

Re-engineering the Building Approval Process

Mission

Buildings Department (BD) is committed to adopt a totally positive attitude towards building development.

2. Its mission is not to find faults in a building proposal but to facilitate building professionals in the approval process whilst ensuring public safety and health.

Re-engineering

3. With this mission in mind, BD has re-engineered the building approval process. This Practice Note announces the principles adopted in the re-engineered approval process, and the services which BD provides to facilitate the process.

Pre-submission Enquiry and Conference

4. The processing of an application for approval of the basic design principles requires interaction between Authorized Persons (AP), Registered Structural Engineers (RSE), Registered Geotechnical Engineers (RGE) and the concerned Government departments and the exercise of discretion as appropriate by the latter. AP/RSE/RGE would want to settle the design principles involved at an early stage so that they can proceed with confidence and avoid any abortive work later on.

5. To facilitate early clearance of basic design principles before formal submission of plans including proposals to adopt performance-based design approach and uncommon engineering design, proposals involving applications for modification of the prescriptive requirements in the building regulations, etc, BD will upon a written enquiry provide a determination on the matters involved in the form of a "letter of assurance" normally within 45 days. BD may hold pre-submission conferences with AP/RSE/RGE and invite representatives of concerned Government departments to discuss and examine the issues and principles involved.

6. It is recommended that AP/RSE/RGE should make use of this facility to consult BD as early as possible on the use of any new structural theory, materials or systems, sophisticated designs and unconventional construction methods prior to preparing the detailed design.

7. The officers in BD responsible for the above enquiry service are at chief or senior professional level.

/Processing

Processing of Formal Submissions

8. For formal submissions of general building plans, superstructural plans and drainage plans, the curtailed check system will be further simplified to check on fundamental issues only.

9. In respect of general building plans, BD will check the fundamental issues concerning density, safety, health and environment, and major issues under the allied regulations. The items to be checked are detailed in Appendix A.

10. For superstructural plans, including those of curtain wall, window wall, cladding, space frame and similar superstructural elements, BD will check the master framing plans, notes, specifications on the design loads, design methods, materials, design codes and fire resistance period requirements. The items to be checked are detailed in Appendix B.

11. For drainage plans, BD will check the disposal system, underground drain layout, the connection to public sewers and access for maintenance/repair. The items to be checked are detailed in Appendix C.

12. As regards other types of plans (e.g. demolition, site formation, structural works other than superstructure), processing will continue to be generally on a curtailed basis. The items to be checked are detailed in Appendix D.

13. Non-fundamental issues will not be checked and will not be raised as disapproval items. These relate generally to matters that do not affect the basic design of the proposed building. It is the responsibility of the AP/RSE/RGE to ensure that all such non-fundamental issues fully comply with the relevant regulations and codes of practice.

14. To ensure that a high standard of self-regulation is maintained, BD carries out audit checks by examining in detail some submissions selected at random. BD will consider taking appropriate actions against AP/RSE/RGE who prepare plan submissions which blatantly or repeatedly contravene the requirements of the Buildings Ordinance (BO) and regulations.

Enquiry Service

15. To assist AP/RSE/RGE in ensuring that design details comply with BD's requirements, BD will also provide an enquiry service regarding compliance or interpretation of building regulations and codes of practice throughout the entire development process. BD will give an answer to these enquiries normally within four weeks.

16. The staff responsible for this service are at the senior or basic professional rank.

/Concept

Concept Drawings

17. To assist AP in demonstrating to concerned Government departments that their basic design principles comply with government and statutory requirements, they are recommended to submit concept drawings for pre-submission conferences, when making enquiries or when making a formal submission of general building plans. Concept drawings are coloured key plans summarizing the basic design parameters on site coverage, plot ratio, accountable floor areas, fire safety strategy and barrier free access strategy in broad terms. General guidance on the content and preparation of concept drawings is provided in Appendix E. A set of sample concept drawings is provided for reference in BD's web site at www.bd.gov.hk.

Use of Computer for Mathematical Calculations

18. AP adopting the use of computer for calculating floor areas of buildings in the preparation of general building plans are required to provide BD with an electronic copy of the plan submission with the calculations in an accepted format capable of being verified by AutoCAD, MicroStation or other software accepted by BD. In this regard, AP should follow the guidelines at Appendix F.

Minor Amendments

19. The requirement for prior approval and consent for all amendments to building works for which consent has been given may affect the construction process.

20. Subject to a modification of Building (Administration) Regulation (B(A)R) 33(1) being granted by the Building Authority (BA) under section 42(1) of the BO, prior approval and consent to the minor amendments of building, superstructure (including curtain wall, cladding, space frame and similar superstructural elements) and drainage works, for which first consent has already been given, would not be required except for the following amendments :

- (a) For general building plan amendments and building (alteration and addition) amendments :
 - an amendment resulting in a major revision or localized major revision as per criteria specified in Practice Notes for Authorized Persons and Registered Structural Engineers (PNAP) 143;
 - an amendment having material effect on the fundamental issues;
 - an amendment involving concern on stability/deformation of slopes, retaining walls, adjoining land and buildings;

/• an

- an amendment involving an application for exemption or modification of the BO and its subsidiary regulations;
 - an amendment not in compliance with the relevant Outline Zoning Plan or deviating from a scheme approved by the Town Planning Board; or
 - an amendment involving works outside the lot boundary.
- (b) For superstructural plan amendments and superstructural (alteration and addition) amendments :
- an amendment affecting the overall structural stability of the building.
- (c) For drainage plan amendments and drainage (alteration and addition) amendments :
- an amendment involving the revision of the drainage layout as a result of a major revision of the building proposal;
 - an amendment involving the change of drainage disposal system or connections to public sewers;
 - an amendment involving stability/deformation of slopes, retaining walls, adjoining land and buildings;
 - an amendment involving an application for exemption or modification of the BO and its subsidiary regulations;
 - an amendment involving excavations deeper than 3 metres; and
 - an amendment involving works outside the lot boundary.

21. AP/RSE/RGE adopting this option of deferring the submission of these types of amendments should ensure that the proposed amendments comply with the building regulations and the requirements of concerned Government departments and the lease conditions prior to the execution of the works. The amendments should be clearly documented and deposited in the site office. He should also ensure that approval and consent for all the amendments are obtained prior to certifying completion of the building works or applying for an occupation permit/temporary occupation permit.

22. AP/RSE/RGE should submit an application for modification of B(A)R 33(1) either after obtaining the first consent or simultaneously with the application for the first consent in respect of the specific type of works [i.e. building, building (alteration and addition), superstructural, superstructural (alteration and addition), drainage and drainage (alteration and addition) works].

23. A practice note covering the above guidelines on minor amendments has been issued to Registered Contractors.

Concurrent Applications for Approval and Consent

24. To streamline the approval process for certain types of building works meeting the relevant criteria, applications for approval of plans and consent to the commencement of the building works specified in the following paragraphs may be made concurrently.

Alteration and Addition Works, Drainage Works, Curtain Wall Works and Cladding Works

25. For alteration and addition (A&A) works, drainage works, curtain wall works and cladding works, approval of plans and consent to the commencement of works may be applied for concurrently if the following criteria are met:

- (a) The proposed works do not involve foundation works other than spread footing with excavation depth not exceeding 4.5m, and/ or works with significant geotechnical content;
- (b) Carrying out the proposed works will not involve precautionary works or other safety measures which are required to be completed to the satisfaction of the BA prior to the commencement of the proposed works;
- (c) All the plans and documents prescribed under B(A)R 8 are submitted for approval; and
- (d) All the requisite supporting information/documents for the consent application are submitted. These may include, where appropriate, site supervision plans, hoarding plans or other supporting documents such as test reports or structural assessment reports required under PNAP 249. For curtain wall works, compliance certificates and other test reports as required under PNAP 106 may be submitted prior to the application for an occupation permit.

/Fast.....

Fast Track Processing of Proposal for Simple A&A Works

26. For simple A&A works, where the AP/RSE confirms that the proposed works do not involve the structure of the building and do not affect the fundamental issues mentioned above (or if there are only minor changes and the AP/RSE confirms that such changes comply with the provisions of the BO) and referrals to the other Government departments/offices (except Fire Services Department) are not necessary, the concurrent applications for approval and consent will be processed within 30 days. A sample of the AP's certification form is attached at Appendix G.

Building a Two-storey Warehouse

27. With effect from 1st December 2008, the Efficiency Unit (EU) launches a pilot scheme to operate a One Stop Centre for receiving submissions and coordinating joint inspections for two-storey warehouse proposals on behalf of relevant Government departments (including BD) and utility companies. Details of the scheme are available from EU's website: <http://www.eu.gov.hk/english/osc/osc.html>.

28. Submission of a proposal for building a two-storey warehouse via the EU's One Stop Centre to BD for processing under the BO shall include all relevant plans such as building plans, structural plans, drainage plans, demolition plans, site supervision plans, hoarding plans, etc and the corresponding consent application. Alternatively, such submission under the BO may be made to BD directly.

29. For building proposals satisfying the following criteria, approval and consent may be applied for concurrently either through the One Stop Centre or directly to BD for processing under the BO:

- (a) The proposed building is a warehouse, for general storage, of not more than two storeys and has no basement;
- (b) The site is a Class A, B or C site and emergency vehicular access is provided in compliance with Building (Planning) Regulation 41D and the Code of Practice for Means of Access for Firefighting and Rescue;
- (c) No compartment in the building shall exceed 7 000m³; and
- (d) The criteria as set out in paragraph 25 above are satisfied.

Fast Track Processing of Proposal for a Two-storey Warehouse

30. For proposals for building a two-storey warehouse satisfying the criteria in paragraph 29 above, BD undertakes to process the concurrent applications for approval and consent within 45 days from the date of submission, irrespective of whether the submission is made via the EU's One Stop Centre or directly to the BD.

/Form.....

Form BA8A

31. When submitting applications for approval and consent concurrently, AP/RSE should indicate the same in the covering letter and submit the consent application on Form BA8A as at Appendix H. Regarding the submission of Form BA8A, it should be noted that:

- (a) The effective date of application for consent to the commencement of the proposed building works will be the date on which the BA gives his approval of the plans of the proposed building works or, where applicable, the date on which approval is deemed to have been given by the BA; and
- (b) The application for consent to the commencement of the proposed building works will not be processed if the prescribed plans and documents of the proposed building works are not approved.
- (c) In cases where the BA considers that the approval applied for would be given but finds proper grounds to refuse the consent application, the period of 28 days as stipulated under B(A)R 32(3) would run from the date of approval.

Approval of All Prescribed Plans before Commencement of Works

32. AP/RSE should note that there are cases where approval of other types of plans, apart from the simple A&A plans, A&A plans, drainage plans, plans for curtain wall works, cladding works or a two-storey warehouse submitted in the concurrent applications concerned, and consent in respect thereof, are required before the simple A&A works, A&A works, drainage works, curtain wall works, cladding works or building works for a two-storey warehouse concerned can be carried out. In such cases, the BA may disapprove the plans and accordingly refuse the concurrent application for consent. In cases where the BA approves the plans and grants the consent concurrently, notwithstanding that some of these other types of plans required have not been approved, the AP/RSE should ensure that the works consented to will not be commenced until such time approval and consent in respect of such other types of plans have been given.

(AU Choi-kai)
Building Authority

Ref. : BD GP/BOP/6 (VIII)
BD GP/BREG/A/3

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This revision December 2008 (AD/NB1) – General revision to include RGE and concurrent applications for approval and consent of curtain wall works, cladding works and 2-storey warehouse; Appendix H added

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Concurrent Applications for Approval and Consent

Checklist for Checking Fundamental Issues of General Building Plans

1. Density

(a) Site Parameters

- (i) Claimed site area acceptable?
- (ii) Site classification correct?
Need for Building (Planning) Regulation 19(2) determination?
- (iii) Required private street/service lane acceptable?
Deducted from site area and not built over?

(b) Site Coverage (SC) and Plot Ratio (PR)

- (i) Configurations of gross floor area (GFA) diagrams (accountable, non-accountable and exempted areas) correct?
- (ii) Configurations of SC diagrams (accountable, non-accountable and exempted areas) correct?
- (iii) Exempted areas and non-accountable areas acceptable?
- (iv) Dedication/Surrender in return for bonus acceptable?
- (v) Overall PR & SC acceptable? (i.e. check the proposed PR and SC against the permissible PR and SC, including any granted bonus SC & PR, mean street level and height of podium/building).

2. Safety

(a) Means of Access for Firefighting and Rescue (MOA)

- (i) Number and disposition of fireman's lifts/firefighting & rescue stairway (FRS) acceptable? (MOA 5 & 10.4)
- (ii) Initial access to fireman's lifts and FRS provided? (MOA 9 & 16)
- (iii) Emergency vehicular access provided? (MOA 24 & 25)

(b) Means of Escape (MOE)

- (i) Single staircase building acceptable? (MOE 9)

- (ii) MOE table: Occupancy factor and the required/provided number and width of the exit doors and exit routes acceptable? (MOE Table 1 & 2)
 - (iii) Discharge value calculation in order? (MOE 15)
 - (iv) Discharge at G/F:
Directly to street, lane or to open area? (MOE 8.2)
Exits at ground storey acceptable? (MOE 12)
 - (v) Inter-relationship between staircases acceptable? (MOE 8.3, 11.2, 13.3 & 14.3)
 - (vi) Direct distance and travel distance acceptable? (MOE 14)
 - (vii) Independent staircase serving the basement, kindergarten or child care centre provided? (MOE 20 & PNAP 117)
 - (viii) Disposition of refuge floors acceptable? (MOE 21.1 & 21.5)
 - (ix) PPE premises: Site, exit routes and staircases acceptable? (MOE 22, 23, 25 & 26)
- (c) Fire Resisting Construction (FRC)
- (i) FRC table: Required/provided fire resistance period (FRP) against the compartment volume and use acceptable? (FRC 6.1, 6.2, 6.3, 8.1 & 14.1)
 - (ii) Protection of adjoining buildings acceptable? (FRC 7)
 - (iii) External walls of required staircases/lobbies acceptable? (FRC 11.7)
 - (iv) Smoke vent disposition acceptable? (FRC 15.2)
 - (v) Bridge and tunnel : Fire shutter and by-pass lobby provided? (FRC 16)

3. Health and Environment

- (a) Lighting and Ventilation
 - (i) Window provided for habitable room, kitchen and office?
 - (ii) Disposition of windows acceptable?
- (b) Open space: Required/provided area and its disposition acceptable?

4. Major issues under allied legislations

- (a) Facilities for persons with a disability
 - (i) Initial access for wheelchair provided?
 - (ii) Access for wheelchair to required areas provided?
 - (iii) Disabled toilet provided?
- (b) Fire certificate issued?
- (c) Outline Zoning Plan complied with?
- (d) Vehicular run-in/out acceptable to Transport Department and Highways Department?
- (e) Geotechnical assessment under PNAP 78 required and acceptable to Geotechnical Engineering Office?
- (f) Airport height restriction complied with?
- (g) Railway protection acceptable to Mass Transit Railway Corporation/Kowloon Canton Railway Corporation?

(Rev. 12/2004)

Checking of Fundamental Issues of Superstructural Plans

For superstructural plans, submissions are divided into two parts, viz. :

- (i) master framing plans in which all the requirements on materials, design loadings, workmanship and the structural framing of the structure are stipulated; and
- (ii) structural detailed plans in which details of every structural members of a building, including the size of members, quantity and arrangement of steel bars inside the members are given.

2. BD's check on the master framing will focus on the following aspects :

- (i) Stability and framing;
- (ii) Fire Resistance Period (FRP) requirements;
- (iii) Loading; and
- (iv) Materials.

3. To assist RSE in making superstructural submissions, a list of the items appropriate to the type of structural plans which will be checked in processing master framing plans is enclosed at Appendix B1 for general guidance. RSE should complete the checklist and include them into Part I of the calculations (prepared in accordance with PNAP 121) for submission with the structural plans for approval.

Checklist for Checking Fundamental Issues of Superstructural Plans

	Items to be checked	Remarks
<i>Structural Stability & Safety</i>		
(1) Structural System	<input type="checkbox"/> Beam-column/core wall/shear wall <input type="checkbox"/> Flat Slab/Prestressed/Precast Beam-Slab <input type="checkbox"/> Curtain Wall/Cladding/Window Wall <input type="checkbox"/> Others: _____	
(2) Compatibility Check	<input type="checkbox"/> Wind modelling <input type="checkbox"/> Structural layout compatible with building plans <input type="checkbox"/> Loading compatible with foundation plans	
(3) Stability Check	<input type="checkbox"/> Comply with B(C)R 15 <input type="checkbox"/> Max. lateral deflection = _____ (d/H = 1/ _____) <input type="checkbox"/> Anchorage system : cast-in/drill-in/through bolt <input type="checkbox"/> Supporting structure for curtain wall/cladding/window wall <input type="checkbox"/> Robustness of the building and in particular those adopting precast concrete construction	
(4) FRP Requirements	<input type="checkbox"/> Comply with building plans' requirements <input type="checkbox"/> Comply with 1996 Code	
<i>Loading</i>		
(5) Floor Loads	<input type="checkbox"/> Comply with building plans' requirements <input type="checkbox"/> Comply with B(C)R 17(1) & (2)	
(6) Lateral Loads	<input type="checkbox"/> Wind loads comply with HK Wind Code <input type="checkbox"/> Impact loads comply with B(C)R 17(3) & (4) <input type="checkbox"/> Design soil pressure and surcharge loads <input type="checkbox"/> Others: _____	
(7) Dynamic Loads	<input type="checkbox"/> Comply with B(C)R 17(5) <input type="checkbox"/> Others: _____	
<i>Design Standard</i>		
(8) Design Codes	<input type="checkbox"/> 1987 Concrete Code <input type="checkbox"/> BS 8110:1985 (modified) <input type="checkbox"/> BS 8110:1985 <input type="checkbox"/> 1987 Steel Code <input type="checkbox"/> BS 5950:Pts 1&2:1990 <input type="checkbox"/> Others: _____	

(9) Design Method	<input type="checkbox"/> Working Stress Method <input type="checkbox"/> Limit State Method <input type="checkbox"/> Others: _____	
(10) Computer Programme	<input type="checkbox"/> Pre-acceptance programmes: _____ <input type="checkbox"/> Others: _____	
<u>Material Specification</u>		
(11) Concrete	<input type="checkbox"/> Not exceeding 45D <input type="checkbox"/> Exceeding 45D, please specify : _____	
(12) Reinforcement	<input type="checkbox"/> Grade 250/460 complying with CS2:1995 <input type="checkbox"/> Others: _____	
(13) Prestressed Tendon	Grade _____ complying with _____	
(14) Structural Steel	Grade _____ complying with _____	
(15) Aluminum	Grade _____ complying with _____	
(16) Glass	Type: _____ Permissible stress = _____ complying with _____	
(17) Others		

(7/2002)

Checklist for Checking Fundamental Issues of Drainage Plans

1. Method of disposal

- (a) Public sewers (including nullah, culvert and streamcourse) available for connection and acceptable to Drainage Services Department (DSD)?
- (b) Private sewers available for connection and acceptable to DSD?
- (c) Sewage treatment plant septic tank and soakaway design acceptable to Environmental Protection Department (EPD)?
- (d) Trade/industrial effluent discharge acceptable to EPD?

2. Layout of Underground drain

- (a) Direction of flow in order?
- (b) No surface water discharging into foul water drains?
- (c) No foul water discharging into surface water drains?
- (d) Underground drains on newly reclaimed land acceptable? (PNAP 227)
- (e) Underground drains kept out of slopes? (PNAP 183)

3. Connection to Public Sewer

- (a) Terminal manhole and invert levels acceptable to DSD?
- (b) Sizes of connection pipe acceptable to DSD?

4. Access for maintenance/repair

- (a) Common underground drain located in common area? (PNAP 211)
- (b) No water-borne pipe embedded in structural elements? (PNAP 230)
- (c) Condensate disposal system for air-conditioning units provided? (PNAP 238)

5. Other related issues

- (a) Well construction acceptable? (PNAP 17)
- (b) Drain within a gathering ground acceptable to Water Services Department?
- (c) Discharge proposal for sites within 200m of seaward boundaries of a marine fish culture zone acceptable to EPD?
- (d) Railway protection zone :
 - (i) Deep excavation acceptable to Mass Transit Railway Corporation (MTRC)?
 - (ii) Installation of wells including bored well acceptable to MTRC?

(7/2002)

1. Checklist for Checking Fundamental Issues of Demolition Plans

- (a) Precautionary measures particularly the hoarding, covered walkways and any necessary propping and shoring;
- (b) The codes and standards proposed to be adopted;
- (c) Appraisal of the building to be demolished, methods statement, sequence of demolition and the safe use of any powered mechanical plant;
- (d) Stability of the framing system during demolition and of any remaining structures after demolition; and
- (e) Effects on all affected buildings, slopes structures, lands and services and the provision of supports and protection, if necessary.

2. Checklist for Checking Fundamental Issues of Site Formation Works (including Slope Works) and Deep Excavation and Lateral Support Works

- (a) The geotechnical parameters and assumptions adopted in the design;
- (b) The margin of safety;
- (c) The safety of the structural elements;
- (d) The buildability such as the construction sequence, working space and safety under temporary condition; and
- (e) The effects of the proposed works on surrounding land, structures and utilities.

3. Checklist for Checking Fundamental Issues of Structural Works other than Superstructure, such as Foundation and Excavation and Lateral Support Works

- (a) Codes and standards adopted;
- (b) The geotechnical parameters and assumptions adopted in the design;
- (c) Loadings;
- (d) Stability of framing and foundation systems;
- (e) Structural adequacy of major structural elements;

- (f) The margins of safety of the framing and foundation systems;
- (g) Adequacy of precautionary measures;
- (h) Effects on adjoining buildings, structures, lands, streets and utility services;
- (i) Construction sequence and safety under temporary condition;
- (j) Ground settlement estimates; and
- (k) Groundwater drawdown estimates.

(7/2002)

General Guidelines for Concept Drawings

1 Basic Information in Concept Drawings

- Site coverage including accountable, non-accountable and exempted SC area;
- GFA including accountable, non-accountable and exempted domestic and non-domestic GFA;
- Fire safety strategy including MOE, MOA and FRC arrangements;
- Barrier free access including basic provision of access and facilities for wheelchair-users.

2 Sample Drawings

Sample concept drawings are available in BD's website at www.info.gov.hk/bd for reference.

3 Size

- A2, A3 or A4 depending on size of development.

4 Colour Scheme

- It is recommended that the colour schemes for designation of different types of SC & GFA and barrier free access in sample concept drawings be adopted.

5 Signs and Indicators

- It is recommended that the signs and indicators for MOE, MOA and FRC arrangements in the sample concept drawings be adopted.

Notes on Submission Drawing Standards in Electronic Format

Electronic Submission for Mathematical Calculation of Areas

Introduction

The purpose of this supplementary note is to advise on the electronic format and the pre-requisites for checking of area calculations in CAD drawing files electronically.

2. When the requirements set out in the following paragraphs are complied with and clearly shown in the submitted CAD drawing files, diagrammatic breakdowns and details on calculation of the gross floor area, usable floor area, site coverage, plot ratio, refuge floor area and green feature area etc. would not be required to be included in plan submission. For avoidance of doubt, annotation and dimension of the areas concerned are required to be indicated on plans for checking purpose. Samples of the dimensioned plans are in Annex 1 for reference.

3. For area calculations computed electronically, soft copies of the building floor plans containing the area diagram layer(s) are required to facilitate verification of the calculations. For approval purpose, hard copies of the general building plans showing floor area layouts, area diagrams and calculations without breakdowns are required. Information shown in both the soft and hard copies of the plans submitted for approval must be identical to each other. Plans may be rejected if discrepancy between the two is found. The AP should certify on each of the CD-ROM discs with a permanent marker signifying that information in the electronic drawing files are identical to the submitted hard copies and that all files are prepared under his supervision. His signature shall be deemed to be his assumption of responsibility for the electronic plans and the calculations.

4. The following minimum requirements in CAD drawing format should be observed and provided for in the area calculations computed electronically. Plans may be rejected on grounds of insufficient information if these requirements are not complied with.

4.1 Format and Software Version

- (a) The submitted CAD drawing files should be stored in non-rewritable CD-ROM discs. Except otherwise agreed by the Building Authority all other electronic submission formats are not acceptable.
- (b) CAD drawings using AutoCAD version R14 or later or MicroStation version SE, J, V8 or later are acceptable.
- (c) AutoCAD files should be saved in “.dwg” format and MicroStation files in “.dgn” format only. All other

compressed or zipped file formats are not acceptable.

- (d) Title blocks completed with drawing number showing revision legends, site/project title, drawing title etc. should be inserted in every drawing for identification purpose. Each CAD file shall contain one hard copy drawing only. Typical title block sample is attached in Annex 2 for reference.

4.2 Referencing System

File Name/Drawing Number Convention

- (a) Each file shall contain one drawing only, default zoomed to full drawing extent.
- (b) All information for approval shall be contained in the same drawing file. The need to cross-reference or hyper-link with another CAD file to enable verification of the area calculations in the CD ROM is not acceptable except in situation covered in (c) below.
- (c) In situation where the layering number and the system are limited due to software constraint, limited referencing system might be used provided that all information and model files which compose the final drawings are clearly visible and intact when files are open in the computer. A clear and systematic path trial in hard copy format highlighting the list of file(s) for area checking purpose should be provided to facilitate the verification exercise. All drawing files and model files are to put into the same folder to ensure coherent path recognition. Cross-referencing and hyper-linking within folder should be kept to the minimum.
- (d) Naming and numbering of drawing files in the hard copy should be identical to those in the submitted soft copy.
- (e) A completed hard and soft copy of the drawing index listing all file names, drawing numbers with brief description on location and contents of the submitted drawings shall be provided. Drawings under different revision must carry a revision letter (e.g. A to Z) for identification purpose. For large and complicated project involving numerous drawing versions/amendments, a revision legend should also be provided as well.

e.g. **B-01_A.DWG**

Drawing No. Rev. A

4.3 Layering Organization

- (a) CAD drawing files including floor plans, tables and calculations etc. shall contain all information identical to the hard copy. Each file shall accommodate different elements such as floor layout plans, usable floor area, gross floor area and dimension etc. into the relevant layers. The “layering” drafting technique isolates elements of a drawing and places them into separate layers for easy reference and manipulation. The same principle applies to “level” in MicroStation files.
- (b) To facilitate checking of the area calculations, general building plans shall contain GFA and other areas diagram layer(s) for verification and calculations. To reconcile the requirements of other government departments and to adopt the rules under CAD Standards for Works Projects (CSWP) of Environment, Transport and Works Bureau, AP shall name the relevant layers in a format specified below:

Layer Name Convention

Diagram A: Rules of Layer Name Convention of CSWP (abstracted)

<p>ARC 082 4 0</p>	<p>Field 3 - Addition/Deduction Type Field 2 - Building Plan Area Type (Sub-class) Field 2 - CSWP Element Code assigned for Building Plan Area Calculation (Class) Field 1 - Agent Responsible Code (ARC) e.g. ADA</p>		
Field	Description	Length/Type	Coding
1	Agent Responsible Code	3 (alphanumeric)	See www.etwb.gov.hk/cswp
2	CSWP Element Code assigned for Building Plan Area Calculation (Class)	3 (numeric)	a) 082 for BD's area calculation, b) 086 for LandsD's area calculation
	Building Plan Area Type (Sub-class)	1 (numeric)	See Diagram B
3	Addition/Deduction Type	1 (alphanumeric)	See Diagram C

Diagram B

Code	Building Plan Area Type
1	Site Coverage (SC) – Non-domestic
2	Site Coverage (SC) –Domestic
4	Gross Floor Area (GFA) – Non-domestic
5	Gross Floor Area (GFA) – Domestic
9	Usable Floor Area (UFA)
0	Open Space (OS)
–	Elements common to all area type

Diagram C

Code	Addition/Deduction Type	Remarks
0	Base Area	
4	Deduction Area	For area to be deducted from the outline of area layers under the Buildings Ordinance.
5	Deduction Area	For area to be deducted from the outline of area layers under the Lands Department requirement.
6	Deduction Area	For area to be deducted from the outline of area layers under the Planning Department requirement.
8	Dimension	

Diagram D: Layer Names generated from the above rules for this PNAP

Code	Description	Remarks
<i>ARC08240</i>	Non-domestic area Layer	For outline of non-domestic GFA layer.
<i>ARC08244</i>	Non-domestic area to be deducted from area calculations	For non-domestic area to be deducted from the outline of non-domestic area layers under the Buildings Ordinance.
<i>ARC08246</i>	Non-domestic area to be deducted from area calculations	For non-domestic area to be deducted from the outline of non-domestic area layers under the Planning Department requirements.
<i>ARC08250</i>	Domestic area Layer	For outline of domestic GFA layer.
<i>ARC08254</i>	Domestic area to be deducted from area calculations	For domestic area to be deducted from the outline of domestic area layers under the Buildings Ordinance.
<i>ARC08256</i>	Domestic area to be deducted from area calculations	For domestic area to be deducted from the outline of domestic area layers under the Planning Department requirements.
<i>ARC082_8</i>	Dimension layers	All dimensions for the floor layout plans are automatically generated from the computer software (<i>not to be manually inserted by text input construction</i>)
<i>ARC08210</i>	Area for non-domestic site coverage calculations	For outline of non-domestic site coverage layer.
<i>ARC08214</i>	Non-domestic site coverage deducted from calculations	Deduction complying with requirements of the Buildings Department.
<i>ARC08216</i>	Non-domestic site coverage deducted from calculations	Deduction complying with requirements of the Planning Department.
<i>ARC08220</i>	Area for domestic site coverage calculations	For outline of domestic site coverage layer.

ARC08224	Domestic site coverage deducted from calculations	Deduction complying with requirements of the Buildings Department.
ARC08226	Domestic site coverage deducted from calculations	Deduction complying with requirements of the Planning Department.
ARC08200	Area for open space calculations	For outline of open space layer.
ARC08204	Area to be deducted from open space calculations	For area to be deducted from outline of the open space under the Buildings Ordinance.
ARC08290	Area for usable floor area calculations	For outline of usable floor area layer.
ARC08294	Area to be deducted from the usable floor area calculations	For area to be deducted from outline of the usable floor area under the Buildings Ordinance.

- (c) The layer names required by LandsD are not listed in this PNAP and AP should make reference to the Practice Note issued by LandsD. AP should also refer to CSWP of Environment, Transport and Works Bureau (at www.etwb.gov.hk/cswp) for other layer name convention.
- (d) Layering organization of the file(s) in hard copy format shall be submitted. If more layering description is required in the submitted general building plans, AP could lengthen the above list with additional input along similarly constructed methodology. All layering organizations must be clearly shown.

Layer contents

- (e) CAD file for the floor plan shall contain all elements and information that have to be shown on the drawings to facilitate approval, including, inter alia, the area and the dimension layers. Elements such as lighting, electric appliances and the like where approval from the Building Authority is not required should not be shown in the submitted drawings.

4.4 Presentation Style

Drawing Scale

- (a) CAD drawings should be drawn in true size (i.e. 1 drawing unit = 1mm or metre) with precision rounded up to the nearest mm unit.

Drawing Object within area diagram

- (b) The position of the drawing shall be close to World

Coordination 0,0 and drawing objects in area diagram shall not be grouped or blocked.

Polyline

- (c) All line drawings intended for area calculations in area layer(s) shall be in **closed** polyline diagram (or in complex shape in MicroStation files).

Dimension

- (d) All dimensions should be true dimensions generated automatically by the software and laid in the specified layers. Text figures or figures manually inserted, amended or constructed for calculation purpose in the CAD file is not acceptable.

Decimal places of areas and volumes

- (e) All areas and volumes should be presented in m² and m³ units respectively and rounded up to 3 decimal places.

Suggested Text Font

- (f) Text style is not compulsory. Conventional text fonts are suggested. Common type such as “Romans” font is recommended for use in the text. For MicroStation, “Engineering” font could be adopted.

Review

5. These guidelines will be refined taking into the experience gained. Suggestions to facilitate and/or to improve the electronic vetting procedures are always welcomed.

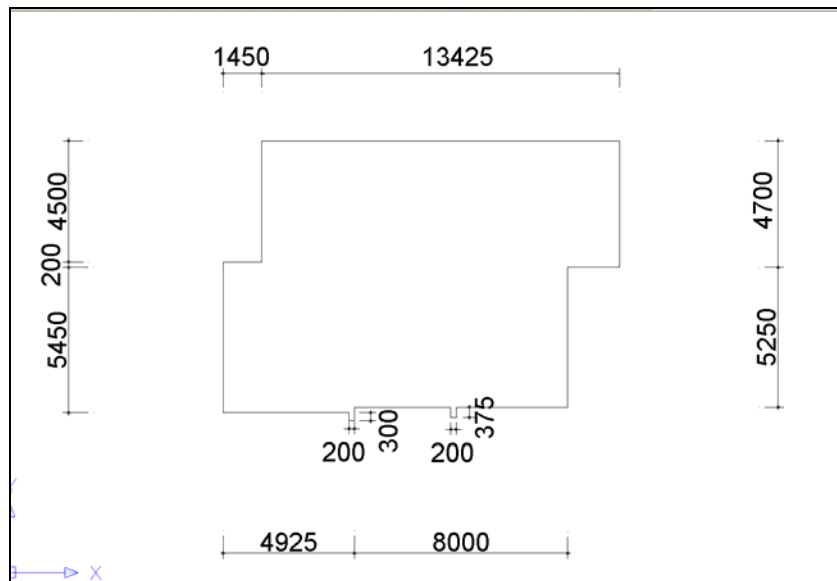
First issue : August 2003

This revision : September 2006 (Layer Name Convention amended)

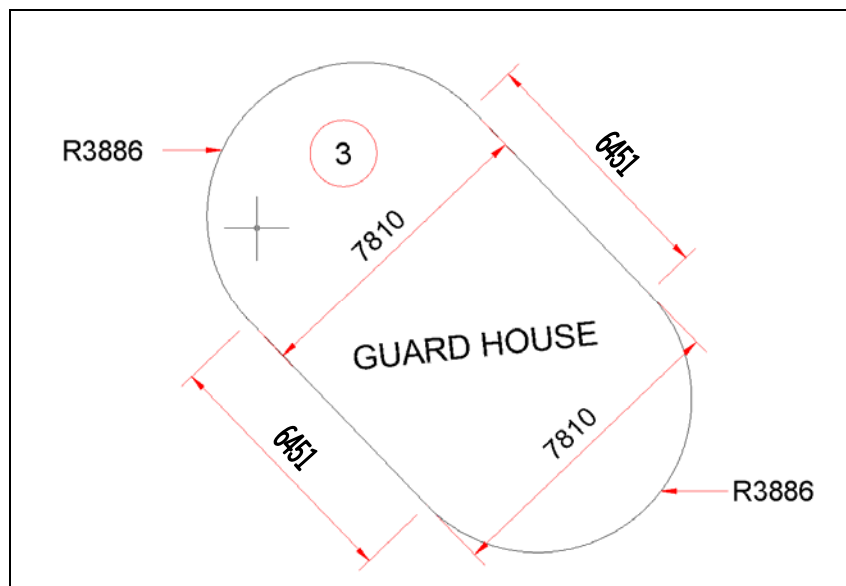
Samples for Dimensioned and Annotated GFA Diagrams

The following part diagrams shown with dimensions and annotations are for reference only. They are intended to illustrate the minimum information required to facilitate electronic verification of the area calculations more effectively. Illustrations shown are by no means exhaustive.

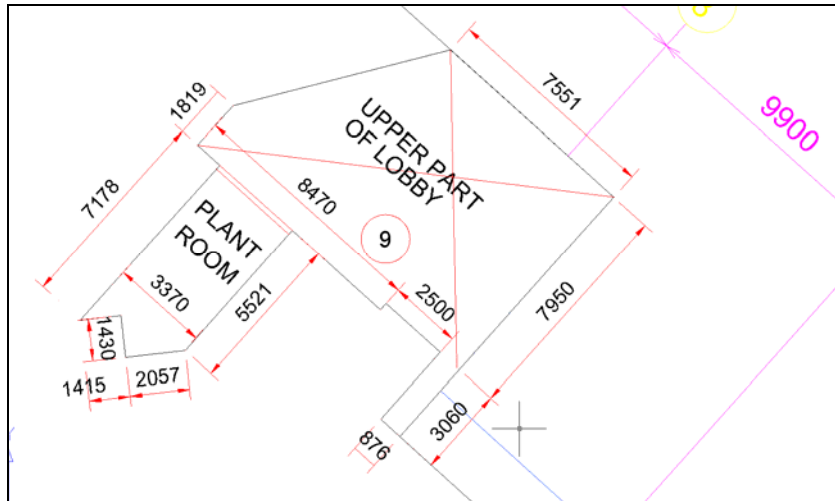
Sample 1 Rectangular shape GFA diagram



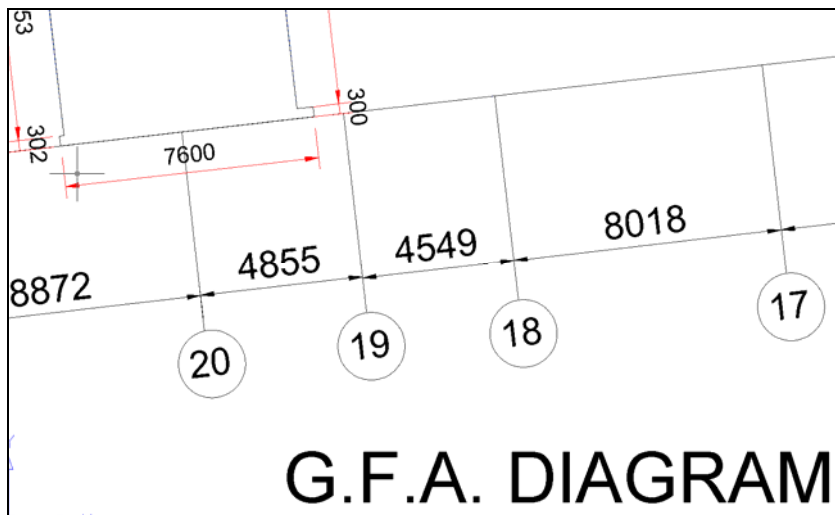
Sample 2 GFA diagram with curve(s) and annotations



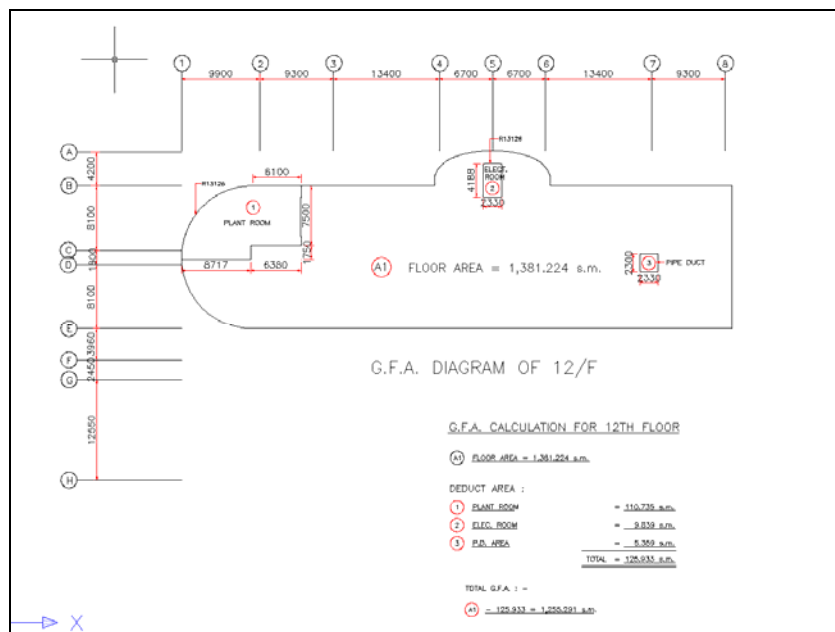
Sample 3 GFA diagram (part) with dimension and annotation



Sample 4 GFA diagram (part) with grid line and dimension.



Sample 5 Overview of a sample GFA diagram with calculations



Sample Title Panel

Information Panel

Revision Column

Officers Concern

Site/Project Title

Drawing Title

Scale

Drawing Number (with revision)

Original Drawing No. (if any)

Company Logo (if any)

REVISIONS		INITIAL AND		
NO.	DESCRIPTION AND DATE	DWN	CKD	AUTH

	NAME AND DESIGNATION	INITIAL	DATE
AUTHORIZED			
CHECKED			
DRAWN			

PROJECT

DRAWING TITLE

SCALE

DRAWING NO

SOURCE

*Information box shown in bold letter is compulsory for BD submission

**Request for Fast Track Processing of Plans
of Alteration and Addition Works and Certificate of Preparation of Plans**

To the Building Authority

In accordance with paragraph 23 of PNAP 272, I hereby request for fast track processing of the plans submitted for the proposed A & A works to be carried out at _____

2. I confirm that the A & A works as shown on the enclosed drawings (drwg. no. _____ to _____) do not involve the structure of the building and do not involve changes to the latest approved plans of the affected areas in the following aspects :

- * Density - site parameter, plot ratio, site coverage;
- * Fire safety - means of access, means of escape in case of fire, fire resistance, compartmentation;
- * Health and environment - lighting, ventilation, open space;
- * Fundamental issues required under allied legislation - fire safety, OZP, access for persons with a disability, airport height restrictions, railway route protection.

3. I also confirm that the A & A works as shown on the enclosed drawings (drwg. no. _____ to _____) involve changes to the latest approved plans of the affected areas in the following aspects :

- * Fire safety - means of access, means of escape in case of fire, fire resistance, compartmentation;
- * Health and environment - lighting, ventilation, open space;
- * Minor changes to structural elements of the building;

and that such changes as shown on the said drawings comply with the provisions of the Buildings Ordinance.

4. A Form BA 8 applying for your consent to the commencement and carrying out of the A & A works mentioned in paragraph 1 above is enclosed.

Date

Signature of authorized person

(Name in full)

Signature of Registered Structural Engineer

(Name in full)

* *delete whichever is inapplicable*

BUILDINGS ORDINANCE
(Chapter 123)
Section 14(1)(b)
BUILDING (ADMINISTRATION) REGULATIONS
Regulation 31

**Application for Concurrent Consent to
the Commencement of Building Works**

Date _____

To the Building Authority,

In accordance with the provisions of section 14(1)(b) of the Buildings Ordinance and Regulation 31 of the Building (Administration) Regulations, *I/We, (name of applicant) _____ submit this Form for your custody, and consideration where appropriate, in relation to obtaining concurrent consent for commencement of the following building works upon approval of the relevant proposal, at (number and name of street and locality) _____

on (Lot No.) _____ as shown on the plans mentioned in paragraph 2 below :

* Simple Alteration & Addition Works/Alteration & Addition Works/Drainage Works/Curtain Wall Works/Cladding Works/Building Works for a Two-storey Warehouse

2. I confirm that the proposed building works which are to be carried out at the abovementioned address as shown on the plans (drwg. No. _____

_____)

submitted together with this form satisfy the following criteria :

I General Criteria

- | | Yes | No |
|--|--------------------------|--------------------------|
| (a) The proposed works do not involve foundation works, other than spread footing with excavation depth not exceeding 4.5m, and/or works with significant geotechnical content; | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) Carrying out the proposed building works will not involve precautionary works or other safety measures which are required to be completed to the satisfaction of the Building Authority prior to the commencement of the proposed works; | <input type="checkbox"/> | <input type="checkbox"/> |

- (c) All the plans and documents prescribed under Building (Administration) Regulation 8 are submitted for approval; and
- (d) All the requisite supporting information/documents for the consent application are submitted. (The supporting information/documents may include, where appropriate, site supervision plans, hoarding plans or other supporting documents such as test reports or structural assessment reports required under PNAP 249. For curtain wall works, compliance certificates and other test reports as required under PNAP 106 may be submitted prior to the application for an occupation permit.)

II Specific Criteria for Building Works for a Two-storey Warehouse

- | | Yes | No |
|---|--------------------------|--------------------------|
| (a) The proposed building is a warehouse, for general storage, of not more than two storeys and has no basement; | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) The site is a Class A, B or C site and emergency vehicular access is provided in compliance with Building (Planning) Regulation 41D and the Code of Practice for Means of Access for Firefighting and Rescue; | <input type="checkbox"/> | <input type="checkbox"/> |
| (c) No compartment in the building shall exceed 7000m ³ | <input type="checkbox"/> | <input type="checkbox"/> |

3. I understand that this application for consent to the commencement of the proposed building works will not be considered if the prescribed plans and documents of the proposed building works are not approved. I further understand and agree that for the purpose of Building (Administration) Regulation 32(3), the effective date of this application for consent to the commencement of the proposed building works will be the date on which the Building Authority gives his approval of the plans of the proposed building works or, where applicable, the date on which approval is deemed to have been given by the Building Authority.

Signature

Capacity of signatory

4. To be filled in by the Building Authority

Type of plans	Date of approval	BA's Ref. No.

Note : Reference to be made to paragraph 31 of PNAP 272

* Delete whichever is inapplicable.

(12/2008)