Appendix F –   Codification for EMSD BIM Model Naming Convention

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1. INTRODUCTION

The codifications listed in this Appendix are for EMSD's BIM model naming convention that has been aligned with Appendix IV – Common Codes for Naming of DEVB BIM Harmonisation Guidelines for Works Departments (BH). If/when discrepancies exist, this Appendix shall be followed. Below Table describes the naming fields of EMSD BIM model.

Table 1-1 Description of Naming Fields for BIM Model

Field No.	Information Container ID Field	Sub-field No.	Obli-gation	Field Length and Format	Nature of Codification	Reference
1	Project	N/A	M	1-8 alpha-numeric	Building Code for AIM or EMSD-specific [1] (contract number for PIM)	Appendix A of the BIM-AM SG for AIM or Contractor's BEP for the PIM
2	Originator	N/A	M	3 alpha-numeric	Follow BH with exceptions [2]	DEVB's Agent Responsible Codes (ARC) or EMSD assigned unique code
3	Volume (and System when applicable)	3.1	M	1-3 alpha-numeric	EMSD-specific [1]	Contractor's BEP
		3.2	O	1-3 alpha-numeric	Follow BH	Sections 2 of this Appendix
4	Location (and Sub-location when applicable)	4.1	M	1-4 alpha-numeric	Block; EMSD-specific [1]	Section 3.11 of this Appendix and Contractor's BEP
		4.2	O	1-2 alpha-numeric	Level; Follow BH	Section 錯誤! 找不到參照來源。 of this Appendix
5	Discipline (and Sub-discipline when applicable)	5.1	M	1-2 alphabetic	Follow BH	Sections 2 and 3.3 of this Appendix
		5.2	O	1-2 alphabetic	Follow BH	Section 2 of this Appendix

Field No.	Information Container ID Field	Sub-field No.	Obli-gation	Field Length and Format	Nature of Codification	Reference
6	Type (and Characteristic when applicable)	6.1	M	1-2 alphabetic	Follow BH	Section 3.5 of this Appendix
		6.2	O	1 alphabetic	Follow BH	Section 3.6 of this Appendix
7[3]	Sequential Number	7	O	3 numeric	EMSD-specific [1]	Section 2 of this Appendix

Remarks:

M – Mandatory

O – Optional

[1] For codes whose nature of codification is EMSD-specific, EMSD may specify the codes for Contractor or Contractor shall propose the codes to EMSD for approval. The approved codes shall be documented in Contractor's BIM Execution Plan (BEP).

[2] For Field 2 (Originator), if the Contractor is not listed in ARC, EMSD should assign a unique code, which shall be documented in Contractor's BIM Execution Plan (BEP).

[3] Field 7 is used for identifying a BIM model file from other identical BIM models' filenames.

[4] NA should be inputted for Field 3.1 that represents "All zones" or "Whole building".

2. CODES FOR FIELDS 3.2, 5 AND 7

2.1 Arrangement of the Codes for Fields 3.2, 5 and 7

The codes below for Fields 3.2, 5 and 7 are extracted from BH and mapped to EMSD E&M equipment for Contractor to follow. If additional code is required, Contractor shall propose the codes to EMSD for approval. Approved codes shall be documented in Contractor's BIM Execution Plan (BEP).

Table 2-1 Codes for Field 3.2, 5 and 7 (sorted by EMSD System No.)

EMSD System No.	Field 3.2	Definition of Field 3.2	Field 5.1	Definition of Field 5.1	Field 5.2	Definition of Field 5.2	Field 7	Definition of Field 7	Remarks
01	BD	Building	BS	Building Services	LE	Lift & Escalator			
02	BD	Building	BS	Building Services	LV	LV Switchboard			
03	BD	Building	BS	Building Services	EG	Emergency Generator			
04	BD	Building	BS	Building Services	HA	Heating, ventilation, and air conditioning	040	Heating, ventilation, and air conditioning-Air Side (AS)	If the size of model is too large, it is suggested to separate the water-side and air-side models for HVAC system.
04	BD	Building	BS	Building Services	HA	Heating, ventilation, and air conditioning	041	Heating, ventilation, and air conditioning-Water Side (WS)	
05	BD	Building	BS	Building Services	BL	Boiler System			
06	BD	Building	BS	Building Services	FP	Filtration Plant			
07	BD	Building	FS	Fire Services					Please note that Fire services installation shall be an individual discipline under Field 5.1

EMSD System No.	Field 3.2	Definition of Field 3.2	Field 5.1	Definition of Field 5.1	Field 5.2	Definition of Field 5.2	Field 7	Definition of Field 7	Remarks
08	BD	Building	BS	Building Services	UP	Uninterrupted Power Supply			
09	BD	Building	BS	Building Services	BA	Burglar Alarm	090	Burglar Alarm and Security Installation (Access Control system) (ACS)	
09	BD	Building	BS	Building Services	BA	Burglar Alarm	091	Burglar Alarm and Security Installation (Burglar Alarm System) (BAS)	
09	BD	Building	BS	Building Services	BA	Burglar Alarm	092	Burglar Alarm and Security Installation (CCTV & Intercom System) (CCTVI)	
09	BD	Building	BS	Building Services	BA	Burglar Alarm	093	Burglar Alarm and Security Installation (Smart Card System) (SCS)	
09	BD	Building	BS	Building Services	BA	Burglar Alarm	094	Burglar Alarm and Security Installation (Call Alarm System) (CAS)	
09	BD	Building	BS	Building Services	BA	Burglar Alarm	095	Burglar Alarm and Security Installation (Videophone System) (VPS)	

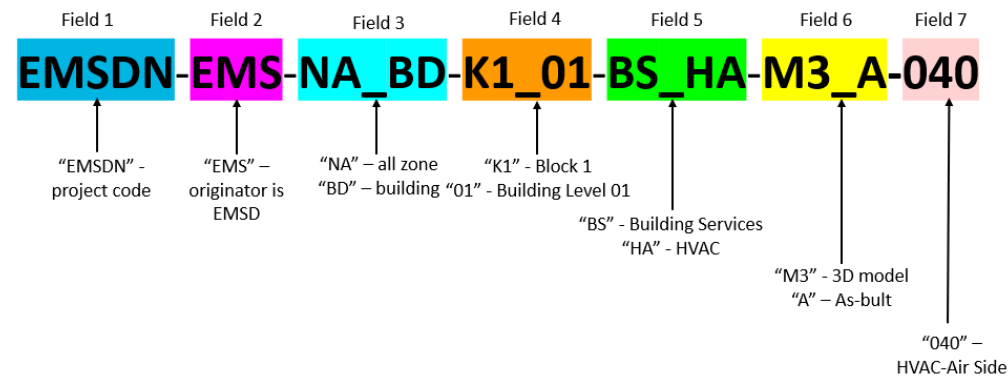| EMSD System No.	Field 3.2	Definition of Field 3.2	Field 5.1	Definition of Field 5.1	Field 5.2	Definition of Field 5.2	Field 7	Definition of Field 7	Remarks
09	BD	Building	BS	Building Services	BA	Burglar Alarm	096	Burglar Alarm and Security Installation (Keypad Lock System) (KLS)	
09	BD	Building	BS	Building Services	BA	Burglar Alarm	097	Burglar Alarm and Security Installation (Drop-arm Barrier) (DAB)	
09	BD	Building	BS	Building Services	BA	Burglar Alarm	098	Burglar Alarm and Security Installation (Electric Lock System)	
10	BD	Building	BS	Building Services	RN	Radar and Navigation System			
11	BD	Building	BS	Building Services	ML	Microwave Link System			
12	BD	Building	BS	Building Services	TD	Timing & Display System			
13	BD	Building	BS	Building Services	AV	Audio Video System			
14	BD	Building	BS	Building Services	AU	Audio Electronics System			
15	BD	Building	BS	Building Services	RS	Radio System			

EMSD System No.	Field 3.2	Definition of Field 3.2	Field 5.1	Definition of Field 5.1	Field 5.2	Definition of Field 5.2	Field 7	Definition of Field 7	Remarks
16	BD	Building	BS	Building Services	CC	Closed Circuit TV System			Please note that Closed Circuit TV System (CCTV) shall refer to non-burglar alarm purpose such as CCTV at LVS room, people control and thermal camera.
17	BD	Building	BS	Building Services	BR	Broadcast Reception	170	Broadcast Reception Installation (UHF TV System) (UTV)	
17	BD	Building	BS	Building Services	BR	Broadcast Reception	171	Broadcast Reception Installation (Satellite TV System) (STV)	
18	BD	Building	BS	Building Services	LG	Lighting			
19	BD	Building	BS	Building Services	EL	Electrical Distribution			
20	BD	Building	BM	Biomedical					Please note that Biomedical shall include medical gas system.
21	BD	Building	BS	Building Services	PT	Pneumatic Tube Transport			
22	BD	Building	BS	Building Services	IS	Internet-of-thing Installation (IoT)			
23	BD	Building	BS	Building Services	HV	High Voltage Power Supply			

EMSD System No.	Field 3.2	Definition of Field 3.2	Field 5.1	Definition of Field 5.1	Field 5.2	Definition of Field 5.2	Field 7	Definition of Field 7	Remarks
24	BD	Building	BS	Building Services	PX	Private Automatic Branch Exchange System			
25	BD	Building	BS	Building Services	AR	Automatic Refuse Collection System			
A1	BD	Building	BS	Building Services	PL	Plumbing System			
A2	BD	Building	BS	Building Services	DR	Drainage System			
A3	BD	Building	BS	Building Services	LD	Water Leakage Detection System			
A4	BD	Building	AR	Architectural	MH	Mechanical Handling & Lifting Installation			
	DCS	District Cooling System	CD	Chilled Water Distribution					for underground DCS utilities outside of building
	ZZ	Combined model							This code shall be used for combined model with multiple models at Field 3.2.

2.2 BIM Model Naming Examples

Below example shows a project called "EMSD Headquarter (EMSDN)" under EMSD (EMS) maintenance. The site contained several building blocks within one zone (or no zoning definition is required). BIM model naming for Field 1 to 7 could be similar as below:

Figure 2-1 Example of Using the Naming Fields for EMSD Project

BIM model file names may include:

Table 2-2 List of BIM Models Naming for Asset Information Model (AIM) and Project Information Model (PIM)

#	BIM Model File Name	Description
Asset Information Model (AIM) for operation stage		
1	EMSDN-EMS-NA_BD-K1_01-AR-M3_A	Building Block 1 (Level 01) Architectural 3D Model File (As-built)
2	EMSDN-EMS-NA_BD-K1_01-BS_AV-M3_A	Building Block 1 (Level 01) Building Services (Audio Video System) 3D Model File (As-built)
3	EMSDN-EMS-NA_BD-K1_01-BS_CC-M3_A	Building Block 1 (Level 01) Building Services (Closed Circuit TV System) 3D Model File (As-built)
4	EMSDN-EMS-NA_BD-K1_01-BS_DR-M3_A	Building Block 1 (Level 01) Building Services (Drainage) 3D Model File (As-built)
5	EMSDN-EMS-NA_BD-K1_01-BS_HA-M3_A-040	Building Block 1 (Level 01) Building Services (Heating, ventilation, and air conditioning-Air Side (AS)) 3D Model File (As-built)

#	BIM Model File Name	Description
Asset Information Model (AIM) for operation stage		
6	EMSDN-EMS-NA_BD-K1_01-BS_LE-M3_A	Building Block 1 (Level 01) Building Services (Lift & Escalator) 3D Model File (As-built)
7	EMSDN-EMS-NA_BD-K1_01-BS_LG-M3_A	Building Block 1 (Level 01) Building Services (Lighting) 3D Model File (As-built)
8	EMSDN-EMS-NA_BD-K1_01-BS_PL-M3_A	Building Block 1 (Level 01) Building Services (Plumbing) 3D Model File (As-built)
9	EMSDN-EMS-NA_BD-K1_01-BS_UP-M3_A	Building Block 1 (Level 01) Building Services (Uninterrupted Power Supply) 3D Model File (As-built)
10	EMSDN-EMS-NA_BD-K1_01-BM-M3_A	Building Block 1 (Level 01) Biomedical 3D Model File (As-built)
11	EMSDN-EMS-NA_BD-K1_01-FS-M3_A	Building Block 1 (Level 01) Fire Services 3D Model File (As-built)
Project Information Model (PIM) for project handover with EMSD contract number of 1087EM18M. As maximum 8 characters are allowed, the "EM" of the Contract number should be omitted as the project ID.		
12	108718M-EMS-NA_BD-T1_RF_BS_HA-M3_N-040	Tower 1 (Roof) Building Services (Heating, ventilation, and air conditioning-Air Side (AS)) 3D Model File (New Works/ Proposed Works)

3.   OTHER CODES FROM BH

This section contains frequently used codes by EMSD which have been extracted from BH.

3.1   Codes for Field 4.1 – Location

Table 3-1 Abbreviation Codes for Field 4.1 – Location

Codes from BH	Definition
AB	Administration Building
AC	Ancillary Block
BD	Building
DQ	Staff Quarters
FB	Footbridge
MK	Market
OF	Office
PG	Playground
SB	Subway
CAP	Car Park
MB	Management Office Building
SV	Service Block
TL	Toilet
VC	Visitor Centre
E	East Wing
N	North Wing
S	South Wing
W	West Wing
K1	Block 1
K2	Block 2
T1	Tower 1
T2	Tower 2
XX [1]	Non-specific location
ZZ	Multiple locations for combined model

1   Could be used for elements outside of building

3.2   Codes for Field 4.2 – Sub-location (Levels)

Table 3-2 Abbreviation Codes for Field 4.2 – Sub-location (Levels)

Codes from BH	Definition
B2	Basement Level 2
B1	Basement Level 1
LG	Lower Ground Floor
GF	Ground Floor
UG	Upper Ground Floor
ES	Reference level from engineering survey
01	Level 01
02	Level 02
…	2-digit for level number
99	Level 99
MF	Mezzanine Floor
M1	Mezzanine above level 01
M2	Mezzanine Above Level 02
PL	Podium Level
RF	Roof
UR	Upper Roof
WB	Whole Building
AL	All levels (of a specific building zone)

3.3   Codes for Field 5.1 – Discipline

Table 3-3 Abbreviation Codes for Field 5.1 – Discipline

Codes	Definition	Underground Utilities (UU) / Above-grade (AG)
AR	Architectural	AG
BS	Building Services	AG
CD	Chilled Water Distribution	UU
FS	Fire Services [1]	AG
ST	Structural	AG
ZZ	Multiple disciplines for combined model	N/A

[1]   Fire services refer to both fire services elements inside and outside of building
within site boundary

3.4   Codes for Field 5.2 – Sub-discipline

Refer to Section 2.

3.5 Codes for Field 6.1 – Type

Table 3-4 Abbreviation Codes for Field 6.1 – Type

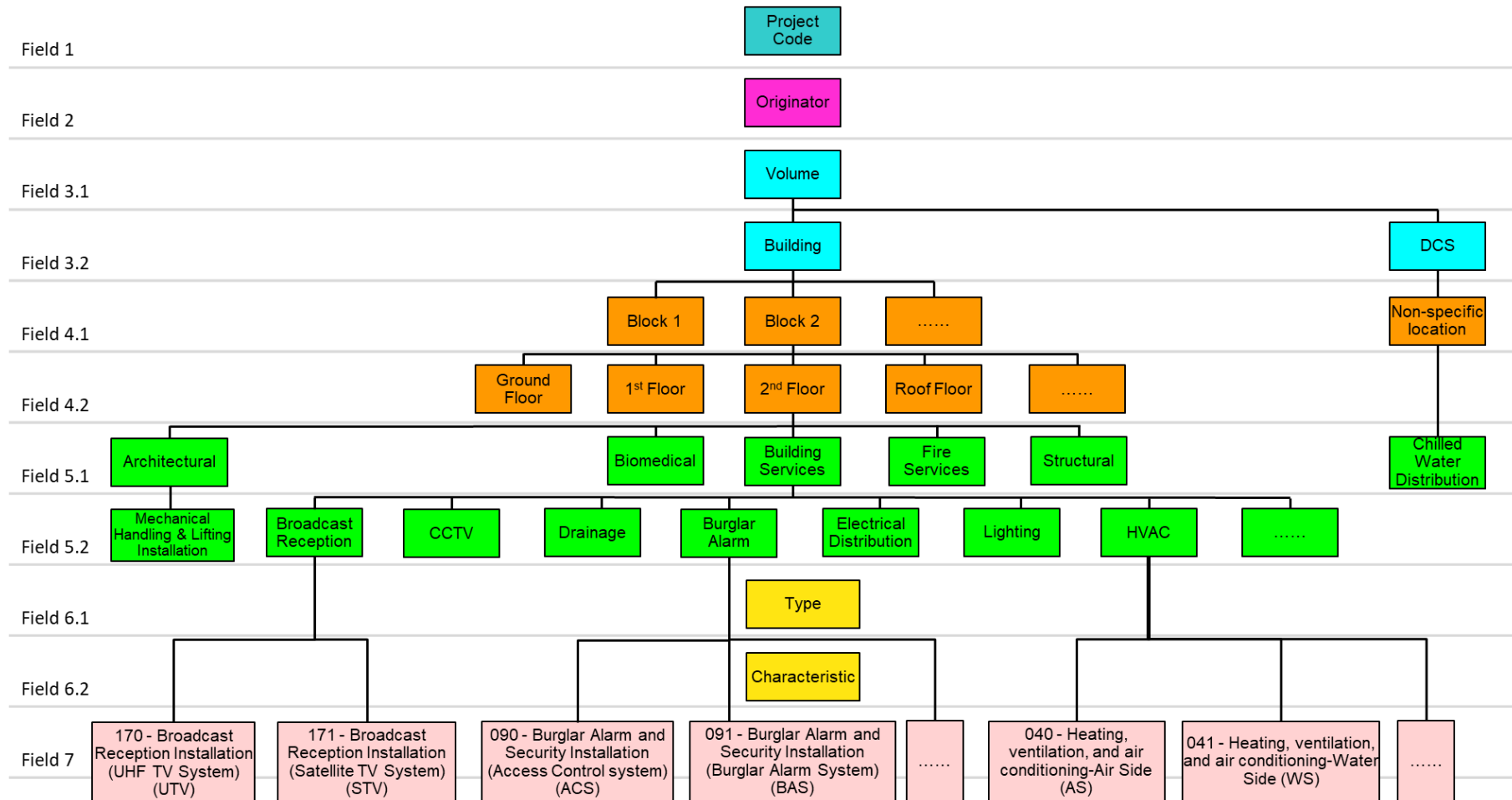| Codes from BH	Definition
CM	Combined Model (Combined Multidiscipline Model)
M3	3D Model File

3.6 Codes for Field 6.2 – Characteristic

Table 3-5 Abbreviation Codes for Field 6.2 – Characteristic

Codes from BH	Definition
A	As-built
D	Demolition
E	Existing, to remain
M	Maintenance or record
N	New Works/ Proposed Works
T	Temporary Works
W	All Works (combination of above works)

4. FEDERATION STRATEGY

Figure 4-1 Federation for EMSD Project

End of this Appendix