

香港特別行政區政府

The Government of the Hong Kong Special Administration Region

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14 March 2011

Ms Annette LAM
Clerk to Bills Committee
Legislative Council Building
8 Jackson Road, Central

Dear Ms LAM,

**Bills Committee on Buildings (Amendment) Bill 2010
Administration's Response to Follow-up Issues**

In response to the discussions at the meeting of the Bills Committee on the Buildings (Amendment) Bill 2010 (the Bill) on 1 March 2011, we are pleased to provide below information in relation to the matters about which Members enquired.

Signboard Control System

Eligibility Criteria and Technical Standards

At the meeting of the Bills Committee on 1 March 2011, Members asked for the Administration's assessment regarding the estimated number of signboards that will be covered under the signboard control system and can be retained. Members also asked about the details of the technical standard to be applied.

As explained at the meeting, if the specification of an unauthorised signboard fits with that of a corresponding minor works item under the Building

(Minor Works) Regulation (Cap. 123 Sub. Leg. N), the signboard could be covered by the signboard control system, as long as a registered building professional/contractor could prove that the signboard has met the technical standard of the respective minor works item. A list of signboard-related minor works items is at **Annex A**. The detailed technical requirements and a sample standard plan as published in the Technical Guidelines on Minor Works Control System are at **Annex B**.

Estimated Number of Unauthorised Signboards

Based on data obtained by the Buildings Department (BD) in a sample survey, we estimate that there are 190 000 signboards in the territory, most of which are unauthorised (i.e. without BD's approval and consent). Based on the sample data, it is estimated that about 15% of these signboards (i.e. about 28 000) would encounter significant difficulty when they are required to be strengthened to meet the required standard. These signboards would have to be demolished eventually. For the remaining unauthorised signboards, it is estimated that about half of them (i.e. about 80 000) are up to the standard required and do not require strengthening works for joining the signboard control system. As regards the remaining half (i.e. about 80 000), they will require minor repair/strengthening works before they can join the system. Minor repair/strengthening works include addition of guy wires as well as supporting channels or anchors, all of which could be carried out by registered minor works contractors for the relevant minor works items. The BD will conduct a stock-taking exercise of all unauthorised building works (UBWs) on the exterior of buildings in Hong Kong. We will have a better picture on the actual number of unauthorised signboards and their status upon the completion the exercise.

Implications on Deeds of Mutual Covenant

Members also asked whether implementation of the proposed signboard control system would have any impact on the rights of owners' corporations (OCs) and building owners under a building's deeds of mutual covenant (DMCs) regarding action to demand the operator of an unauthorised signboard to demolish the same. It should be noted that although an unauthorised signboard which has already been constructed at the relevant date may join the proposed signboard control system by way of submission to the Building Authority (BA) of the relevant certificates certifying the safety etc. of the signboard, the signboard remains an unauthorised signboard under the Buildings Ordinance

(Cap. 123) (BO) since it was erected without obtaining the BA's approval and consent required under section 14(1) of the BO. The fact that BA would not take enforcement action under section 24 or section 24C of the BO for the relevant five-year period does not mean that the signboard is authorised. Whether the fact that the unauthorised signboard has joined the proposed signboard control system will affect enforcement of the DMC by the owners or OC will depend on the terms and conditions of the DMC and the circumstances of the case. The DMC is a private contract between the co-owners of a building. If there is a provision in the DMC to the effect that no owner may convert any of the common areas to his own use and benefit unless the consent of the owners/OC is obtained, the erection of a signboard on the common part of a building without the consent of the owners/OC would be a breach of the DMC. Whether or not the signboard has joined the proposed signboard control system is a separate matter, and should not affect enforcement of the DMC.

Under the minor works control system, the plans and details of signboards completed in accordance with the simplified requirements under the system will be made available for public inspection through the BD's Building Information Centre or Building Records Access and Viewing On-line (BRAVO) System. Building owners and OCs may enquire about such information on building works completed in common areas. As a measure to facilitate the BD's enforcement against abandoned signboards, following a similar practice adopted in the minor works control system, we will include a note in the specified form for the signboard control system to remind the owner of the signboard to seek prior agreement from the concerned OC/other owners in case the unauthorised signboard is erected on the common parts of the building. We will also ask, in the specified form, for the particulars of the person for whom the signboard is to be erected for the record.

Yours sincerely,



(Daniel Fong)
for Secretary for Development

c.c.

Director of Buildings
Department of Justice

Items of Minor Works relating to Erection of Signboards

Class I

- 1.20. Erection or alteration of any projecting signboard, provided that—
- (a) the signboard does not consist of stone;
 - (b) the works do not result in any additional load to any cantilevered slab;
 - (c) the works do not involve the alteration of any other structural elements;
 - (d) the display area of the signboard is more than 10 m² but not more than 20 m²;
 - (e) no part of the signboard projects more than 4.2 m from the external wall to which it is fixed; and
 - (f) the thickness of the signboard is not more than 600 mm.
- 1.21. Erection or alteration of any signboard on the roof of a building, provided that—
- (a) the signboard does not consist of stone;
 - (b) the works do not result in any additional load to any cantilevered slab;
 - (c) the works do not involve the alteration of any other structural elements;
 - (d) the display area of the signboard is not more than 20 m²;
 - (e) no part of the signboard projects beyond the external wall of the building;
 - (f) the thickness of the signboard is not more than 600 mm; and
 - (g) the distance between any part of the signboard and the level of the roof is not more than 6 m.
- 1.22. Erection or alteration of any wall signboard, provided that—
- (a) the works do not result in any additional load to any cantilevered slab;
 - (b) the works do not involve the alteration of any other structural elements;
 - (c) if the signboard comprises a display system consisting of light emitting diodes, the display area of the signboard is

more than 5 m² but not more than 20 m²;

(d) if the signboard does not comprise any display system consisting of light emitting diodes, the display area of the signboard is more than 10 m² but not more than 40 m²; and

(e) if the distance between any part of the signboard and the ground is more than 6 m, the signboard does not consist of stone.

1.23. Erection or alteration of any outdoor signboard fixed on-grade (other than the construction of a spread footing), provided that—

(a) the display area of the signboard is not more than 20 m²;

(b) the thickness of the signboard is not more than 600 mm;

(c) the distance between any part of the signboard and the ground is not more than 6 m; and

(d) the works do not fall within the description of item 2.21.

Class II

2.18. Erection or alteration of any projecting signboard, provided that—

(a) the signboard does not consist of stone;

(b) the works do not result in any additional load to any cantilevered slab;

(c) the works do not involve the alteration of any other structural elements;

(d) the display area of the signboard is not more than 10 m²;

(e) no part of the signboard projects more than 4.2 m from the external wall to which it is fixed;

(f) the thickness of the signboard is not more than 600 mm; and

(g) the works do not fall within the description of item 3.16.

2.19. Erection or alteration of any wall signboard, provided that—

(a) the works do not result in any additional load to any cantilevered slab;

(b) the works do not involve the alteration of any other structural elements;

(c) if the signboard comprises a display system consisting of

light emitting diodes, the display area of the signboard is not more than 5 m²;

(d) if the signboard does not comprise any display system consisting of light emitting diodes, the display area of the signboard is not more than 10 m²;

(e) if the distance between any part of the signboard and the ground is more than 6 m, the signboard does not consist of stone; and

(f) the works do not fall within the description of item 10 of Part 2 of Schedule 2 or item 3.17.

2.20. Erection or alteration of any signboard on or hung underneath the soffit of a balcony or canopy (other than a cantilevered slab), provided that—

(a) the signboard does not consist of stone;

(b) the display area of the signboard is not more than 2 m²;

(c) no part of the signboard projects beyond the balcony or canopy;

(d) the height of the signboard is not more than 600 mm; and

(e) the thickness of the signboard is not more than 100 mm.

2.21. Erection or alteration of any outdoor signboard fixed on-grade (other than the construction of a spread footing), provided that—

(a) the display area of the signboard is not more than 10 m²;

(b) the thickness of the signboard is not more than 600 mm; and

(c) the distance between any part of the signboard and the ground is not more than 2 m.

2.22. Erection or alteration of any outdoor signboard together with a spread footing, provided that—

(a) the display area of the signboard is not more than 1 m²;

(b) the thickness of the signboard is not more than 300 mm;

(c) the distance between any part of the signboard and the ground is not more than 3 m;

(d) the works involve an excavation of a depth of not more than 500 mm for construction of the footing; and

(e) the works do not involve any excavation within area number 1 or 3 of the scheduled areas.

- 2.23. Replacement of the display surface of any signboard referred to in item 1.20, 1.21, 1.22, 1.23, 2.18, 2.19, 2.20, 2.21 or 2.22.

Class III

- 3.16. Erection, alteration or removal of any projecting signboard (including the replacement of the display surface of any signboard), provided that—
- (a) the signboard does not consist of stone;
 - (b) the works do not result in any additional load to any cantilevered slab;
 - (c) the works do not involve the alteration of any other structural elements;
 - (d) the display area of the signboard is not more than 1 m²;
 - (e) no part of the signboard projects more than 1 m from the external wall to which it is fixed;
 - (f) the thickness of the signboard is not more than 300 mm;
- and
- (g) the distance between any part of the signboard and the ground is not more than 6 m.
- 3.17. Erection, alteration or removal of any wall signboard (including the replacement of the display surface of any signboard), provided that—
- (a) the works do not result in any additional load to any cantilevered slab;
 - (b) the works do not involve the alteration of any other structural elements;
 - (c) the display area of the signboard is not more than 5 m²;
 - (d) the distance between any part of the signboard and the ground is not more than 6 m; and
 - (e) the works do not fall within the description of item 10 or 11 of Part 2 of Schedule

3.18 Signboard

MW Items	1.20	2.18	3.16
Simple Comparison of Descriptions	Erection or alteration ... projecting signboard ...		Erection, alteration or removal ... projecting signboard (including replacement of display surface ...)
	Not consist of stone;		
	No additional load to cantilevered slab;		
	Not involve alteration of structural elements;		
	Display area > 10 m ² & ≤ 20 m ² ;	Display area ≤ 10 m ² ;	Display area ≤ 1 m ² ;
	Projects ≤ 4.2 m; &		Projects ≤ 1 m;
	Thickness ≤ 600 mm.		Thickness ≤ 300 mm; &
	Not MW item 3.16.	Any part of signboard ≤ 6 m from ground.	
Other considerations	<ul style="list-style-type: none"> • BO s31(1)(aa) & PNAP APP-126 Appendix G – Control of the projections of signboard on or over streets. • PNAP APP-126 Appendices C-F, H & I – Design & construction requirements of signboard given by the BA, FSD, TD & HyD, etc. • B(P)R 30 – Natural lighting & ventilation, prescribed plane for prescribed window for adjacent building on the same site, if any, not obstructed. • PNAP APP-24 Appendix A s.C.1 & PNRC 14 – No signboard projected within 6 m of the MTR tracks. • Agreement from the IO / co-owners of the external wall / roof (if being common part) should be sought. 		
	Harbour Planning Guidelines for Victoria Harbour and its Harbour-front Areas issued by the Harbour-front Enhancement Committee – Harbour planning principles.	In case of signboard projecting ≤ 600 mm over a footpath, any part of the signboard should have a clearance ≥ 2.5 m from ground.	

B(P)R represents Building (Planning) Regulations; BA represents Building Authority; BO represents Buildings Ordinance; FSD represents Fire Services Department; HyD represents Highways Department; PNAP represents Practice Notes for Authorized Person, Registered Structural Engineers & Registered Geotechnical Engineers; PNRC represents Practice Notes for Registered Contractors & TD represents Transport Department.

MW Items	1.21	2.20	2.22
Simple Comparison of Descriptions	Erection or alteration ... signboard on roof ...	Erection or alteration ... signboard on or hung underneath the soffit of a balcony or canopy (other than a cantilevered slab) ...	Erection or alteration of any outdoor signboard together with a spread footing ...
	Not consist of stone;		
	Display area $\leq 20 \text{ m}^2$;	Display area $\leq 2 \text{ m}^2$;	Display area $\leq 1 \text{ m}^2$;
	No part projects beyond the external wall of the building;	No part projects beyond the balcony or canopy;	
	Thickness $\leq 600 \text{ mm}$;	Thickness $\leq 100 \text{ mm}$; &	Thickness $\leq 300 \text{ mm}$
	Any part of signboard $\leq 6 \text{ m}$ from the level of roof;		Any part of signboard $\leq 3 \text{ m}$ from ground;
No additional load to cantilevered slab; & Not involve alteration of structural elements	Height of signboard $\leq 600 \text{ mm}$	Involve depth of excavation $\leq 500 \text{ mm}$ for construction of the footing; & Not involve excavation within "scheduled areas" no. 1 or 3.	
Other considerations	<ul style="list-style-type: none"> PNAP APP-126 Appendices C-F, H & I – Design & construction requirements of signboard given by the BA, FSD, TD & HyD, etc. Agreement from the IO / co-owners of the external wall / roof / the ground (if being common part) should be sought. 		
	B(P)R 30 – Natural lighting & ventilation not obstructed.		Associated excavation works & footing may be MW item 1.12 or 2.11 & 1.11 or 2.10.
	<ul style="list-style-type: none"> Hong Kong Airport (Control of Obstructions) Ordinance & PNAP APP-32 – Not exceeding the airport height restrictions. If roof is a refuge floor, complied with respective requirements under MOE Code. Drainage on roof not obstructed. 	BO s31(1)(aa) & PNAP APP-126 Appendix G – Control of the projections of signboard on or over streets.	

MW Items	1.21	2.20	2.22
<p>Other considerations</p>	<ul style="list-style-type: none"> • Existing water proofing of the roof not damaged. • Harbour Planning Guidelines for Victoria Harbour and its Harbour-front Areas issued by the Harbour-front Enhancement Committee – Harbour planning principles. 		

B(P)R represents Building (Planning) Regulations; BA represents Building Authority; BO represents Buildings Ordinance; FSD represents Fire Services Department; HyD represents Highways Department; PNAP represents Practice Notes for Authorized Person, Registered Structural Engineers & Registered Geotechnical Engineers & TD represents Transport Department.

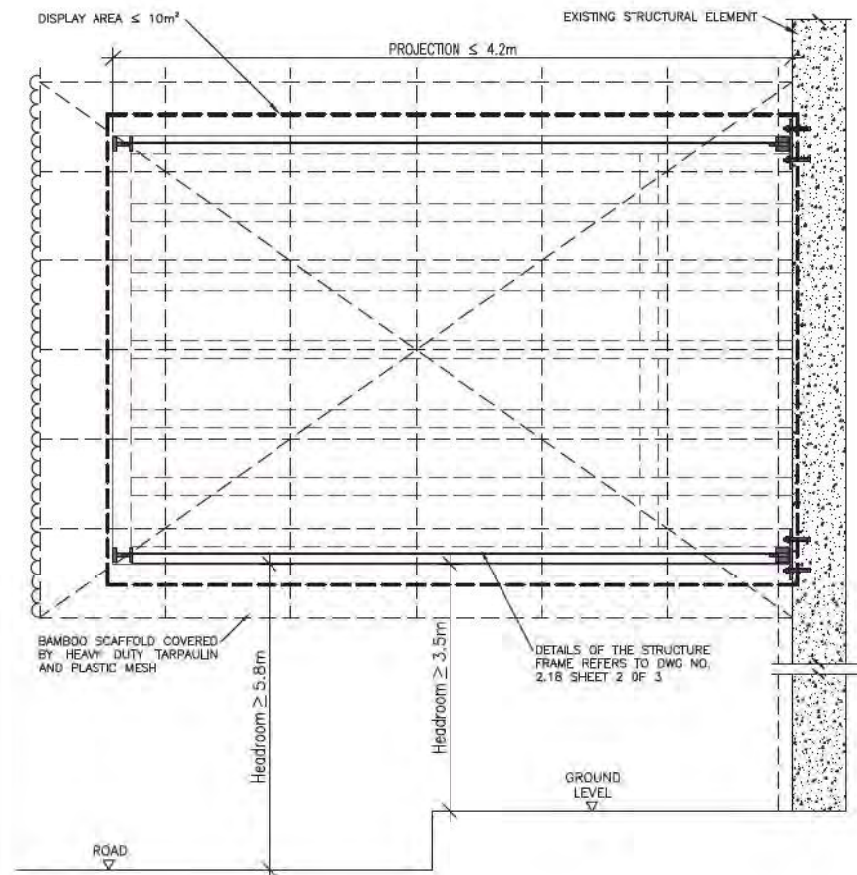


MW Items	1.22	2.19	3.17
Simple Comparison of Descriptions	Erection or alteration ... wall signboard ...		Erection, alteration or removal ... wall signboard (including replacement of display surface ...)
	No additional load to cantilevered slab;		
	Not involve alteration of structural elements;		
	With LED, display area		
	> 5 m ² & ≤ 20 m ² ;	≤ 5 m ² ;	
	Without LED, display area		
	> 10 m ² & ≤ 40 m ² ; &	≤ 10 m ² ; &	≤ 5 m ² ;
	Not consist of stone if any part of signboard > 6m from ground.		Any part of signboard ≤ 6 m from ground; &
	Not MW item 3.17 or DEW item 10 (see 6.1).	Not DEW item 10 or 11 (see 6.1).	
Other considerations	<ul style="list-style-type: none"> • BO s31(1)(aa) & PNAP APP-126 Appendix G – Control of the projections of signboard on or over streets. • PNAP APP-126 Appendices C-F, H & I – Design & construction requirements of signboard given by the BA, FSD, TD & HyD, etc. • B(P)R 30 – Natural lighting & ventilation. • Agreement from the IO / co-owners of the external wall / roof (if being common part) should be sought. • If signboard projecting ≤ 600mm over a footpath, clearance ≥ 2.5 m from ground. • Wall signboards at overhead of shopfront should have a clearance ≥ 2.5 m from ground; and should be structurally independent without supporting any roller shutter, air-conditioning unit or being used for storage. • Harbour Planning Guidelines for Victoria Harbour and its Harbour-front Areas issued by the Harbour-front Enhancement Committee – Harbour planning principles. 		

B(P)R represents Building (Planning) Regulations; BA represents Building Authority; BO represents Buildings Ordinance; DEW represents designated exempted works; FSD represents Fire Services Department; HyD represents Highways Department; LED represents light emitting diodes; PNAP represents Practice Notes for Authorized Person, Registered Structural Engineers & Registered Geotechnical Engineers & TD represents Transport Department.

MW Items	1.23	2.21	2.23
Simple Comparison of Descriptions	Erection or alteration ... outdoor signboard fixed on-grade (other than the construction of a spread footing) ...		Replacement of display surface of any signboard of MW item 1.20, 1.21, 1.22, 1.23, 2.18, 2.19, 2.20, 2.21 or 2.22.
	Display area $\leq 20 \text{ m}^2$;	Display area $\leq 10 \text{ m}^2$;	
	Thickness $\leq 600 \text{ mm}$; &		
	Any part of signboard $\leq 6 \text{ m}$ from ground.	Any part of signboard $\leq 2 \text{ m}$ from ground.	
	Not MW item 2.21		
Other considerations	<ul style="list-style-type: none"> • PNAP APP-126 Appendices C-F, H & I – Design & construction requirements of signboard given by the BA, FSD, TD & HyD, etc. • Associated excavation works & footing may be MW item 1.12 or 2.11 & 1.11 or 2.10. • Agreement from the IO / co-owners of the external wall / roof (if being common part) should be sought. 		
	Harbour Planning Guidelines for Victoria Harbour and its Harbour-front Areas issued by the Harbour-front Enhancement Committee – Harbour planning principles.		

BA represents Building Authority; FSD represents Fire Services Department; HyD represents Highways Department; PNAP represents Practice Notes for Authorized Person, Registered Structural Engineers & Registered Geotechnical Engineers & TD represents Transport Department.



GENERAL NOTES :

- The works carried out shall comply with the Buildings Ordinance and the provisions of other enactment. (Reference can be made to the examples listed in Sections 3 and 10 of the Guidelines.)
- All works shall comply with the following CoP/ standards:
 - Building (Construction) Regulations
 - Code of Practice on Wind Effects in Hong Kong 2004
 - Code of Practice for Structural Use of Steel 2005
- All structural steel to be grade S275 to BS EN 10025 and shall be hot dip galvanized to BS EN ISO 1461.
- All connections to be 5mm fillet weld all round or butt weld with weld strength, $p_w = 220 \text{ N/mm}^2$ unless otherwise specified.
- All anchor bolts to be Hilti HSA-R-M20 and shall be installed according to the manufacturer's specification.
- Existing concrete grade of column is assumed to be Grade 20 with a minimum thickness of 500mm.
- All removal of existing concrete shall be carried out by using of hand-held tools carefully.
- All existing reinforcement should not be damaged.
- All steel members shall be protected with one coat of "UNITHERM 38091" fire resistance paint with thickness of 1.5mm ($H_p/A = 175$).
- All banners should be made of non-combustible material.
- Tolerances such as lack of fit, hole diameter and dimensions etc shall be allowed in accordance with the provision of "Code of Practice for the Structural Use of Steel 2005".

DESIGN LOADS :

- Dead Load = 0.20 kN/m^2 (Cladding)
- Live Load = 0.50 kN/m^2
- Wind Load = 2.01 kN/m^2 with total pressure coeff. 2.0

PREPARATION WORKS:

- Obtain the existing design drawings/ information of the signboard for reference.
- Carry out condition survey of the parent structure/ existing condition prior to the commencement of works.
- If the signboard consists of light emitting diodes, disconnect the power to the signboard before the commencement of works.
- Obtain the original design of the approved structure for reference of any required reinstatement works.
- The structural adequacy of the supporting parent structure due to the additional installation of minor works must be checked to the satisfaction of structural requirement prior to the carrying out of minor works.
- Plastering or rendering should be removed to expose concrete face before installation of anchor bolts and base plate.

SAFETY AND PRECAUTIONARY MEASURES :

- Fence-off the working area from the public. Diversion arrangement shall be taken if necessary.
- Bamboo scaffolds details shall refer to the following figure as shown on drawing no. GN-1.
 - Figure 4 Working platform on a double-row bamboo scaffold
 - Figure 5 Bamboo scaffold for signboard

WORKING PROCEDURES :

- A. Erection
- Install the signboard as per the drawing.
 - Make good and reinstate the affected areas of the parent building.
 - Dismantle the bamboo scaffold and clean the site.
- B. Alteration
- Remove the display surface/ loose parts from the signboard.
 - Remove the defective member and replace with a new member having the same size of the existing member.
 - Make good and reinstate the affected areas of the parent building.
 - Dismantle the bamboo scaffold and clean the site.

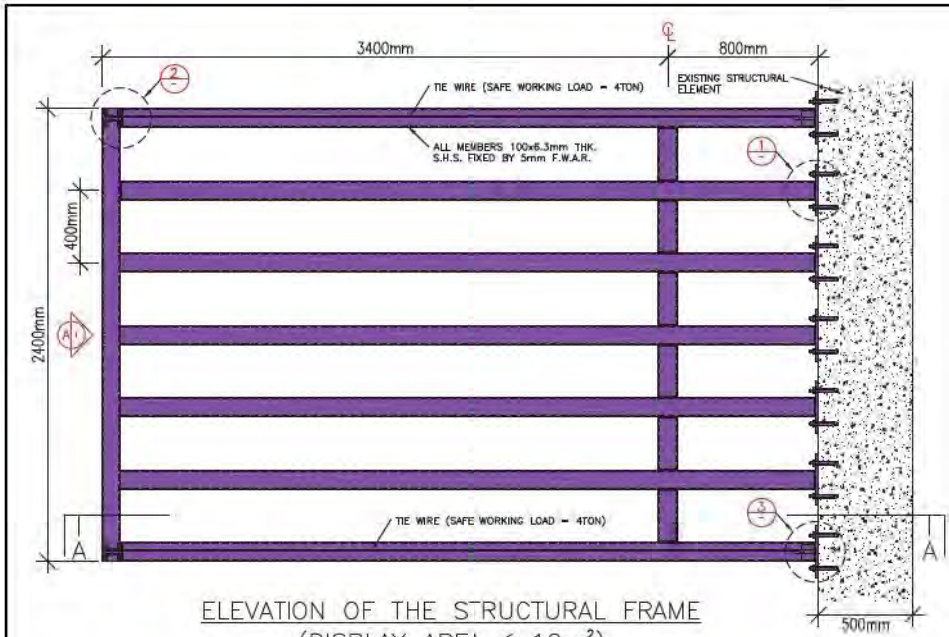
Remarks :

- This case excludes minor works item 3.16.
- The signboard does not consist of stone.

MINOR WORKS ITEM 2.18

ERECTION OR ALTERATION OF PROJECTING SIGNBOARD

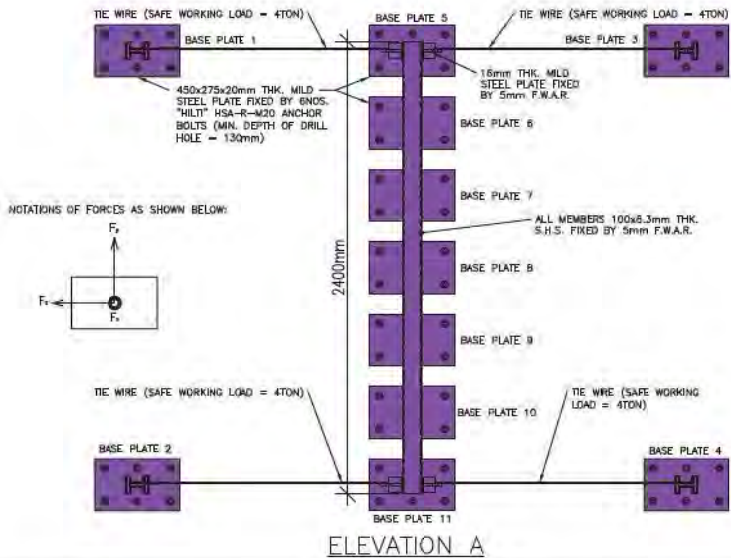
SHEET 1 OF 3



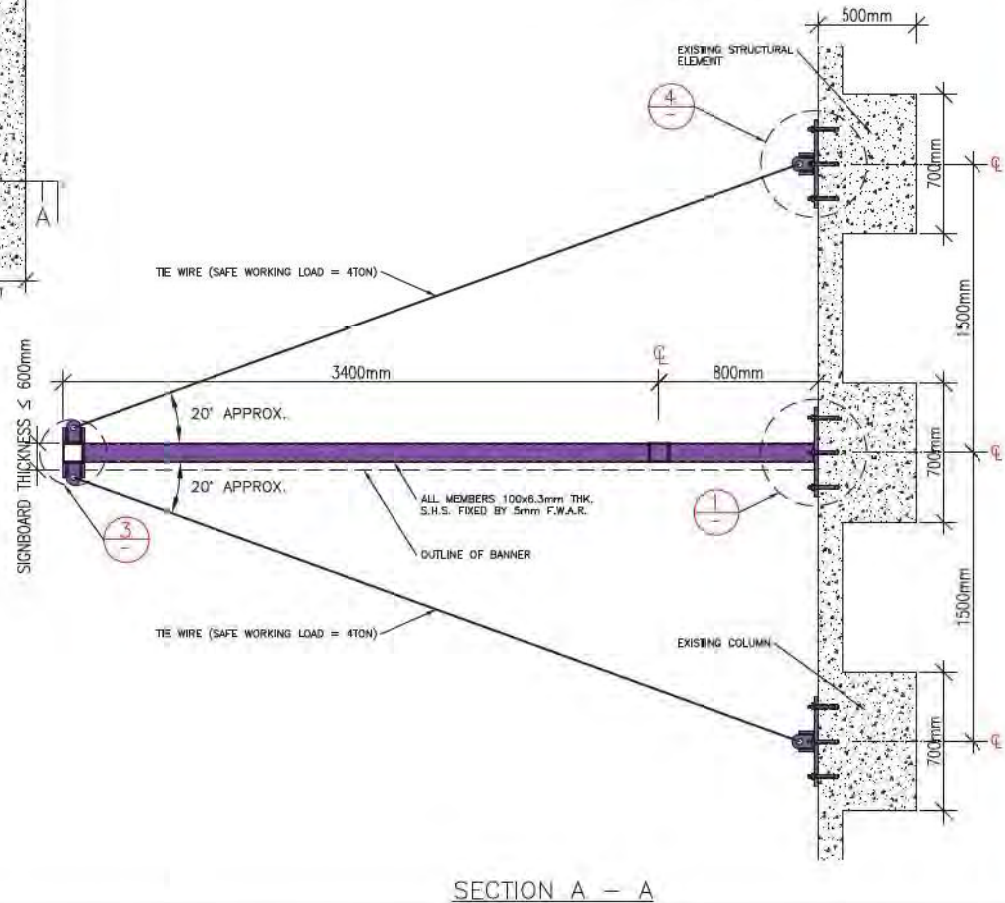
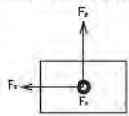
DESIGN FORCES AT BASEPLATE (UNFACTORED)
NOTATION AS SHOWN IN ELEVATION A

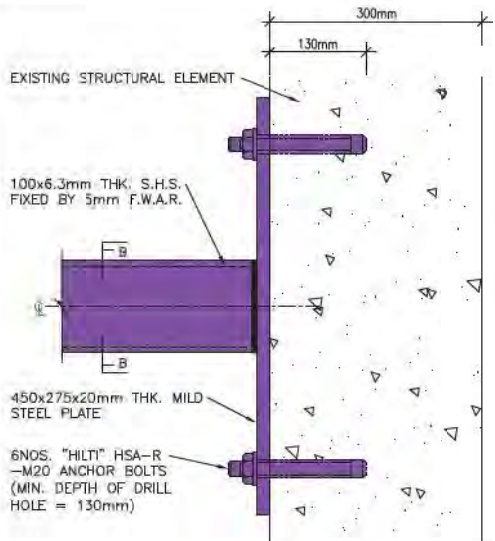
BASE PLATE	DEAD + LIVE LOADS(kN)			DEAD + LIVE + WIND LOADS(kN)		
	F _x	F _y	F _z	F _x	F _y	F _z
1 (OR 3)*	0	0	0	-27.6	0	10.1*
2 (OR 4)*	0	0	0	-27.5	0	10.1*
5	-13.0	1.3	0	9.7	1.5	2.0
6	1.8	2.0	0	7.9	2.2	2.5
7	0.5	2.0	0	-0.1	2.0	2.8
8	0	2.0	0	-1.2	2.0	2.9
9	-0.5	2.0	0	-1.1	2.0	2.8
10	-1.8	2.0	0	4.2	1.9	2.5
11	13.0	1.3	0	35.8	1.2	2.0

* Direction of F_z at baseplates 1 and 2 are opposite to baseplate 3 and 3, respectively.

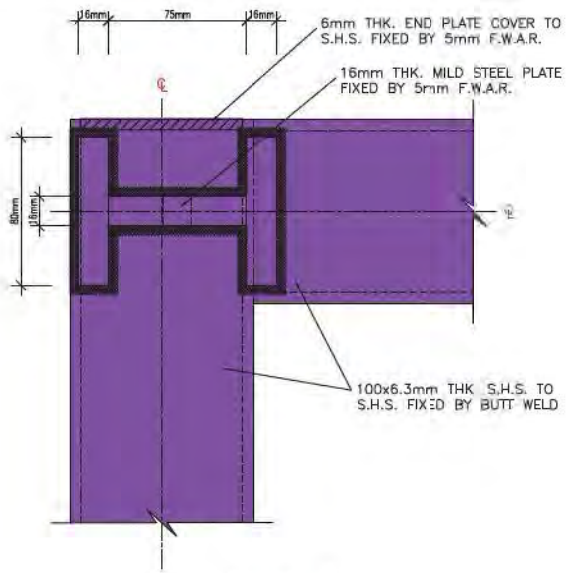


NOTATIONS OF FORCES AS SHOWN BELOW:

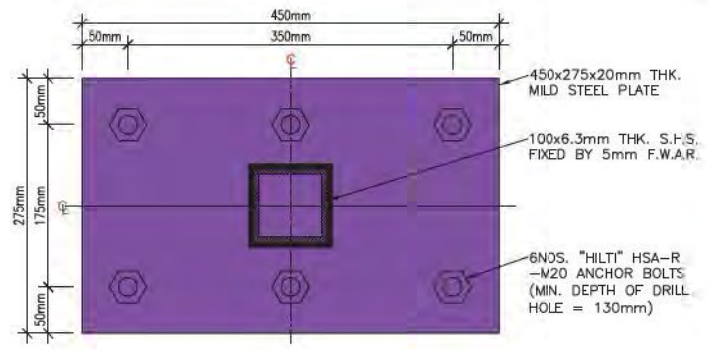




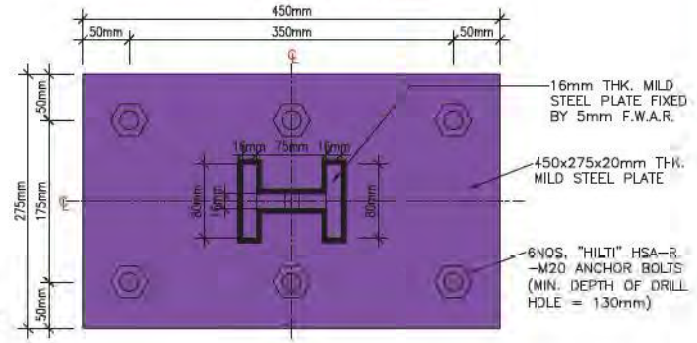
DETAIL 1



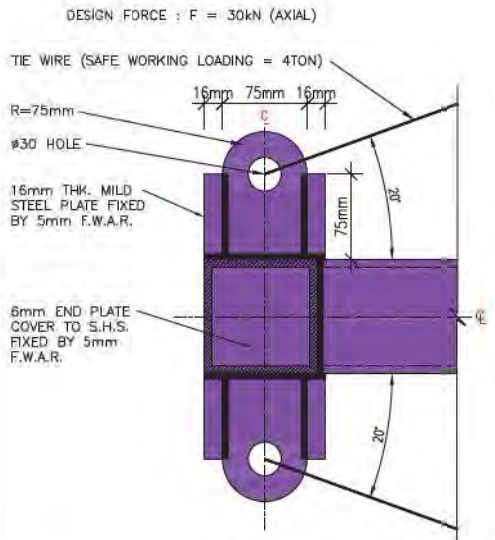
DETAIL 2



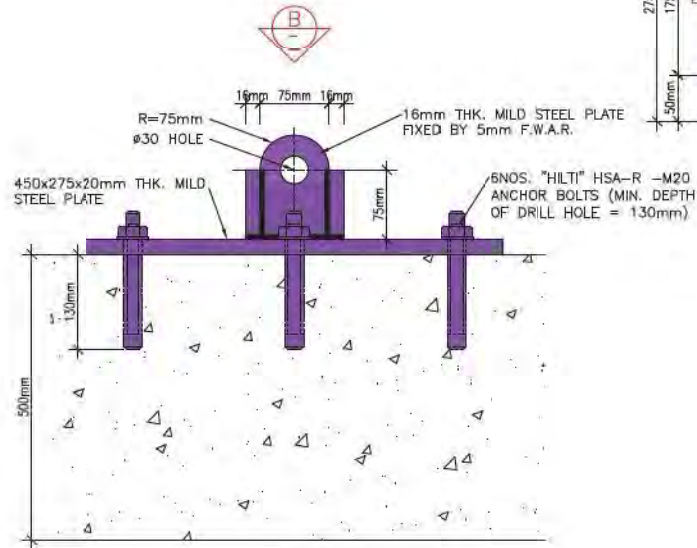
SECTION B-B



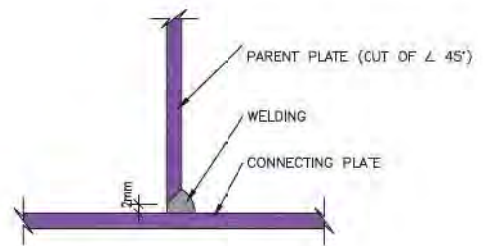
ELEVATION B



DETAIL 3



DETAIL 4

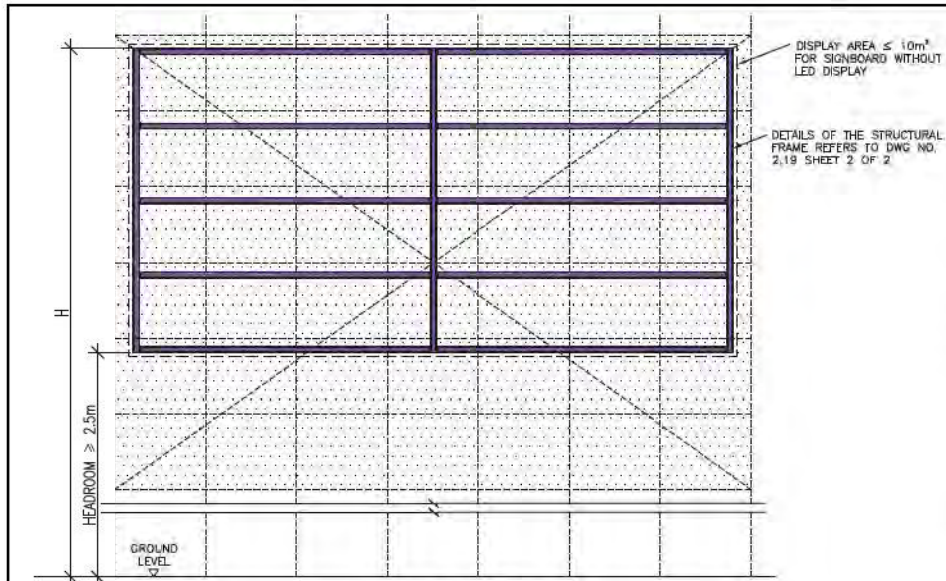


BUTT WELD DETAIL

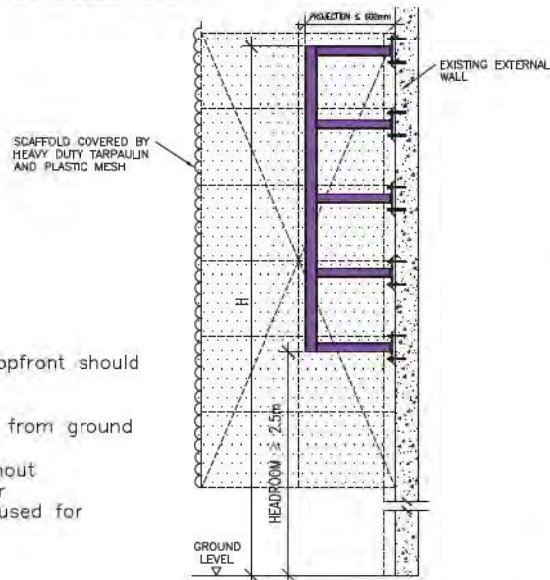
MINOR WORKS ITEM 2.18

ERECTION OR ALTERATION OF PROJECTING SIGNBOARD

SHEET 3 OF 3



FRONT ELEVATION



SIDE ELEVATION

Wall signboards at overhead of shopfront should have :

- (i) a minimum clearance of 2.5m from ground ; and
- (ii) be structurally independent without supporting any roller shutter or air-conditioning unit or being used for storage.

GENERAL NOTES :

1. The works carried out shall comply with the Buildings Ordinance and the provisions of other enactment. (Reference can be made to the examples listed in Sections 3 and 10 of the Guidelines.)
2. All works shall comply with the following CoP/ standards:
 - Building (Construction) Regulations
 - Code of Practice on Wind Effects in Hong Kong 2004
 - Code of Practice for Structural Use of Steel 2005
3. All structural steel to be grade S275 to BS EN 10210 and shall be hot dip galvanized to BS EN ISO 1461.
4. All connections to be 4mm fillet weld all round with weld strength, $p_w = 220 \text{ N/mm}^2$ unless otherwise specified.
5. All anchor bolts to be Hilti HSA-R-M12 and shall be installed according to the manufacturer's specification.
6. Existing concrete grade of wall is assumed to be Grade 20 with a minimum thickness 150mm.
7. All removal of existing concrete shall be carried out by using of hand-held tools carefully.
8. All existing reinforcement should not be damaged.
9. All steel members shall be protected with one coat of "UNITHERM 38091" fire resistance paint with thickness of 1.5mm ($H_p/A = 175$).
10. Tolerances such as lack of fit, hole diameter and dimensions e.t.c shall be allowed in accordance with the provision of "Code of Practice for the Structural Use of Steel 2005".

DESIGN LOADS :

1. Dead Load = 0.2kN/m^2
2. Live Load = 1.00kN/m
3. Wind Load = 2.86kN/m^2 with total pressure coeff. of 1.4

PREPARATION WORKS :

1. Obtain the existing design drawings/ information of the signboard for reference.
2. Carry out condition survey of the parent structure/ existing condition prior to the commencement of works.
3. Obtain the original design of the approved structure for reference of any required reinstatement works.
4. The structural adequacy of the supporting parent structure due to the additional installation of minor works must be checked to the satisfaction of structural requirement prior to the carrying out of minor works.
5. Plastering or rendering should be removed to expose concrete face before installation of anchor bolts and base plate.

SAFETY AND PRECAUTIONARY MEASURES :

1. Fence-off the working area from the public. Diversion arrangement shall be taken if necessary.
2. Bamboo scaffolds details shall refer to the following figures as shown on drawing no. GN-1.
 - Figure 4 Working platform on a double-row bamboo scaffold
 - Figure 5 Bamboo scaffold for signboard

WORKING PROCEDURES :

- A. Erection
 1. Install the signage as per the drawing.
- B. Alteration
 1. Remove the defective members and replace with a new member by using the same size as per the existing member.
 2. Dismantle bamboo scaffold and clean the site.

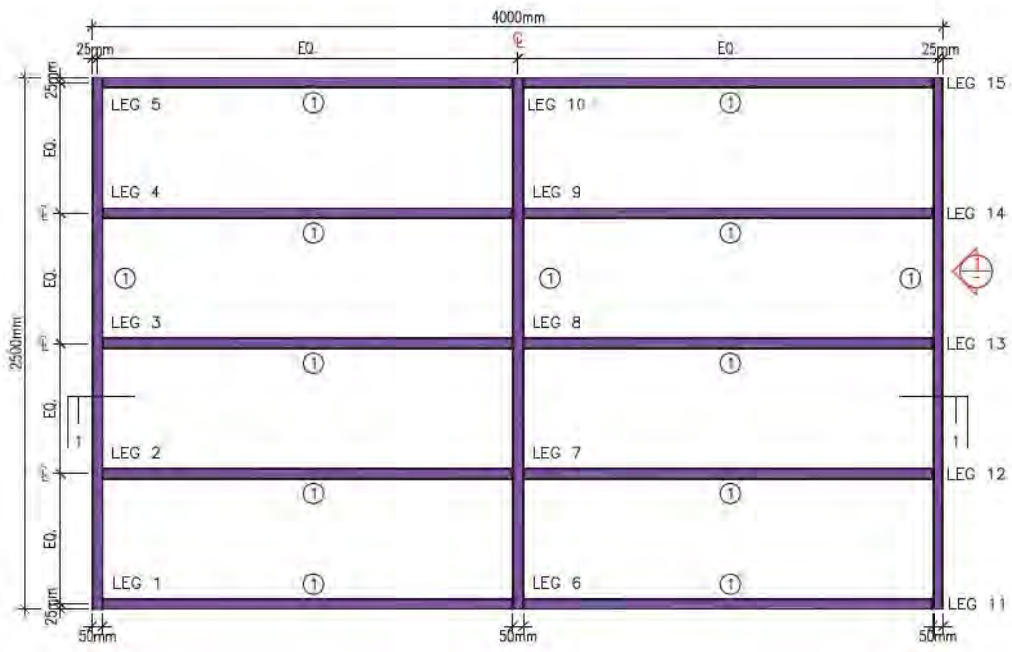
REMARKS :

1. This case excludes item 10 of the Designated Exempted Works or minor works item 3.17.
2. The signboard does not consist of stone if $H > 6\text{m}$.
3. Display area $\leq 5\text{m}^2$ if the signboard has LED display.

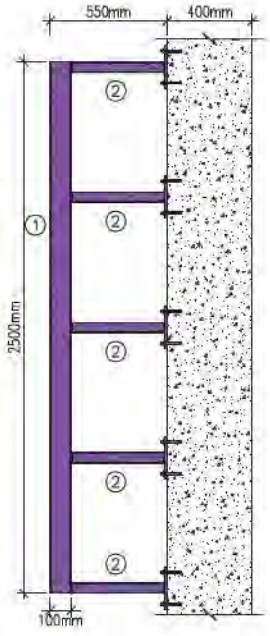
MINOR WORKS ITEM 2.19

ERECTION OR ALTERATION OF WALL SIGNBOARD

SHEET 1 OF 2

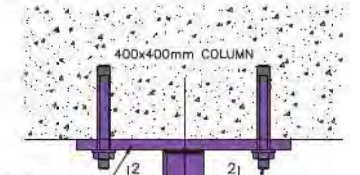


STRUCTURAL FRAME ELEVATION (NO LIGHT EMITTING DIODES & DISPLAY AREA $\leq 10m^2$)



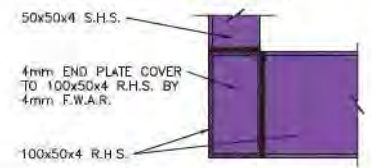
ELEVATION 1

MEMBER SCHEDULE	
①	100x50x4mm THK. R.H.S. FIXED BY FILLET WELD
②	50x4mm THK. S.H.S. FIXED BY FILLET WELD



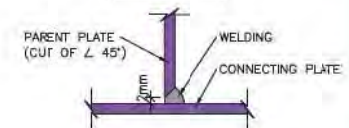
200x200x10mm THK. MILD STEEL PLATE
 50x4mm THK. S.H.S. FIXED BY F.W.A.R.
 4NOS. "HILTI" HSA-R-M12 ANCHOR BOLTS (MIN. DEPTH OF DRILL HOLE = 95mm)

DETAIL A



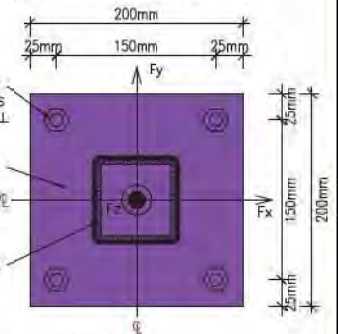
50x50x4 S.H.S.
 4mm END PLATE COVER TO 100x50x4 R.H.S. BY 4mm F.W.A.R.
 100x50x4 R.H.S.

DETAIL B



PARENT PLATE (CUT OF L 45°)
 WELDING
 CONNECTING PLATE

BUTT WELD DETAIL

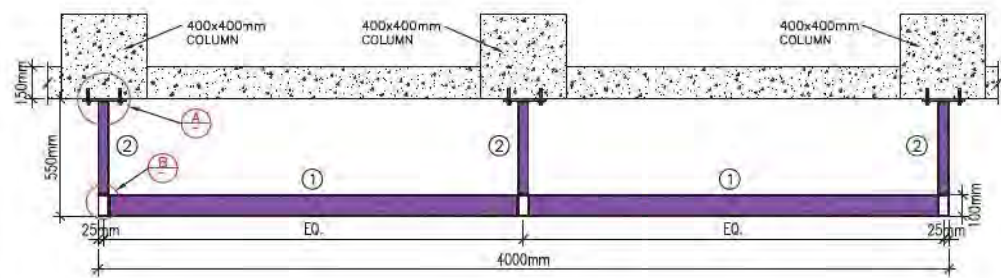


4NOS. "HILTI" HSA-R-M12 ANCHOR BOLTS (MIN. DEPTH OF DRILL HOLE = 95mm)
 200x200x10mm THK. MILD STEEL PLATE
 50x4mm THK. S.H.S. FIXED BY F.W.A.R.

SECTION 2 - 2

DESIGN FORCES (UNFACTORED LOAD):
 NOTATIONS OF FORCES ARE SHOWN IN SECTION 2-2

LEG	D + L (kN)			D + L + W (kN)		
	F _x	F _y	F _z	F _x	F _y	F _z
1	0	0.46	0.65	-0.27	0.45	-0.34
2	0	0.51	-0.26	-0.45	0.50	-2.26
3	0	0.49	0	-0.47	0.49	-2.03
4	0	0.51	0.26	-0.45	0.51	-1.74
5	0	0.46	-0.65	-0.28	0.46	-1.64
6	0	0.74	1.03	0	0.73	-1.85
7	0	0.82	-0.40	0	0.81	-5.90
8	0	0.80	0	0	0.80	-5.64
9	0	0.82	0.41	0	0.83	-5.09
10	0	0.75	-1.04	0	0.76	-3.93
11	0	0.46	0.65	0.27	0.45	-0.34
12	0	0.51	-0.26	0.45	0.50	-2.26
13	0	0.49	0	0.47	0.49	-2.03
14	0	0.51	0.26	0.45	0.51	-1.74
15	0	0.46	-0.65	0.28	0.46	-1.64



SECTION 1 - 1

MINOR WORKS ITEM 2.19

ERECTION OR ALTERATION OF WALL SIGNBOARD

SHEET 2 OF 2