yard : Both site

River : Center

2.1 Basic Conditions

2.1.3 Bridge placement

Fig.2.2



2.1 Basic Conditions

2.1.3 Requirement of the clearance over the river

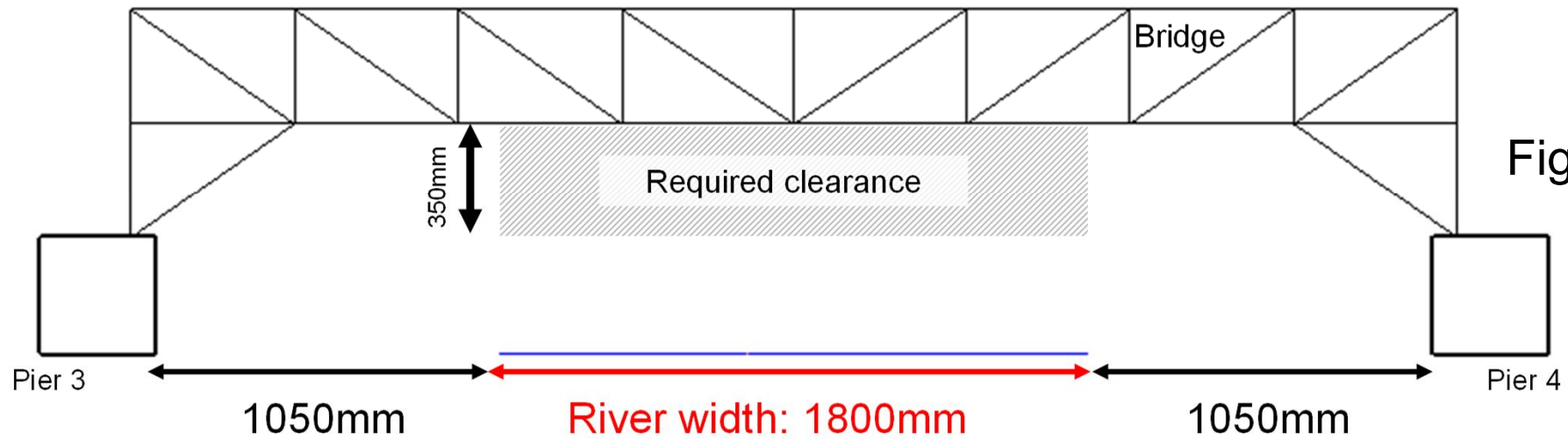
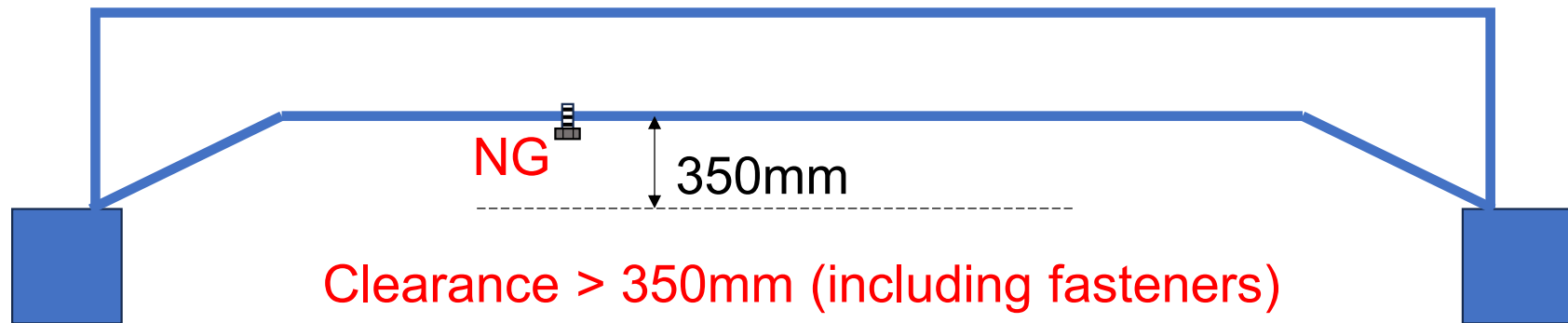


Fig.2.4(b)



Clearance > 350mm (including fasteners)

2.1 Basic Conditions

2.1.8 Vehicle clearance (traffic space)

650x300x4000 (mm)

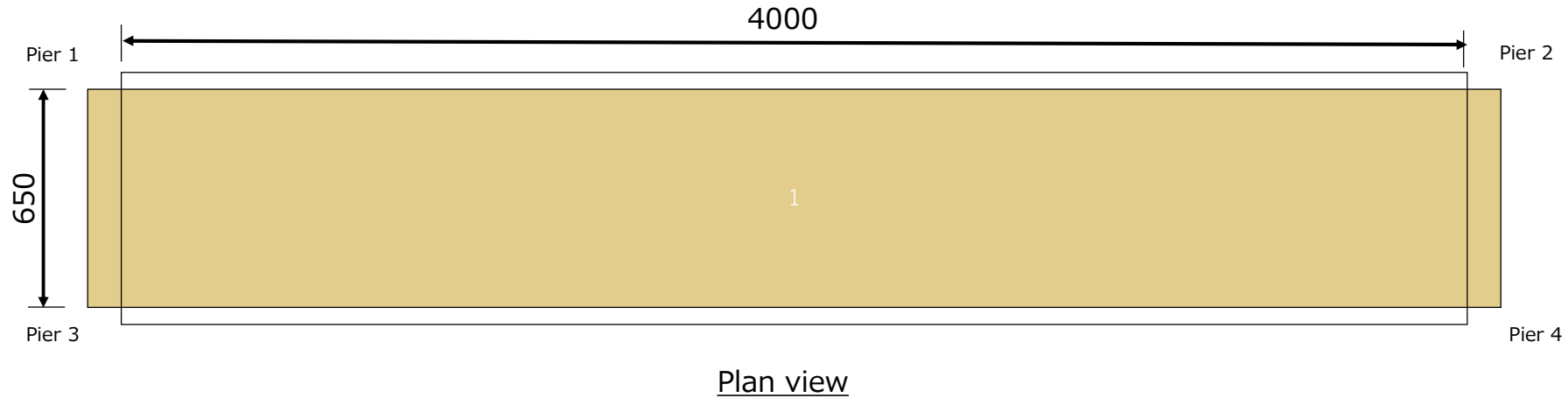
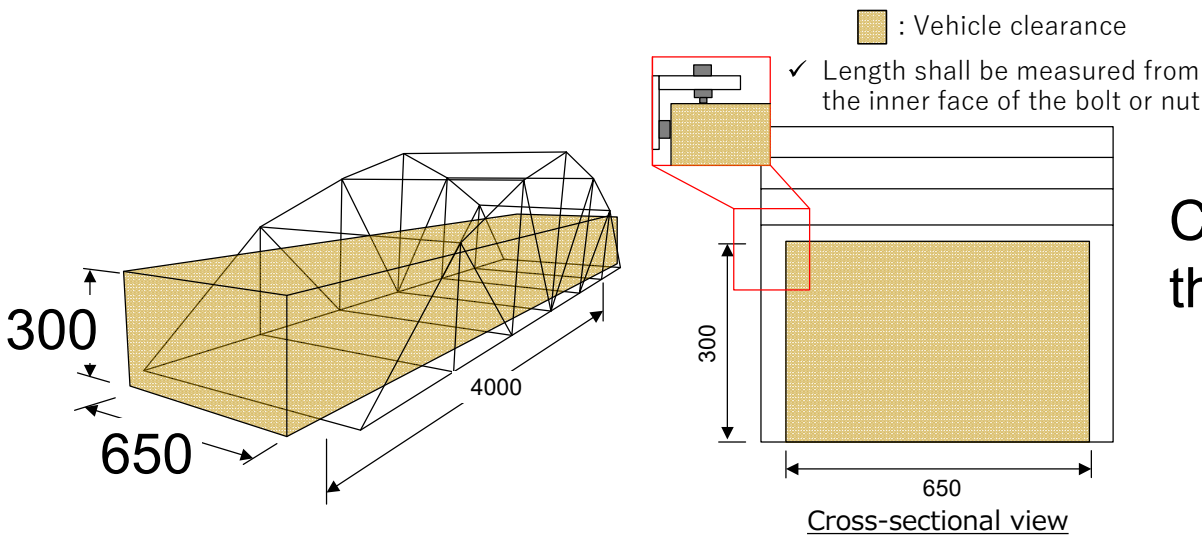


Fig.2.4(a)

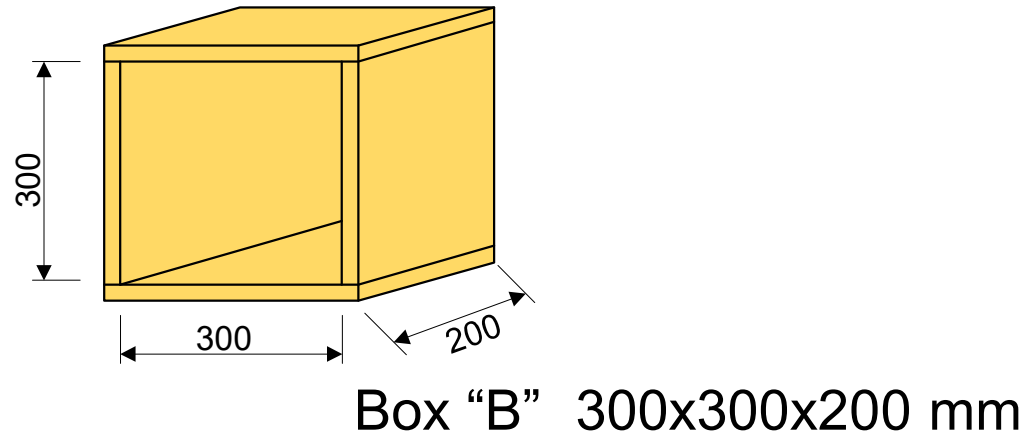
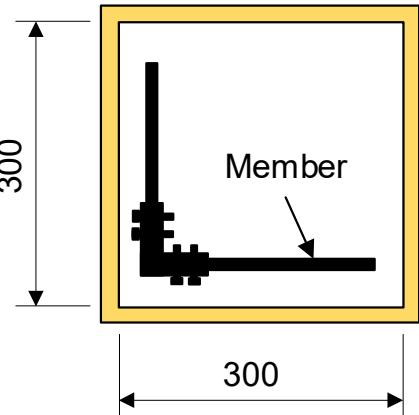
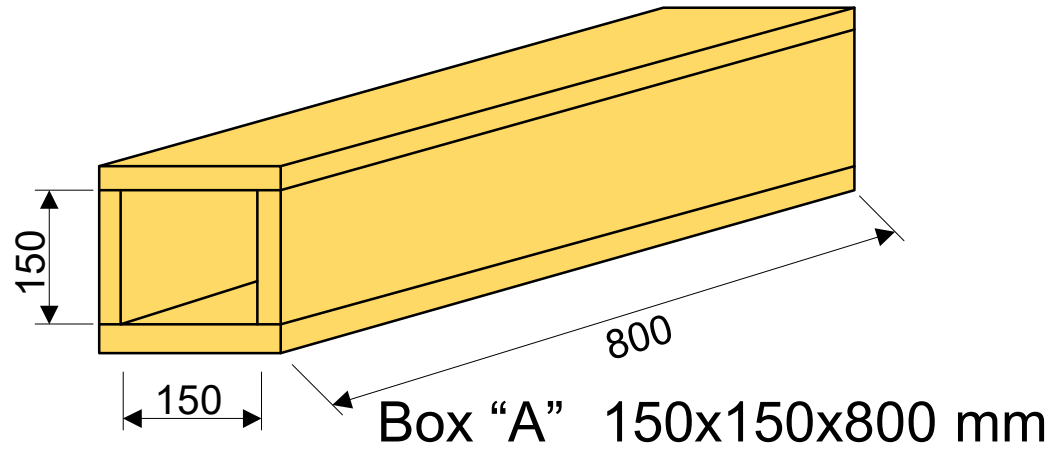
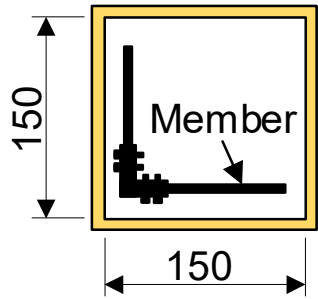


Clearance check shall be measured from the inner face of the bolt and nut

2.1 Basic Conditions

2.1.17 Bridge member size

Figure 2.5 Dimensions limits



2.1 Basic Conditions

2.1.11 Cross beams

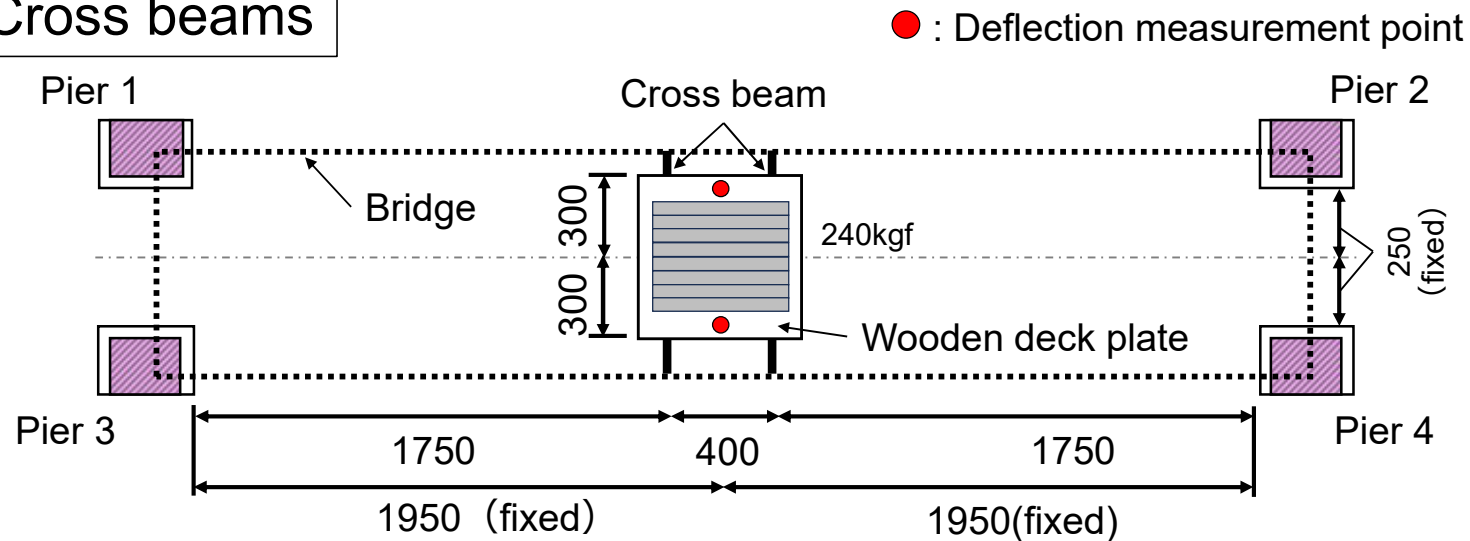
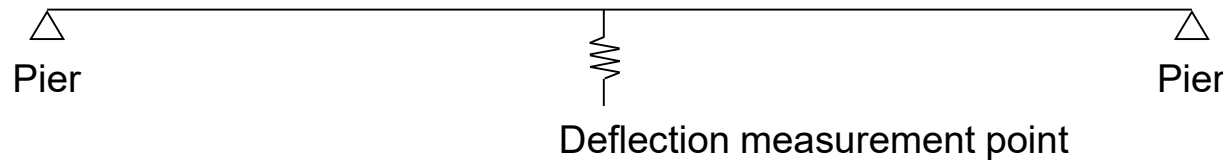


Fig.3.3

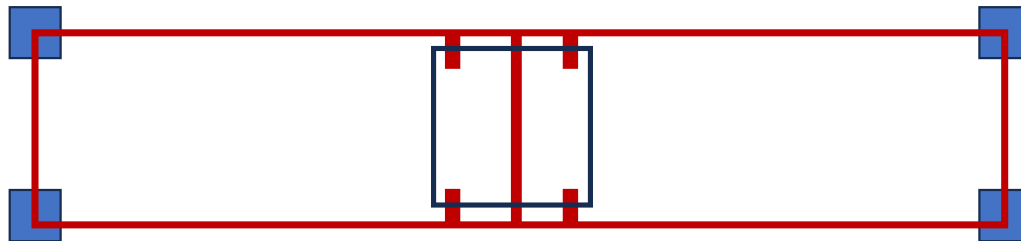
- ✓ **Wooden deck plate:** fixed in both longitudinal and transverse directions
- ✓ **Stringers of the wooden deck plate:** oriented perpendicular to the bridge axis
- ✓ **Cross beams:** installed as shown in the figure



- The deck must be supported by two cross beams
- The deck must not touch the bridge except the supported two cross beams

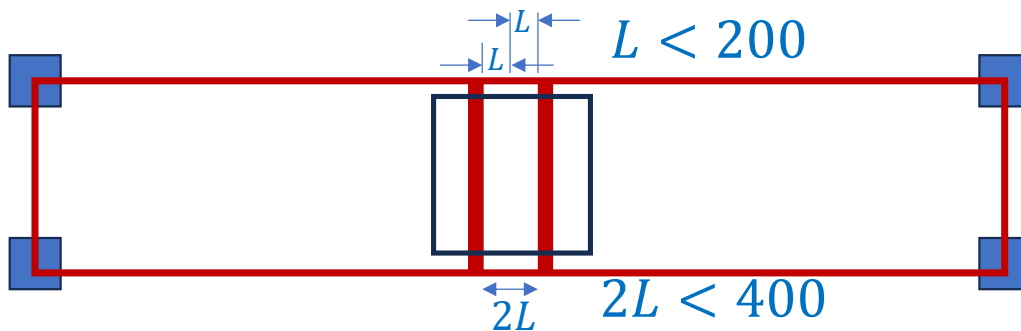
2.1 Basic Conditions

2.1.11 Cross beams to support the deck plate



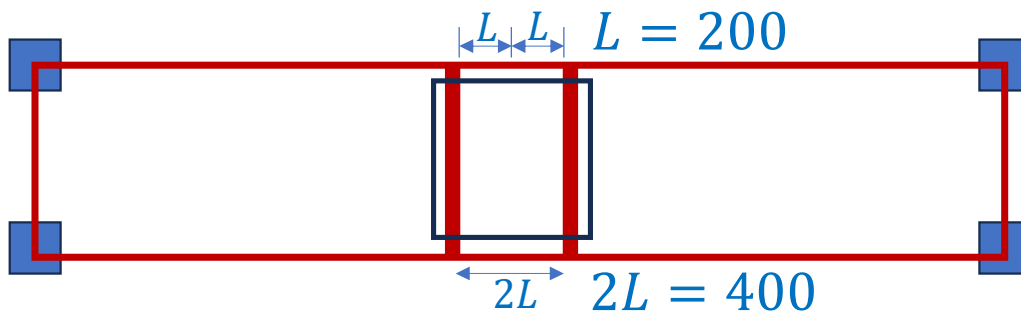
NG

No two cross beams



NG

Two cross beams but the $L < 200$ mm

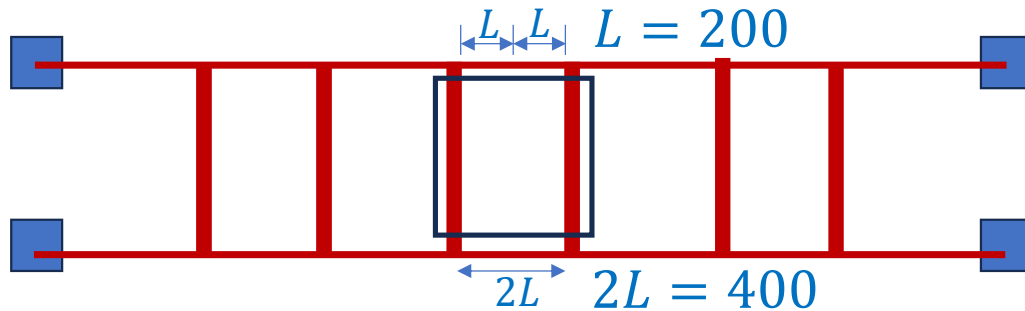


OK

Two cross beams and $L = 200$ mm

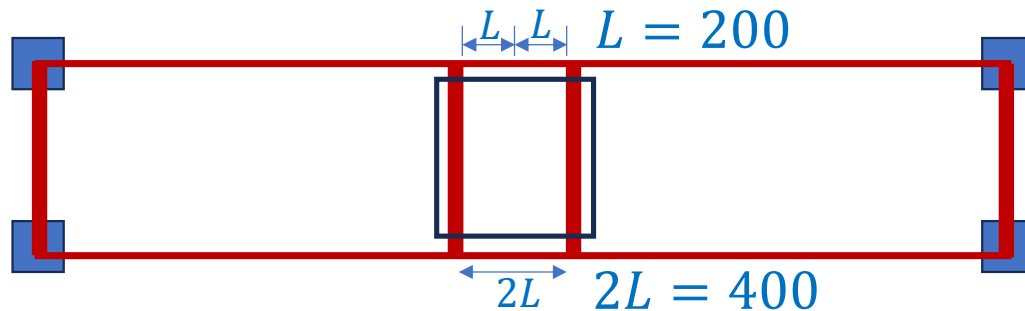
2.1 Basic Conditions

2.1.13 Minimum number of cross beams : 6



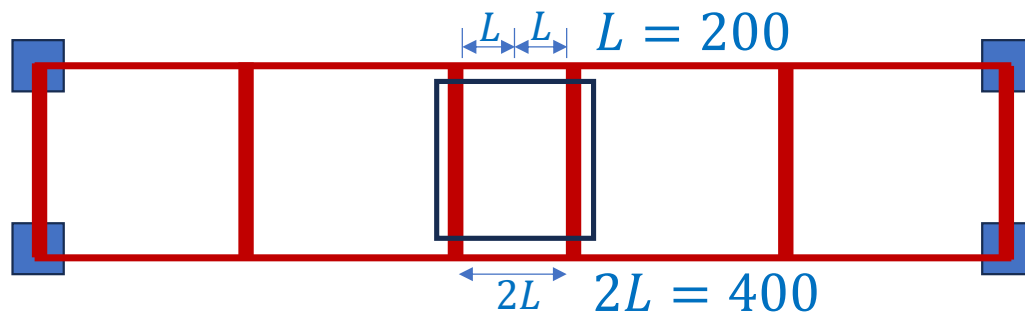
OK

Six cross beams but no end cross beams



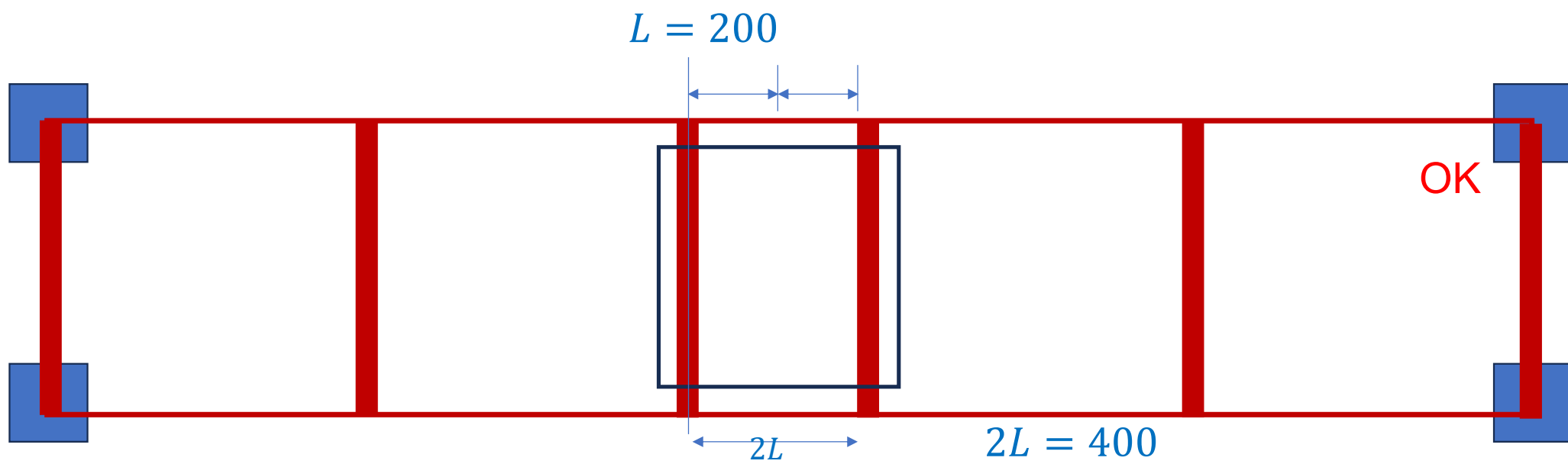
NG

Four cross beams



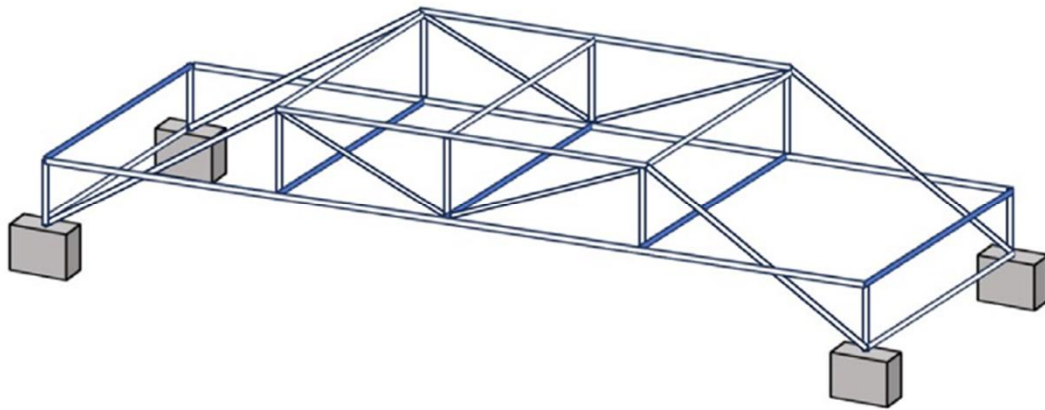
OK

Two beams to support the deck
Two beams at the both ends
6 cross beams

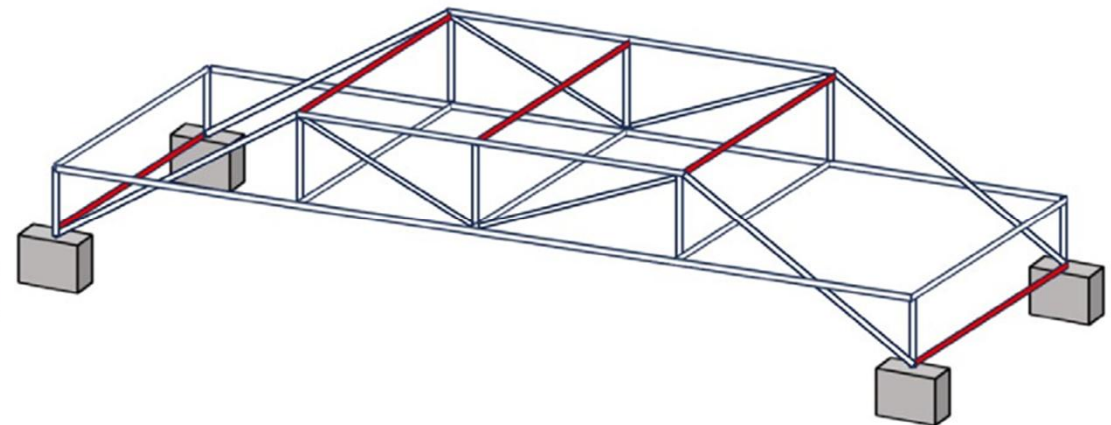


2.1 Basic Conditions

Arrangement of cross beams
(Not mentioned in the rules)



Blue : regarded as cross beams



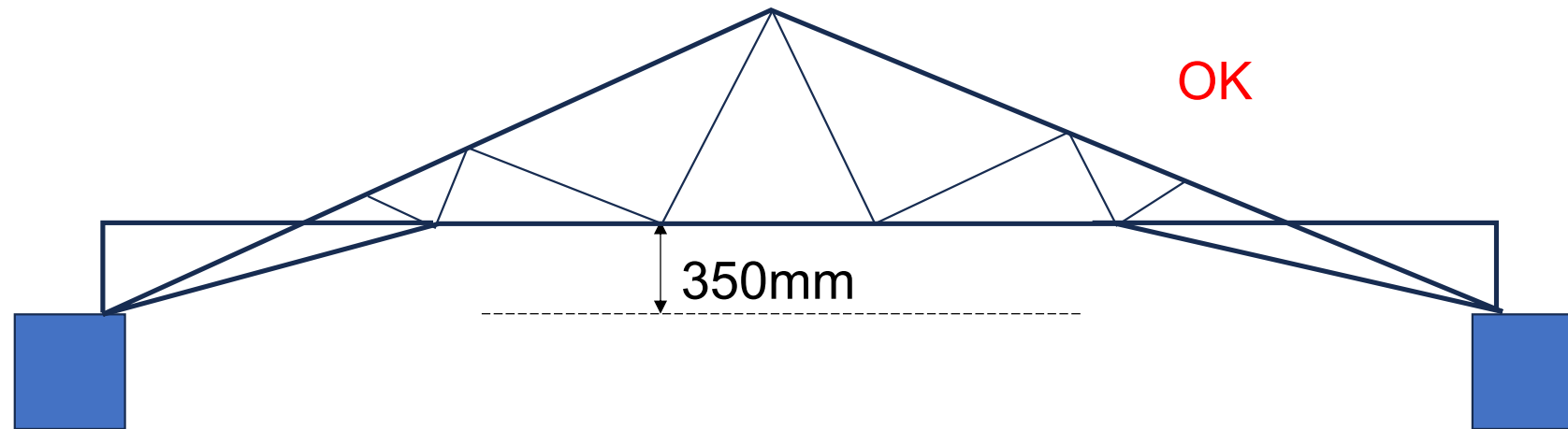
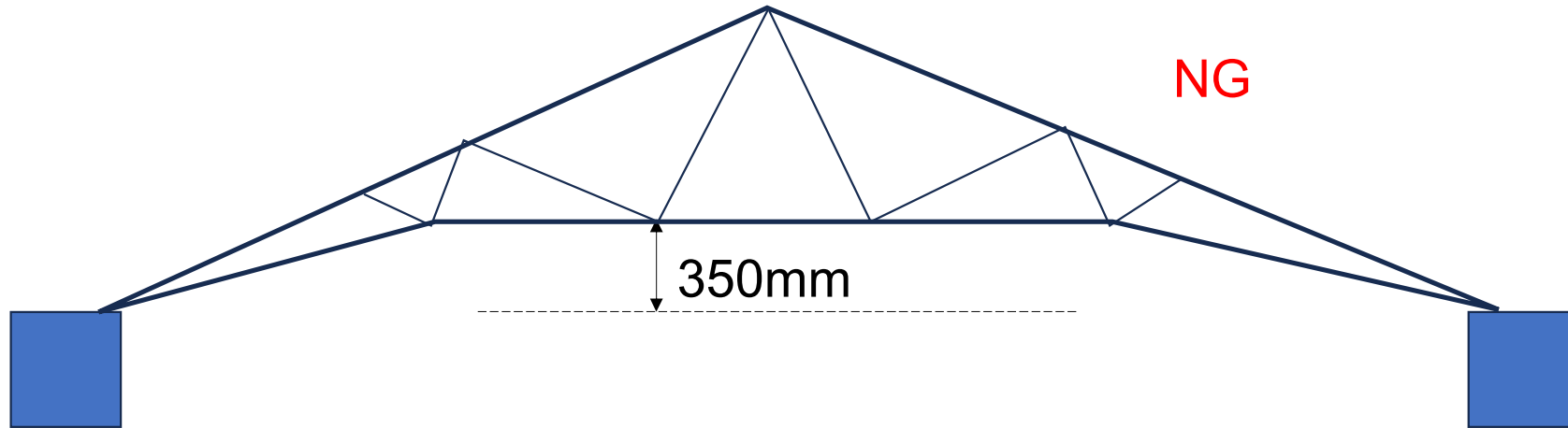
Red : not as cross beams

- Cross beams must be arranged at the height of deck
- Cross beams must be perpendicular to the bridge axis (Fig.3.3)

2.1 Basic Conditions

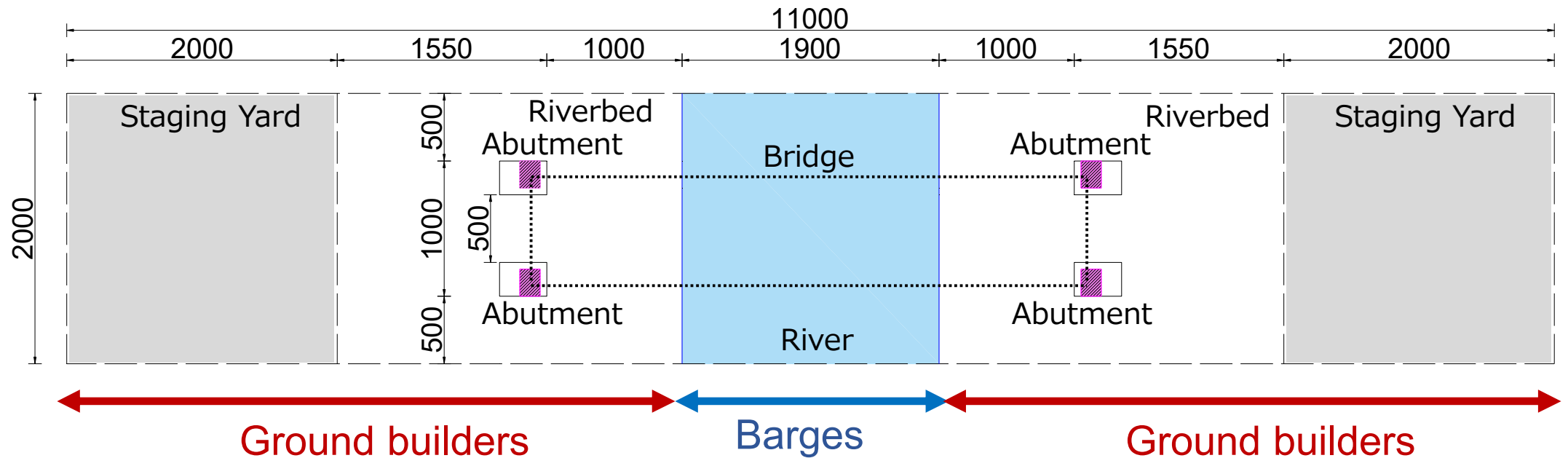
2.1.9 Vehicle traveling surface must be no gradient

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3.2.4 Builders “Ground builders and Barges”

- Builders = “Ground builders” + “Barges”
- The max num of builders (“Ground builders + Barges”) = 7
- Ground builders can work in “Staging yard and Riverbed”
- Barges can work only in “River”



3.2.4 A site supervisor

- An on-site supervisor can give advices to his or her team.
- Instructions or advices from persons other than erection builders and site supervisors are prohibited(6.4.8).



Ground builders and Barges in scoring

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4.2.1, 4.2.2

$Cc = (\text{Total number of Builders} + \text{Total construction time (min)}) \times 20$

Total number of Builders

$= (\text{Number of Ground builders}) + (\text{Number of Barges} \times 1.5)$

If a site supervisor is arranged, one person shall be added to the total.

Example : Team "X"

1 site supervisor + 4 ground builders + 1 barge = 6.5 (Total number of builders)

3.2.5 Erection starts

a) PERMITTED ITEMS

MEMBERS
TEMPORARY MEMBERS
FASTENERS
TOOLS
ONLY FASTENERS
PAPER CUP
TEMPORARY MEMBERS

b) PLACEMENT & HANDLING

i. MEMBER
NO TOUCHING (Members)

ii. CONTACT ALLOWED (Fasteners)

iii. EMPTY POUCHES ONLY
NO TOOLS IN POUCH

c) WAITING POSITION

HANDS-OFF POSITION

d) BARGE & HANDOVER

RIVER AREA WAIT

START

TOOL HANDOVER (After Start)

e) JUDGE CONFIRMATION

JUDGE

JUDGE

JUDGE

ALL CONFIRMED! START & TIMING

- Barges will start in the river.
- Barges must not have anything except safety equipment when construction starts.

3.2.5 Erection completion

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- Barges must remain in the river area when completion.
- No items (tools, fasteners, temporary members etc.) shall be left on the piers.

3.2.6 Erection rules

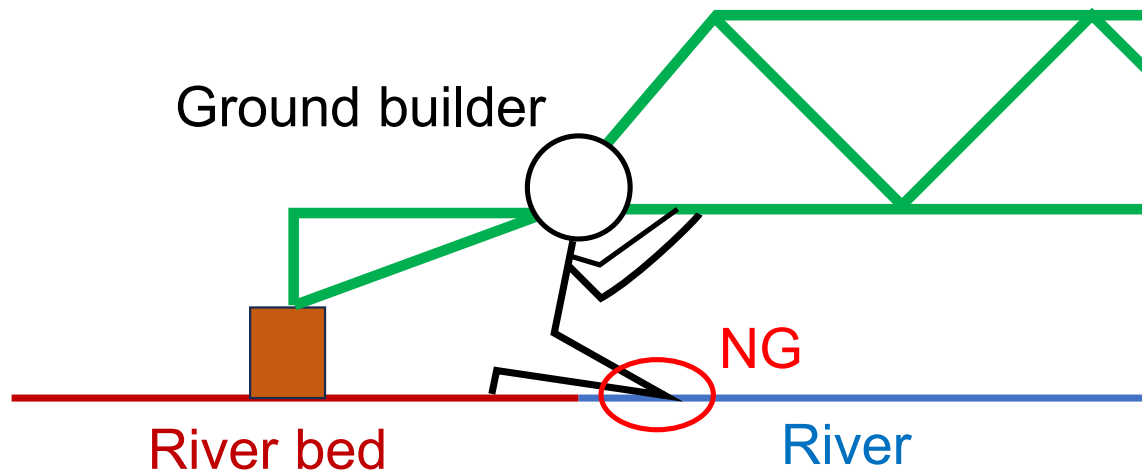


A single builder can carry one bridge member.



Two builders can carry three-rigidly-connected bridge members (a construction block)

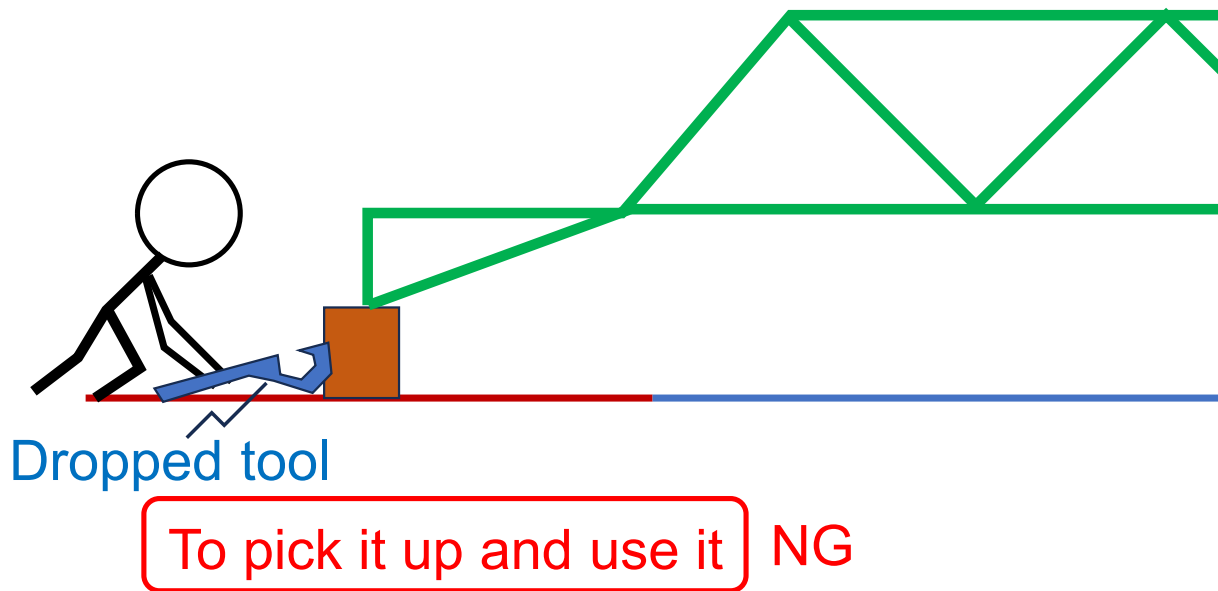
Erection rules (6.4.6 & 6.4.7)



- Kneeling in the river is NOT permitted (Ground builders)
- Kneeling in the river bed is NOT permitted (Barges)
- Ground builders cannot touch the river.
- Barges cannot touch the river bed.

3.2.12 Prohibited acts in erection

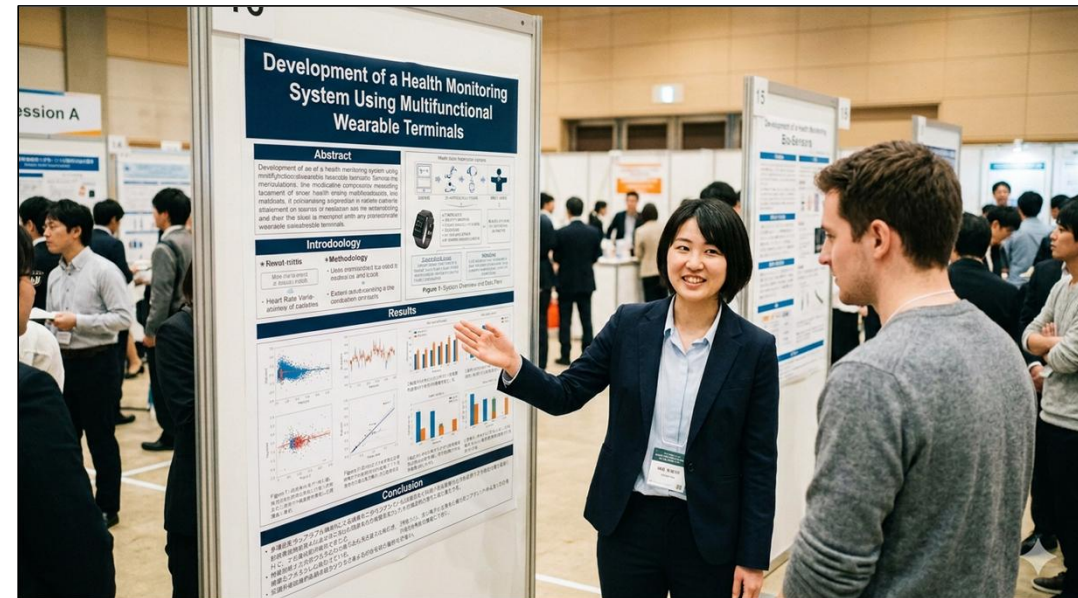
22



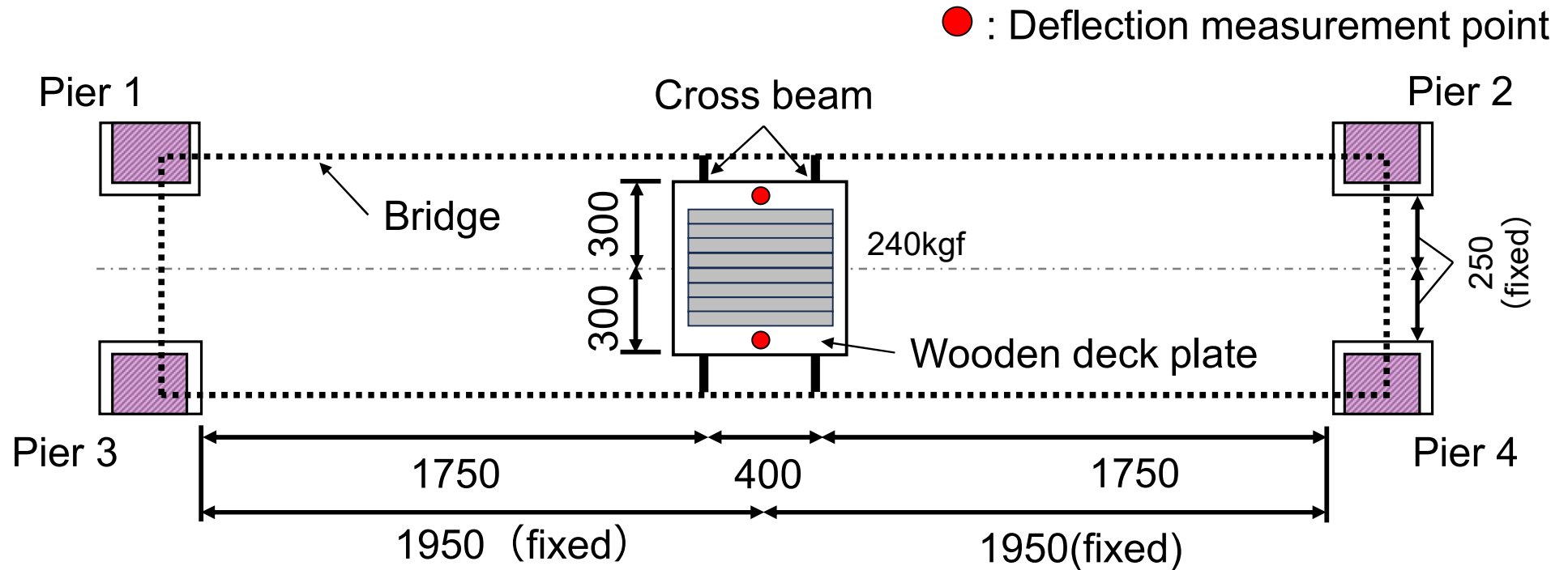
6. Reusing dropped tools/connectors. **You may only reuse them if all spares have been used up and you have notified the judge. (must declare to judge).**

3.4 Presentation

- 2026 competition will hold a poster presentation instead of oral one.
- The poster file for Presentation Competition must be uploaded **by August 7 in PDF format.**
- The poster size must be A0 size or smaller in portrait orientation.
(A0 : W 841mm x H 1189 mm)

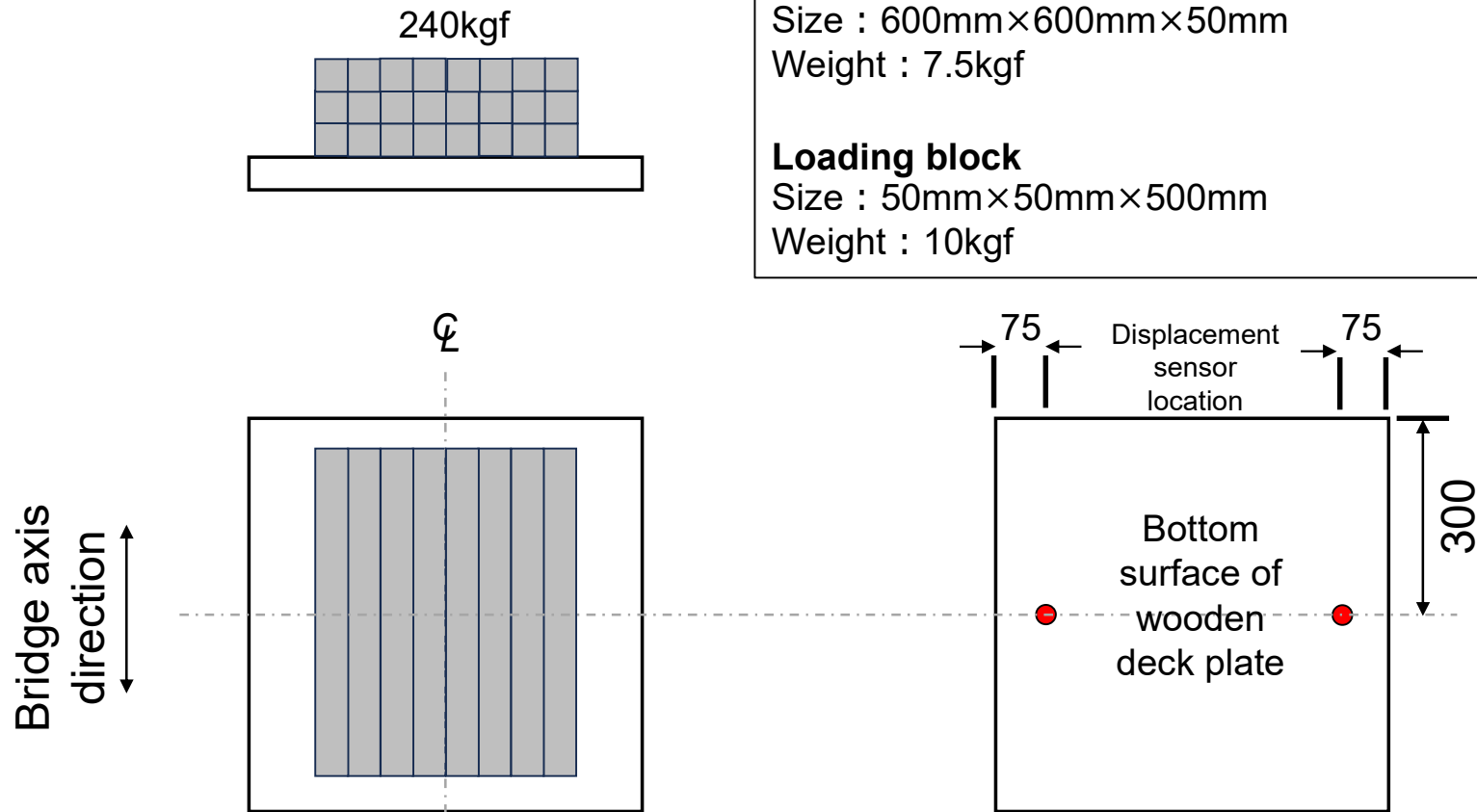


3.5 Loading test



- Deflection will be measured at the lower side of the wooden deck plate.
- 240kgf load will be given

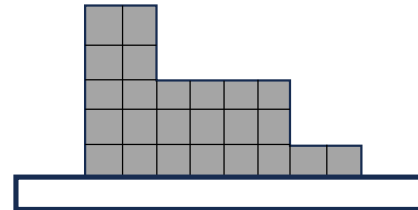
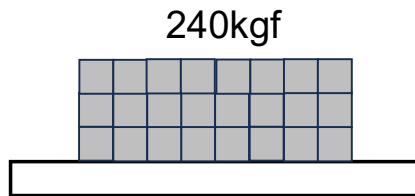
3.5 Loading test



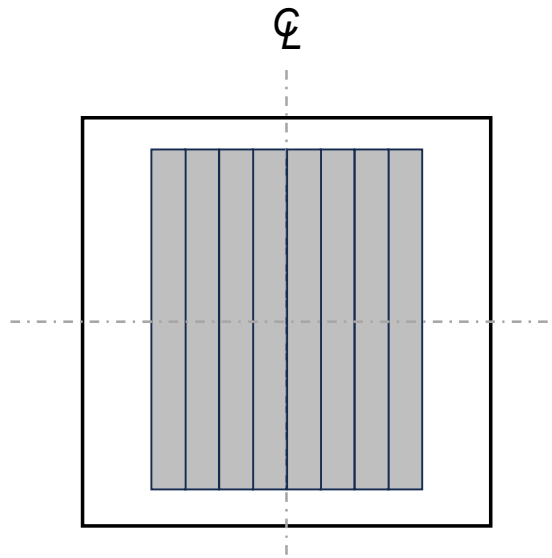
- Loading weight is 24 rectangular steel bars
- Place 8 bars each of three layers
- The bars must be oriented along the bridge axis

3.5 Loading test

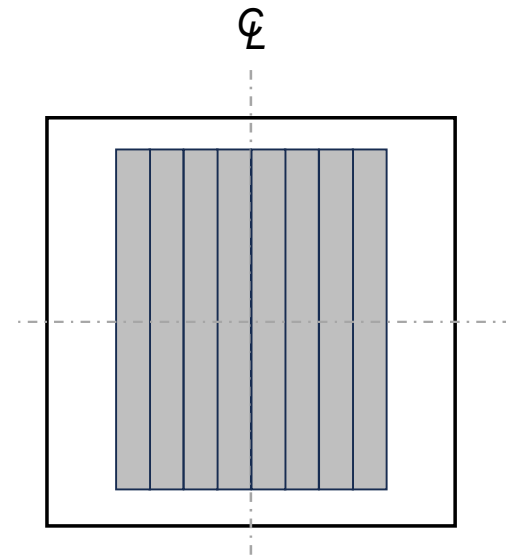
240 kgf excentric loading



Bridge axis
direction



OK



NG

4.3 Structural Points Cs

$$C_S(\text{points}) = \text{Bridge Weight}(\text{kgf}) \times 10 + \delta \times 100$$

$$\delta = \begin{cases} 0 & (4 \leq D \leq 6) \\ |D - 5| & (D < 4 \text{ or } 6 < D) \end{cases}$$

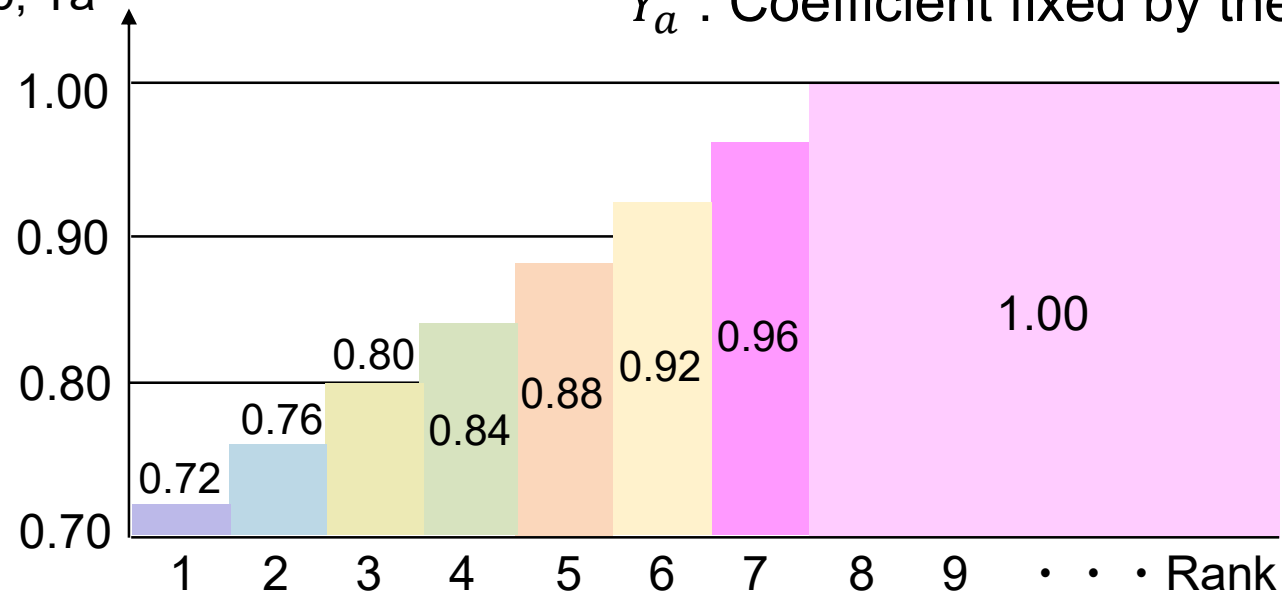
4.6 Overall points

$$\text{Overall Points} = (0.7 \times C_S + 0.3 \times C_C) \times Y_P \times Y_A$$

Coefficient
 Y_p, Y_a

Y_p : Coefficient fixed by the presentation ranking

Y_a : Coefficient fixed by the aesthetic ranking



Example : Team "X"

$C_s=600$, $C_c=400$, Presentation=1st, Aesthetics=3rd

Overall Points = $(0.7 \times 600 + 0.3 \times 400) \times 0.72 \times 0.80 = 311.0$