

Submission of Plans and Documents in Electronic Format

Introduction

The Electronic Transactions Ordinance (ETO) (Cap. 553) was enacted to facilitate the use of electronic transactions for commercial and other purposes. It gives electronic records and digital signatures used in electronic transactions the same legal status as that of their paper-based counterparts.

2. The ETO provides that if a rule of law requires information to be given in writing, an electronic record satisfies such requirement if the information is accessible so as to be usable for subsequent reference (section 5 of the ETO). In addition, if the signature of a person is required on the information, a digital signature of the person satisfies such requirement if the digital signature is supported by a recognised certificate and is generated within the validity of that certificate (section 6 of the ETO).

3. These provisions of the ETO for legal recognition of electronic records and digital signatures in relation to rules of law and admissibility of electronic records as evidence in court have come into operation since 7 April 2000. Further details on the ETO are available at the website of the Office of the Government Chief Information Officer (www.ogcio.gov.hk). As far as these provisions as applicable to the submissions made under the Buildings Ordinance (BO) are concerned, the Buildings Department (BD) has made the following arrangements.

Information Systems Designated for Receiving Electronic Submissions

4. BD has set up the following information systems to receive electronic submissions including plans, documents and specified forms under the BO:

- (a) **Electronic Submission Hub (ESH)** at ESH website <https://esh.bd.gov.hk> for receiving and processing of plan submissions;
- (b) **e-Counter** at receipt@bd.gov.hk for receiving submissions of size not exceeding 25 MB; and
- (c) **Electronic Forms Submission System (EFSS)** at BD website www.bd.gov.hk for receiving submission of certain specified forms.

Implementation and Exemptions

5. While the e-Counter and EFSS are already in operation, ESH will be implemented in three stages and the types of plans that may be submitted via ESH in each stage are shown in Appendix A. Stage 1 of ESH has been launched on 31 May 2022 to accept structural plan submissions for building works above ground not requiring cross-departmental referral. Submission of other plans not covered by Stage 1 will continue to be exempted from the application of the ETO for the time being. Details of the exemptions are set out in Appendix B.

Format, Manner and Procedure

6. With the exception of the submissions under the exemption provisions as stated in paragraph 5 above, electronic submissions under the BO submitted in accordance with paragraphs 8 to 16 below will be considered to be submitted to the corresponding designated information systems of BD for the purpose of receiving electronic records, as mentioned in section 19(2) of the ETO. The identity of the person making an electronic submission should be authenticated by a digital certificate issued by the Postmaster General or other certification authorities recognised by the Government Chief Information Officer under the ETO. Detailed information on such digital certificate and its application procedures are available at BD website.

7. The format, manner and procedure for the acceptance of electronic information has been published in a gazette by virtue of the ETO. Failure to observe the required format, manner and procedure and the requirements of the respective systems will invalidate the submission. Detailed requirements of the designated information systems of BD as referred to in the above gazette are provided in paragraphs 8 to 16 below.

Requirements of ESH

8. ESH is a web-based platform operating 24 hours a day and 7 days a week all year round, excluding scheduled maintenance and unexpected downtime. Authorized persons (AP), registered structural engineers (RSE) and registered geotechnical engineers (RGE) may make an electronic submission via ESH online with a valid digital certificate¹ or “iAM Smart”².

9. By using ESH to make electronic submissions, users are deemed to have agreed and accepted ESH as their designated information system for the purpose of section 19(2)(a)(i) of the ETO for receiving electronic records from BD.

10. Unlike a submission in hard copy form, which may require multiple copies, only one set of documents is required for a submission in electronic format. Notwithstanding this, under regulation 11(2) of the Building (Administration) Regulations (B(A)R), if a plan

/or ...

¹ The digital certificate should be a personal digital certificate.

² Details of “iAM Smart” are available at the website www.iamsmart.gov.hk.

or a related document is submitted (whether or not in hard copy form) to the Building Authority (BA) for approval, the BA may require the submission of additional copies in hard copy form. Furthermore, the BA reserves the right to reply in hard copy form when necessary or appropriate.

11. The plans and documents submitted via ESH should meet the requirements in Appendix C. Each submission of plans should be accompanied with an electronic plan index. The guidelines on electronic plan index are set out in Appendix D.

12. The detailed system requirements, terms and conditions and Users' Manual for ESH are available at ESH website.

13. AP, RSE, RGE and registered contractors are reminded that necessary equipment and provisions should be in place to enable electronic records be supplied to the concerned parties, kept on site, and produced to the BA under regulations 36 and 40 of the B(A)R.

14. To promote green environment and facilitate effective preparation and processing of submissions, BD encourages paperless electronic submission via ESH as an alternative to the conventional paper submission. To this end, after a submission is made via ESH, all the subsequent amendment submissions should continue to be made via ESH so as to facilitate easy tracking, recording and processing of the submissions.

Requirements of e-Counter

15. The submissions made via e-Counter should not involve voluminous documents, customised programme or large size drawings. The electronic records should be sent as attachments in a digitally signed email and in the manner and format as follows:

- (a) electronic records of specified forms should be in Portable Document Format (PDF) with the digital signatures applied at the specified locations of the specified forms;
- (b) other electronic records should either be:
 - (i) in PDF, and each page of the documents should not be larger than A3 size, and each document should be signed with a digital signature; or
 - (ii) in Tag Image File Format (TIFF) or in Joint Photographic Experts Group (JPEG), the respective lengths of the two adjacent sides of the image of each document in a resolution of 200 dpi should not be greater than 3 300 pixels x 2 340 pixels, 24-bit colour depth for document in colour, and each document should be signed with a digital signature; and
- (c) total size of the email including the attachments and digital signatures should not exceed 25 MB.

Requirements of EFSS

16. Certain specified forms and their attachments may be submitted online via EFSS as detailed under Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers APP-60. The forms and attachments should be signed with digital signatures. Total size of the specified forms including the attachments and digital signatures should not exceed 25 MB. The templates of specified forms are also available for downloading from BD website for submission as an attachment to an email, by hand or by post. Users are encouraged to type in the required information using a computer so that the information can be automatically stored in the two-dimensional barcode (i.e. QR code) on the form, for subsequent processing by BD.

Plan for the future

17. BD will keep in view feedback received from the use of the above systems. The exemptions granted under the ETO as detailed in Appendix B will be rescinded in stages upon the launch of subsequent stages of ESH.

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Building Authority

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Implementation of the Electronic Submission Hub (ESH)

Stage 1

1. In the first stage of ESH, the types of plans and related documents that can be submitted via ESH cover structural plan submissions for building works above ground not requiring cross-departmental referral. Submissions for alteration and addition (A&A) works are excluded.

Stage 2

2. In the second stage of ESH, the types of plans and related documents that can be submitted via ESH will be extended to cover submissions requiring referrals to some departments or organisations including the departments under the Works Branch of the Development Bureau. Submissions for A&A works are excluded. These submissions will include plans for:

- (a) hoarding proposal;
- (b) demolition works;
- (c) drainage works;
- (d) excavation and lateral support works;
- (e) ground investigation works;
- (f) foundation works;
- (g) site formation works; and
- (h) all structural works.

Stage 3

3. In the third stage of ESH, all types of plans and related documents including general building plans and submissions for A&A works will be covered and can be submitted via ESH.

**Exemptions of the Buildings Ordinance from
Operation of the Electronic Transactions Ordinance (ETO)
in Stage 1 of Implementation of the Electronic Submission Hub**

1. Provisions excluded from the application of Section 5 of the ETO:

Buildings Ordinance	Column B in the table to section 17(1) (to the extent to which the conditions and requirements set out in that column relate to a document specified under regulation 6A(1)(b) of the Building (Administration) Regulations), sections 20(2) and 21(2)
Building (Administration) Regulations	Regulation 6(1) (to the extent to which it relates to a document specified under regulation 6A(1)(b))
Building (Planning) Regulations	Regulations 51(1) and 64(1) and (2)

2. Provisions excluded from the application of Section 6 of the ETO:

Building (Administration) Regulations	Regulation 12(1), (2), (3) and (5) (to the extent to which it relates to a document specified under regulation 6A(1)(c))
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**Requirements of Plans and Documents
Submitted via the Electronic Submission Hub (ESH)**

1. Plans and documents submitted via ESH should meet the following requirements:

- (a) Prescribed plans:
 - (i) the file should be in Portable Document Format (PDF) without security restrictions;
 - (ii) one file should only contain one drawing with a file name not exceeding 50 alphanumeric characters;
 - (iii) each file size should not be larger than 25 MB;
 - (iv) each file should be signed with a digital signature using the signing tool provided in ESH;
 - (v) paper size of the drawing should follow that specified in PNAP ADM-10 and in landscape orientation;
 - (vi) a minimum unused space of 90 mm wide by 150 mm high, for accommodating the system generated stamps to indicate the plan has been digitally signed by AP, RSE and/or RGE, and the official stamps of approval and certification of copies of approved plans by the Building Authority, should be provided at the lower right corner on every plan in accordance with PNAP ADM-10;
 - (vii) native PDF file created from computer software such as Computer Aided Design (CAD) and Building Information Modelling (BIM), is highly recommended; otherwise, if the file is generated by scanning paper documents, it should have a minimum resolution of 300 dpi and 24-bit colour depth; and
 - (viii) the file should not contain multiple layers or post-edited comments, mark-up or annotation to ensure the file could be viewed and printed without loss of information under any circumstances.

(b) Other prescribed documents:

- (i) the file format should be in single layer PDF without security restrictions;
- (ii) the file name should not exceeding 50 alphanumeric characters;
- (iii) each file size should not be larger than 500 MB;
- (iv) each file should be signed with a digital signature using the signing tool provided in ESH; and
- (v) a minimum unused space of 100 mm wide by 65 mm high, for accommodating the system generated stamps to indicate the document has been digitally signed by AP, RSE and/or RGE, should be provided at the lower right corner on the front page of every document.

2. ESH also enables submission of files in CAD and BIM format of file size not larger than 500 MB each, as supplementary information for reference. Further information and requirements are set out in PNAP ADM-19 and ADV-34.

(5/2022)

**Guidelines on Electronic Plan Index for Plan Submissions
via the Electronic Submission Hub (ESH)**

1. Each submission of plans via ESH should be accompanied with an electronic plan index, which should be completed online. In the plan index, each entry of plan submission is required to be identified with a unique description comprising drawing title, drawing number, revision number of the plan. Each drawing title, drawing number and revision number should not exceed 50 alphanumeric characters.
2. ESH may compile electronic plan index automatically by detecting the required information on the plan if the information (case sensitive) is presented in the title block on the plan as follows:
 - (a) The drawing title should be located under a caption of **“Drawing Title:”**;
 - (b) The drawing number should be located under a caption of **“Drawing Number:”**;
 - (c) The revision number should be located under a caption of **“Revision Number:”**; and
 - (d) The information in (a), (b) and (c) above should be presented in separate rows and in machine readable text format.
3. An example of the title block is given in Diagram 1 for illustration. An example of electronic plan index automatically compiled by ESH is given below:

Electronic Plan Index					
File Name¹	Page Size¹	Drawing Number	Revision Number	Drawing Title	Uploaded Date¹
SSB201_GN_TypD.pdf	A0	SS/B2/01	-	General Notes and Typical Details	31 May 2022 10:11
SSB202-A_GF-RF.pdf	A0	SS/B2/02	A	G/F to R/F Framing Plan	31 May 2022 10:12
SSB203-A_A-A.pdf	A0	SS/B2/03	A	Section A-A	31 May 2022 10:12
SSB204-E_RC_B&S.pdf	A0	SS/B2/04	E	R.C. Details of Beams & Slabs	31 May 2022 10:12
SSB205-E_RC_W&C.pdf	A0	SS/B2/05	E	R.C. Details of Walls & Columns	31 May 2022 10:12
SSB206-E_RC_SS&WT.pdf	A0	SS/B2/06	E	R.C. Details of Staircases & Water Tank	31 May 2022 10:12

¹ Note File name, page size and uploaded date of a plan would be compiled in the plan index by ESH automatically notwithstanding that the information is not listed in the title block.

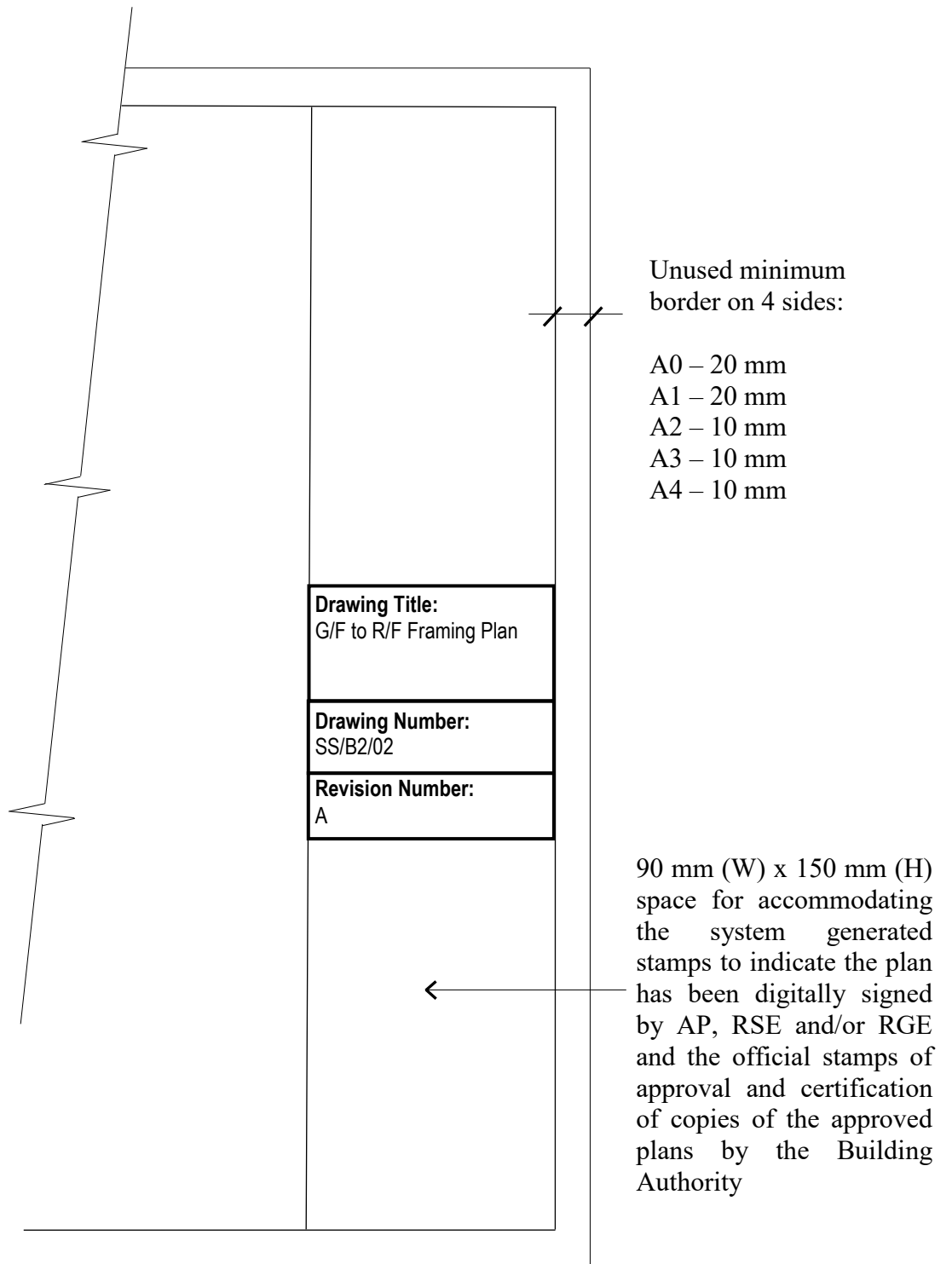


Diagram 1 – Sample Title Block for Electronic Plan

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