

The logo consists of the letters 'NCID' in a bold, white, sans-serif font. The letters are stylized with thick strokes and sharp angles, giving it a modern, architectural feel. The 'N' and 'C' are connected, as are the 'I' and 'D'.

NCID

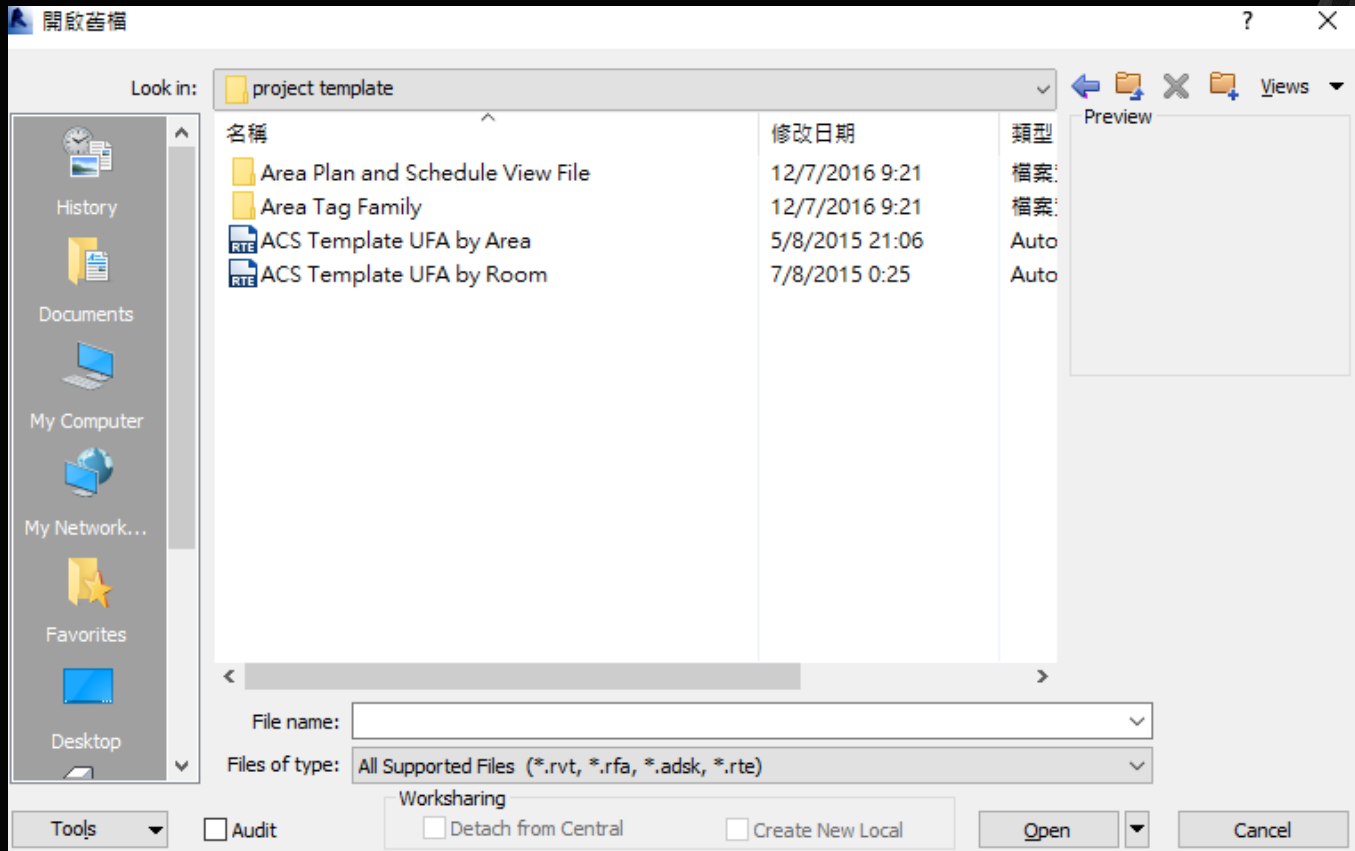
A DVANCED
C ONSTRUCTION
I NFORMATION
D EVELOPMENT



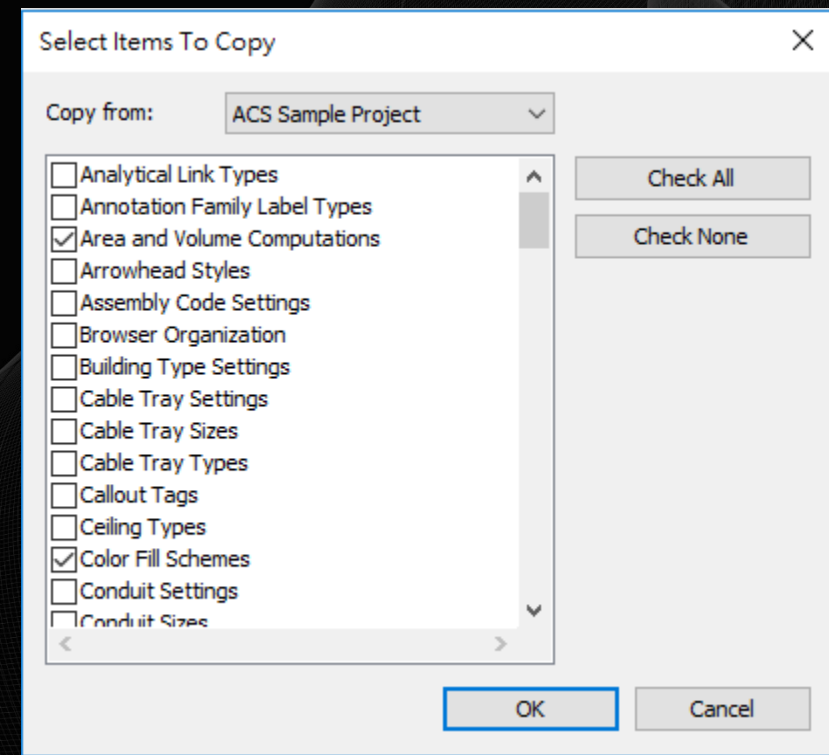
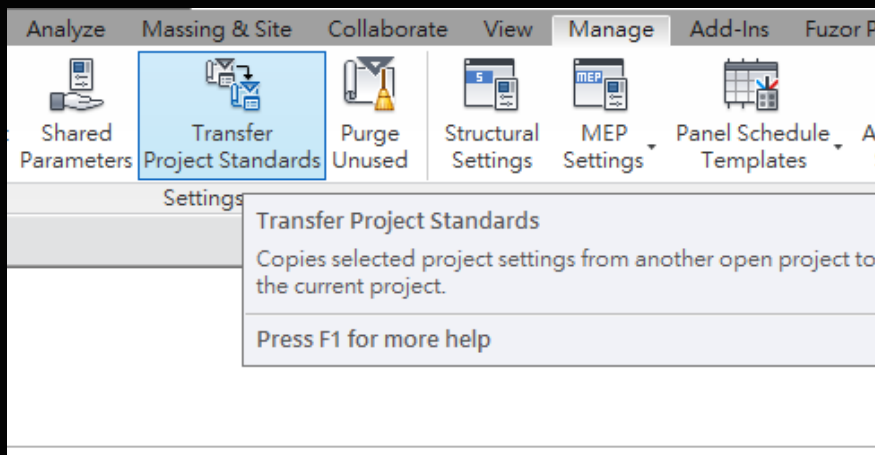
| Wrap-up Workshop on BIM for WTR's ICU GBP Submission

| Project Set Up

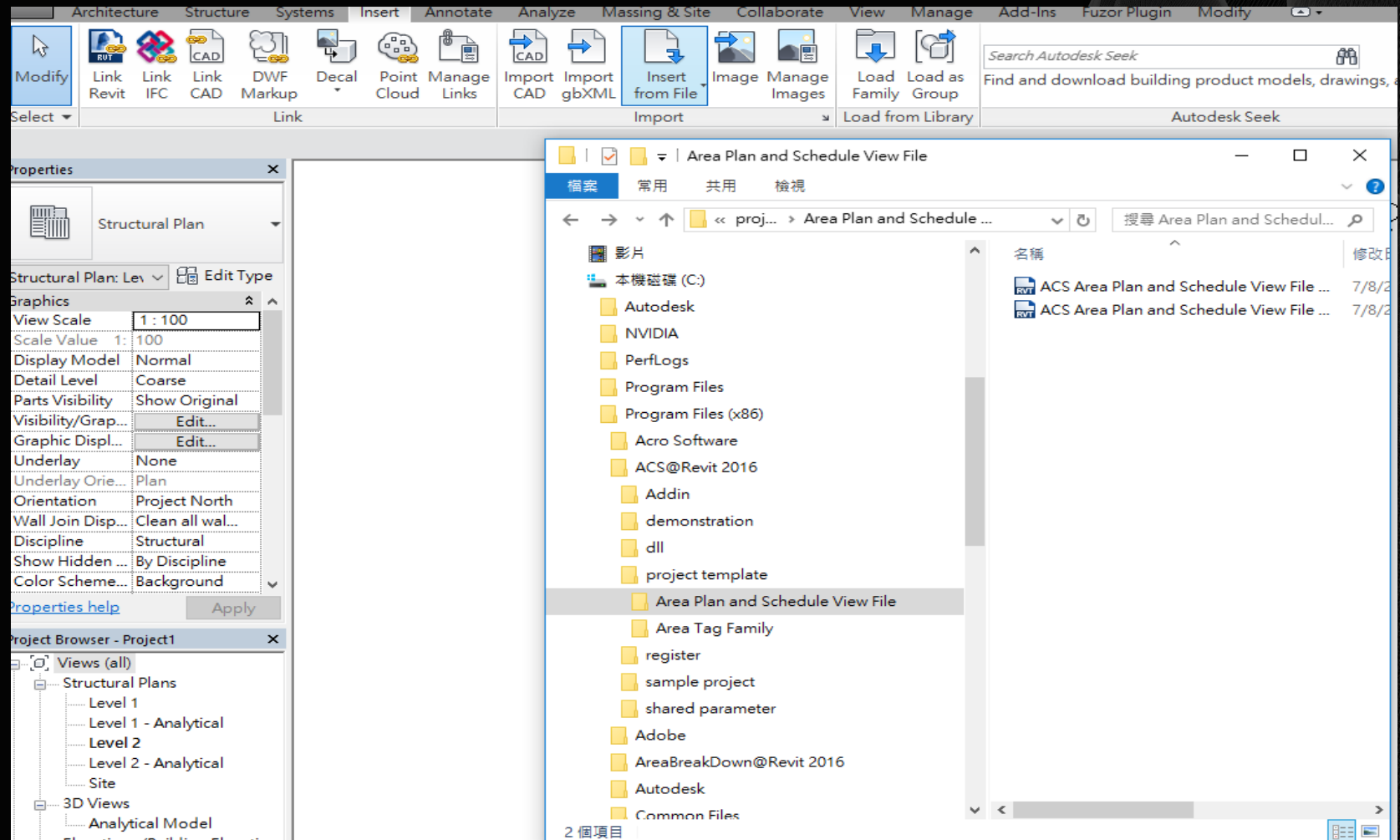
- **Project Template (For New Projects)**
- **Create project by using the ACS Template - UFA by Area/ UFA by Room**



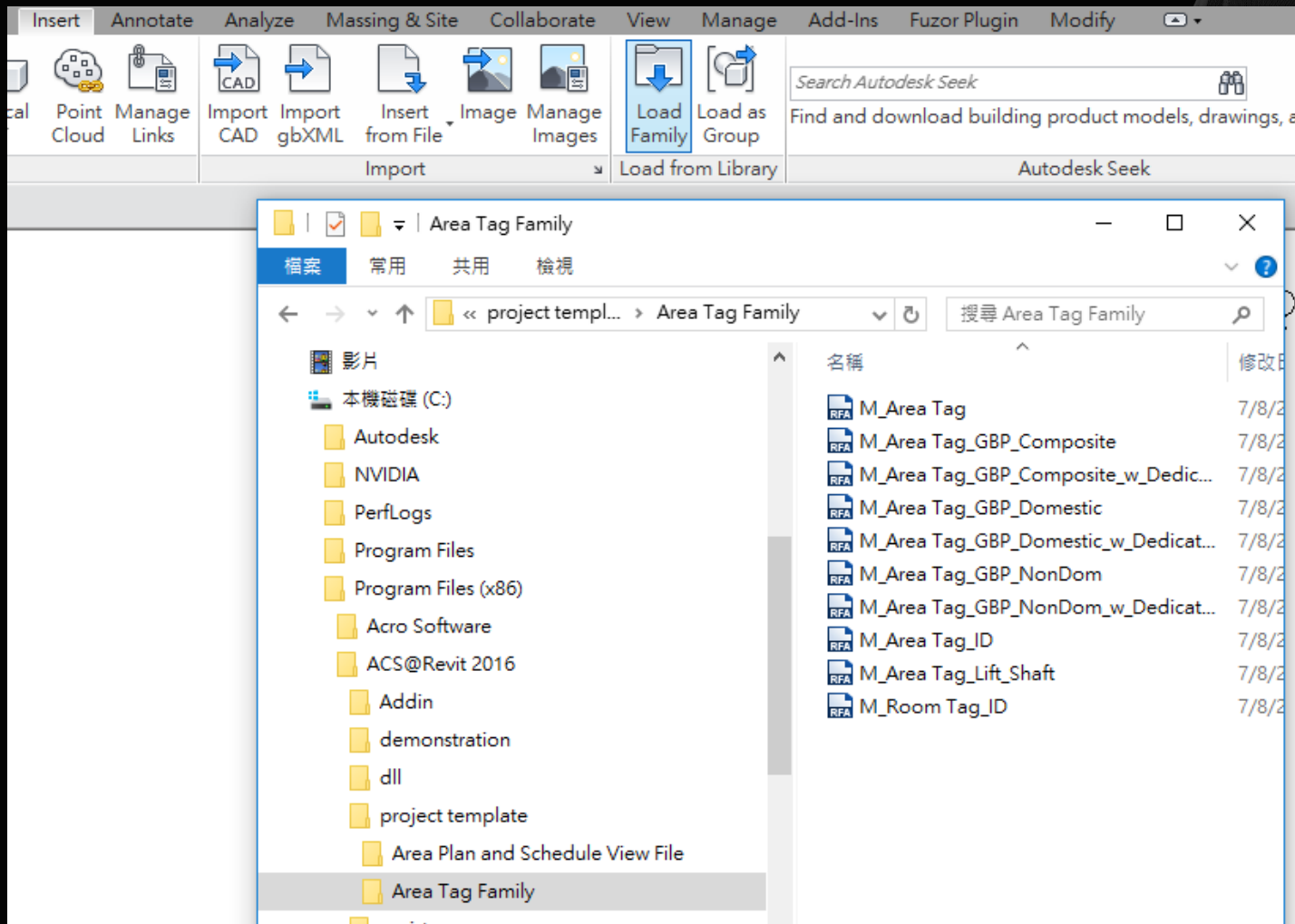
- **Project Template (For Existing Projects)**
- **Transfer Project Standards from ACS Templates to existing project**
- **Select Area and Volume Computations, Color Fill Schemes and Project Parameters only**



- **Preset Submission Schedules**
- **Insert Preset Schedules**



- Preset Submission Families
- Load Preset Area Tag Families

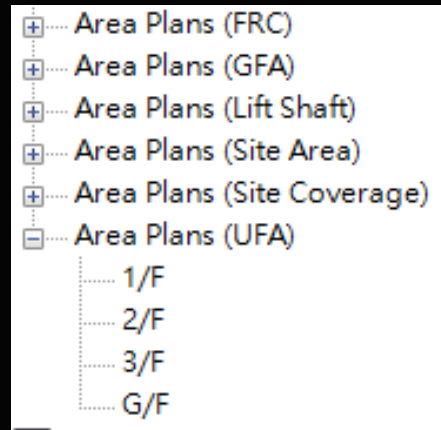
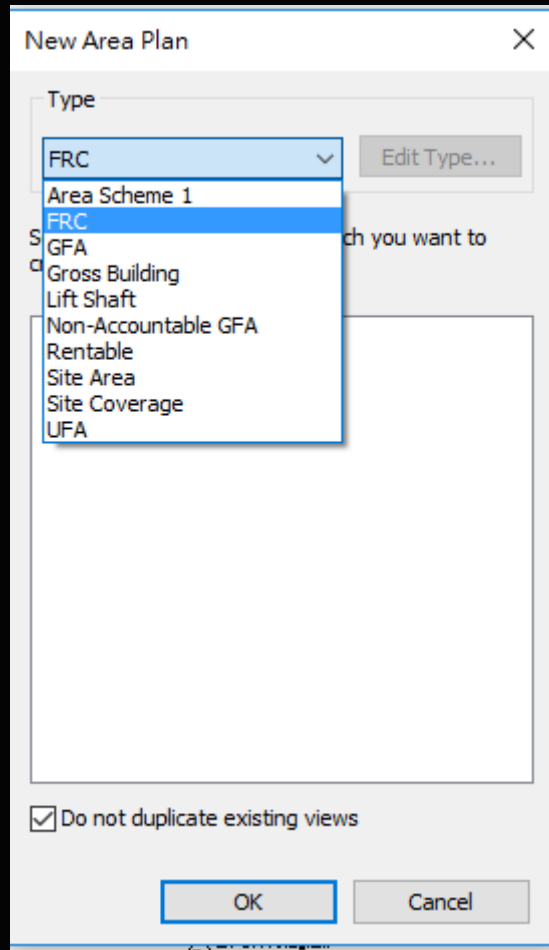


- ACS Calculation Setting
- Configure ACS Calculation Settings

The image displays four sequential screenshots of the 'ACS Calculation Setting' dialog box, each showing a different tab: General, GFA, MoE, and SanFit.

- General Tab:** Contains settings for 'UFA/UFS Calculation' (radio buttons for 'by "Room"' and 'by "Area"'), 'FRC Calculation' (radio buttons for 'by "Room"' and 'by "Area"'), and a 'Description' text area with the text: 'using ROOM for UFA/UFS calculation, recommended for projects using Revit for modeling and government submission'. Buttons for 'Apply' and 'Close' are at the bottom.
- GFA Tab:** Contains settings for 'Lift Shaft Concession' (radio buttons for 'total domestic GFA only' and 'total GFA other than hotel and office GFA'), 'Basis of Hotel Lift Shaft Concession' (radio buttons for 'total hotel GFA only' and 'total GFA other than domestic and office GFA'), and a 'Description' text area with the same text as the General tab. Buttons for 'Apply' and 'Close' are at the bottom.
- MoE Tab:** Contains settings for 'Calculation on total no. of people per floor / group' (radio buttons for 'floor by floor / group by group' and 'room by room'), 'MoE and FRC standard' (radio buttons for 'Fire Safety Code 2011' and 'MoE and FRC Code 1996'), and a 'Description' text area with the same text as the General tab. Buttons for 'Apply' and 'Close' are at the bottom.
- SanFit Tab:** Contains settings for 'Calculation on total no. of people per group' (radio buttons for 'group by group' and 'room by room'), 'Basis of SanFit Provision Calculation' (radio buttons for 'Buildings Regulation' and 'PNAP 297'), and a 'Description' text area with the same text as the General tab. Buttons for 'Apply' and 'Close' are at the bottom.

■ Create different sets of Area Plans



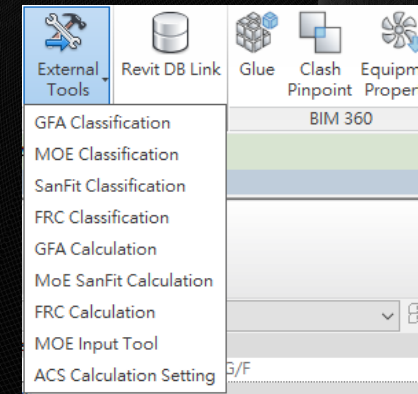
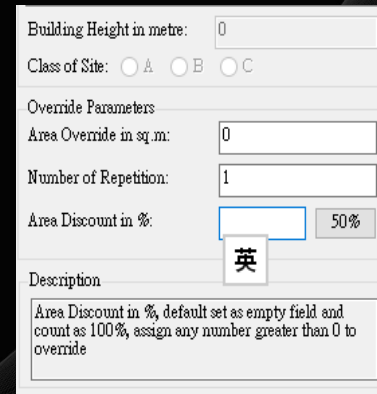
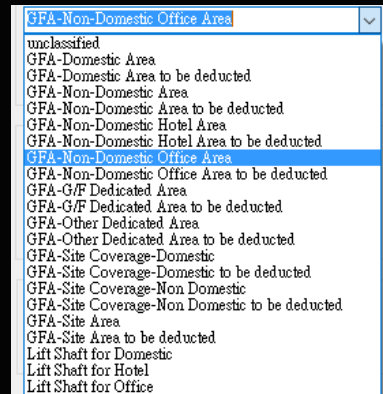
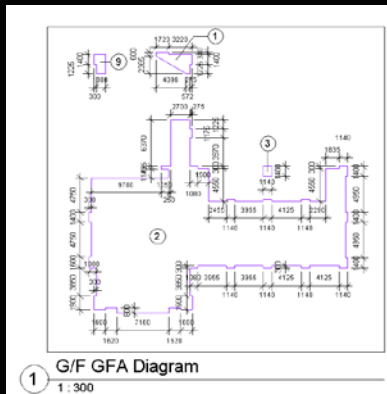
I Main Concept of ACS

■ Three Main Steps for ACS:

1. Create Areas

2. Assign Essential Parameters

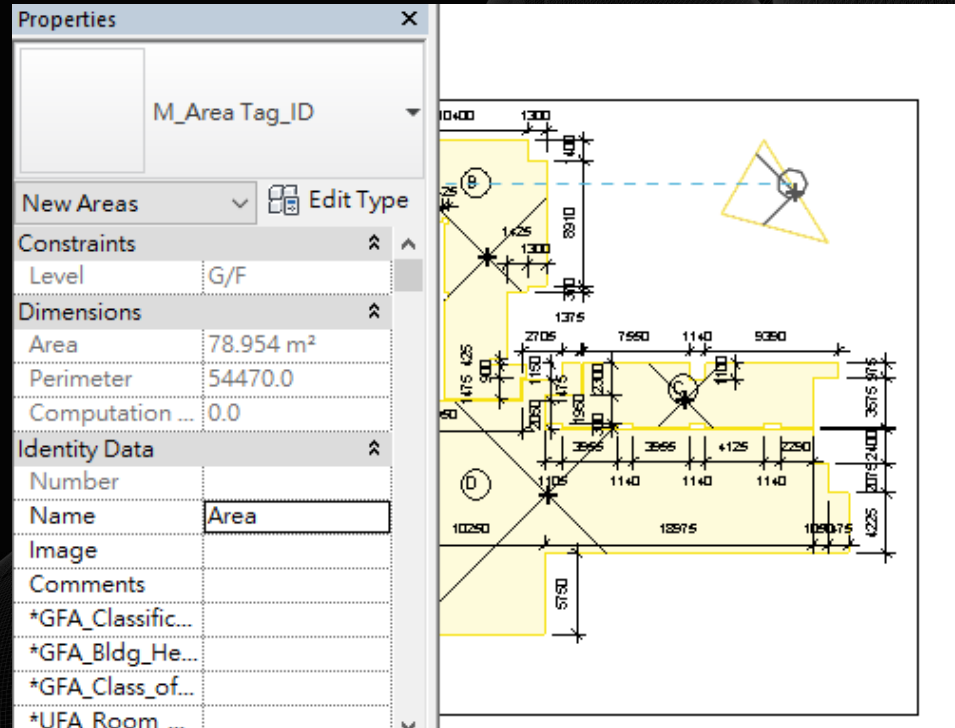
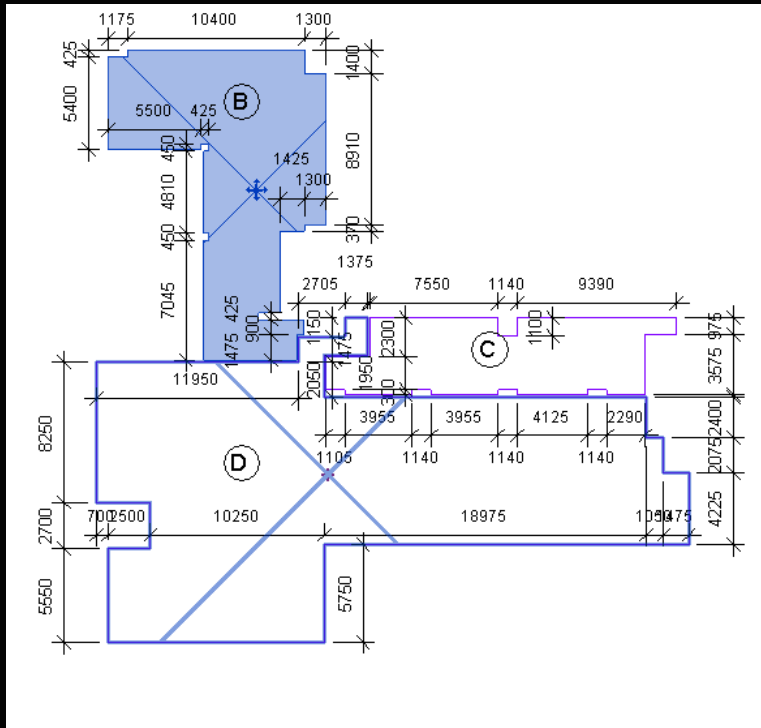
3. Run Calculation



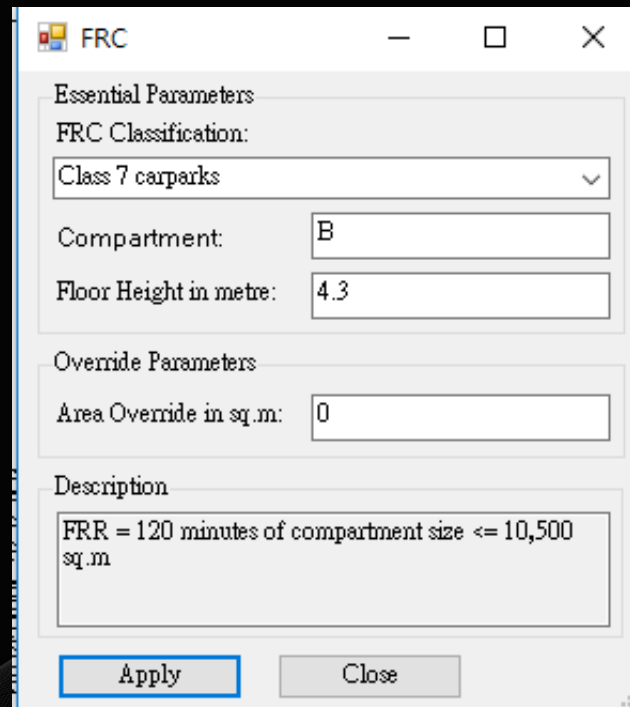
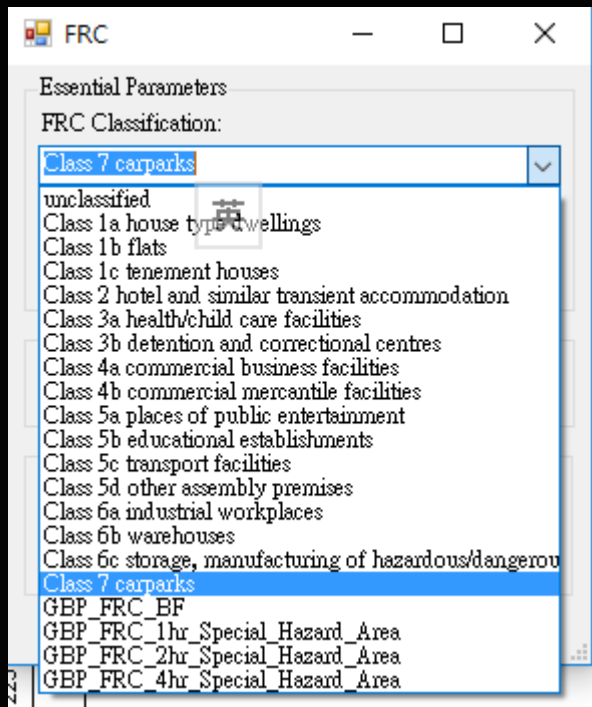


| Calculations

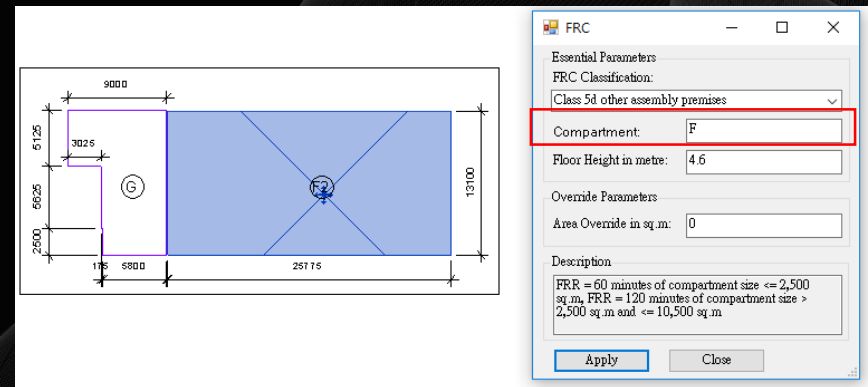
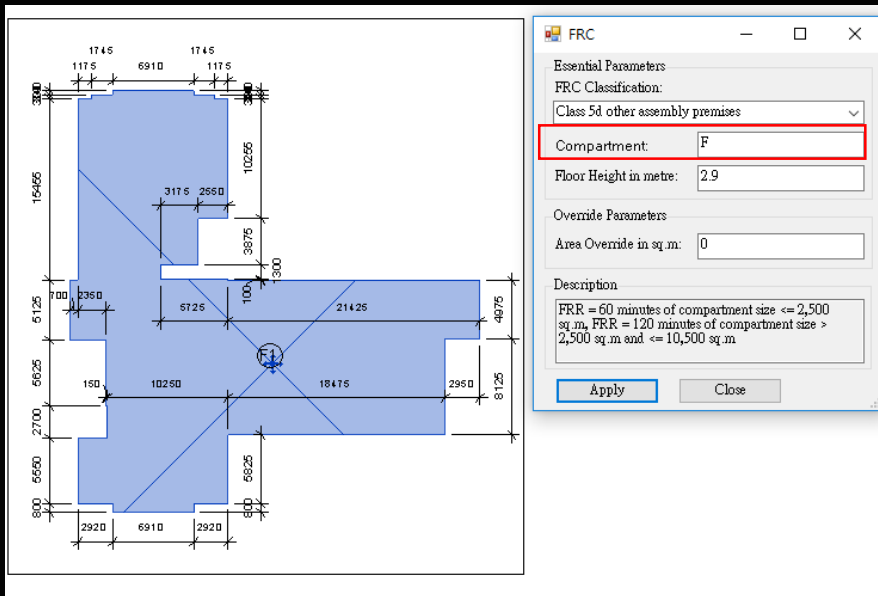
- FRC Calculation (Create Area)
- Use Area Boundary to create areas
- Use M_Area Tag_ID to tag areas



- FRC Calculation (Area Classification)
- Classify the area for different uses under External Tools tab



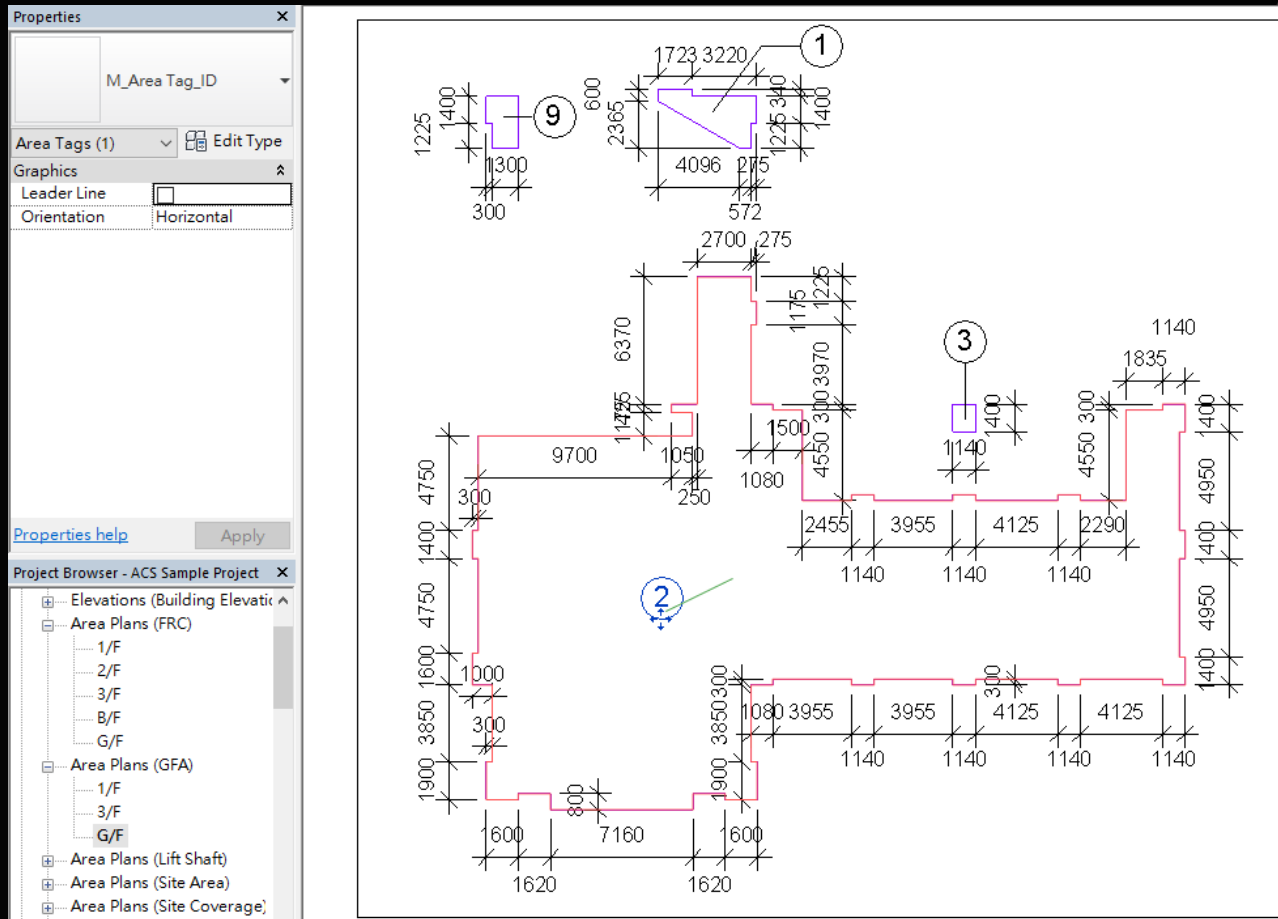
- FRC Calculation (Area Classification)
- Fire Compartmentation
- Independent compartment area – Independent compartment name
- Same compartment area – Same compartment name, independent floor height results the calculation of Fire compartmentation volume



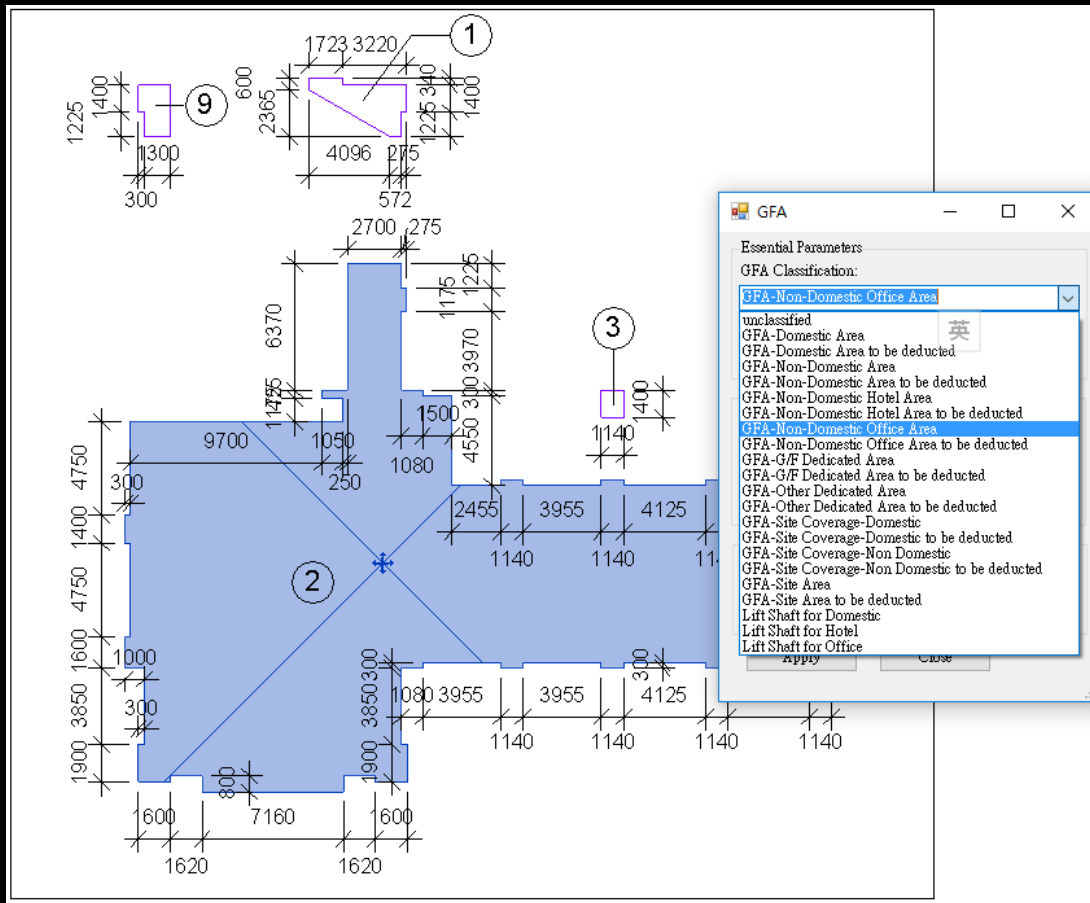
- FRC Calculation (Calculation)
- Results of Fire Resisting Requirement For Elements of Construction

FIRE RESISTANCE REQUIREMENT FOR ELEMENTS OF CONSTRUCTION														
COMPARTMENT	CLASS	AREA	VOLUME	FRP REQ'D	R.C. WALL => 1% V.R.		R.C. BEAM		R.C. COLUMN		R.C. SLAB		R.C. STAIR	
					THK.	COVER TO STEEL	THK.	COVER TO STEEL	THK.	COVER TO STEEL	THK.	COVER TO STEEL	THK.	COVER TO STEEL
A	- (Basement)	68.171	204.513	240	180	25	280	60*	450	35	170	45*	170	55*
B	7 (Carparks)	143.495	617.029	60	75	15	200	30	200	25	100	20	95	20
C	7 (Carparks)	78.954	339.502	60	75	15	200	30	200	25	100	20	95	20
D	5d (Assembly - Other Assembly Premises)	393.832	1693.478	60	75	15	200	30	200	25	100	20	95	20
E	5d (Assembly - Other Assembly Premises)	663.845	4314.993	60	75	15	200	30	200	25	100	20	95	20
F	5d (Assembly - Other Assembly Premises)	1010.945	3505.751	60	75	15	200	30	200	25	100	20	95	20
G	5d (Assembly - Other Assembly Premises)	94.234	433.476	60	75	15	200	30	200	25	100	20	95	20

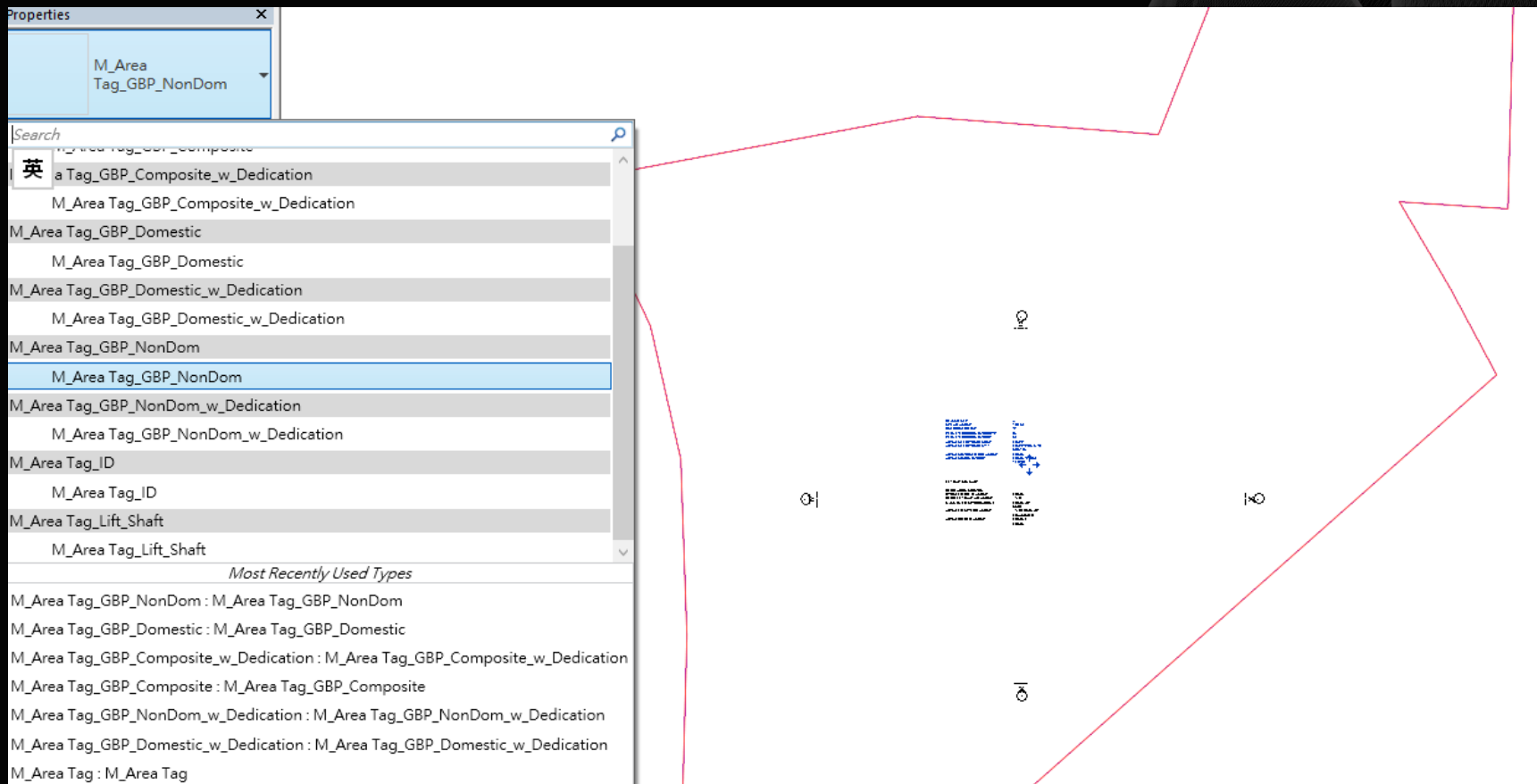
- **GFA Calculation (Create Area)**
- **Use Area Boundary to create areas**
- **Use M_Area Tag_ID to tag areas**



- **GFA Calculation (Area Classification)**
- **Assign Domestic Area and Domestic Area to be deducted**



- **GFA Calculation (Area Classification)**
- **Assign different Area Tag for different sets of plan (Site Area, Lift Shaft Summary, etc...)**



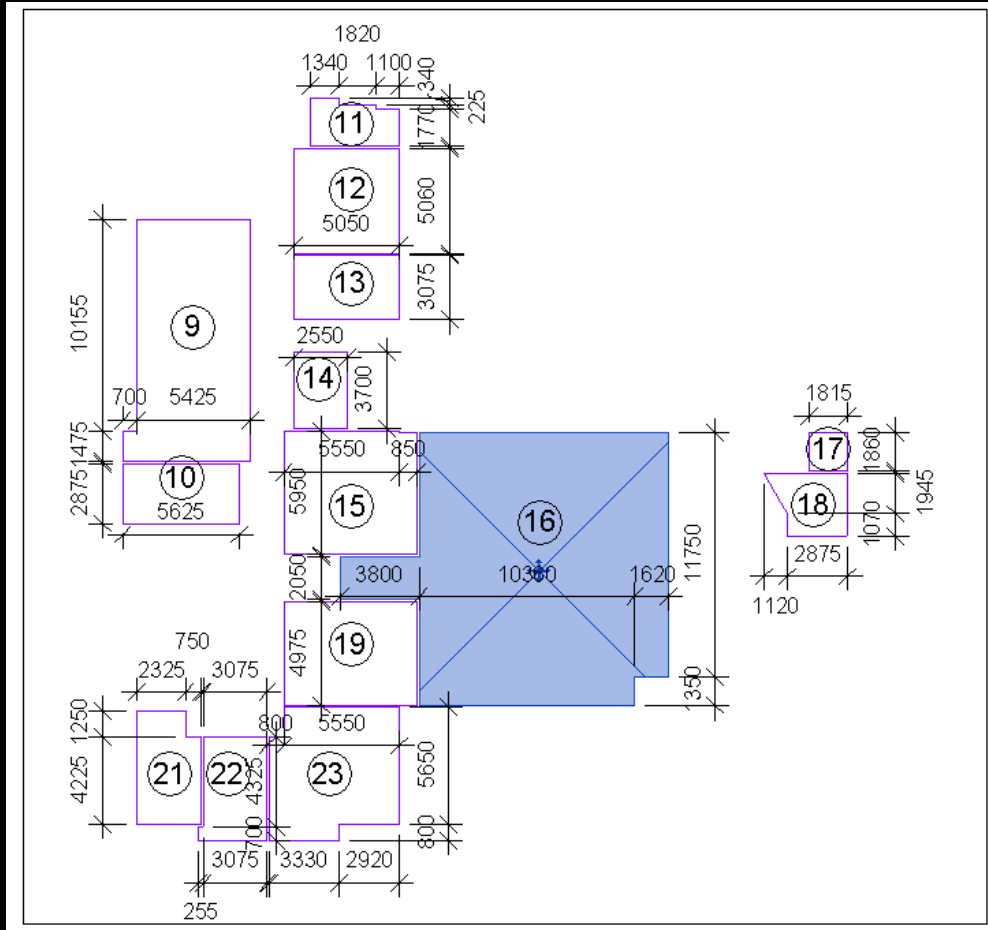
- **GFA Calculation (Calculation)**
- **Run GFA Calculation**

CLASS OF SITE:	A
SITE AREA (SQ.M):	1990.642
BUILDING HEIGHT (M):	19
PERMITTED NON-DOMESTIC SC (%):	95
PERMITTED NON-DOMESTIC PR:	6.7
ACTUAL SITE COVERAGE (SQ.M):	788.919
ACTUAL SITE COVERAGE IN %:	$788.919/1990.642 \times 100$ $39.631 < 95$
ACTUAL NON-DOMESTIC GFA (SQ.M):	2266.734
ACTUAL NON-DOMESTIC PR:	$2266.734/1990.642$ $1.139 < 6.7$

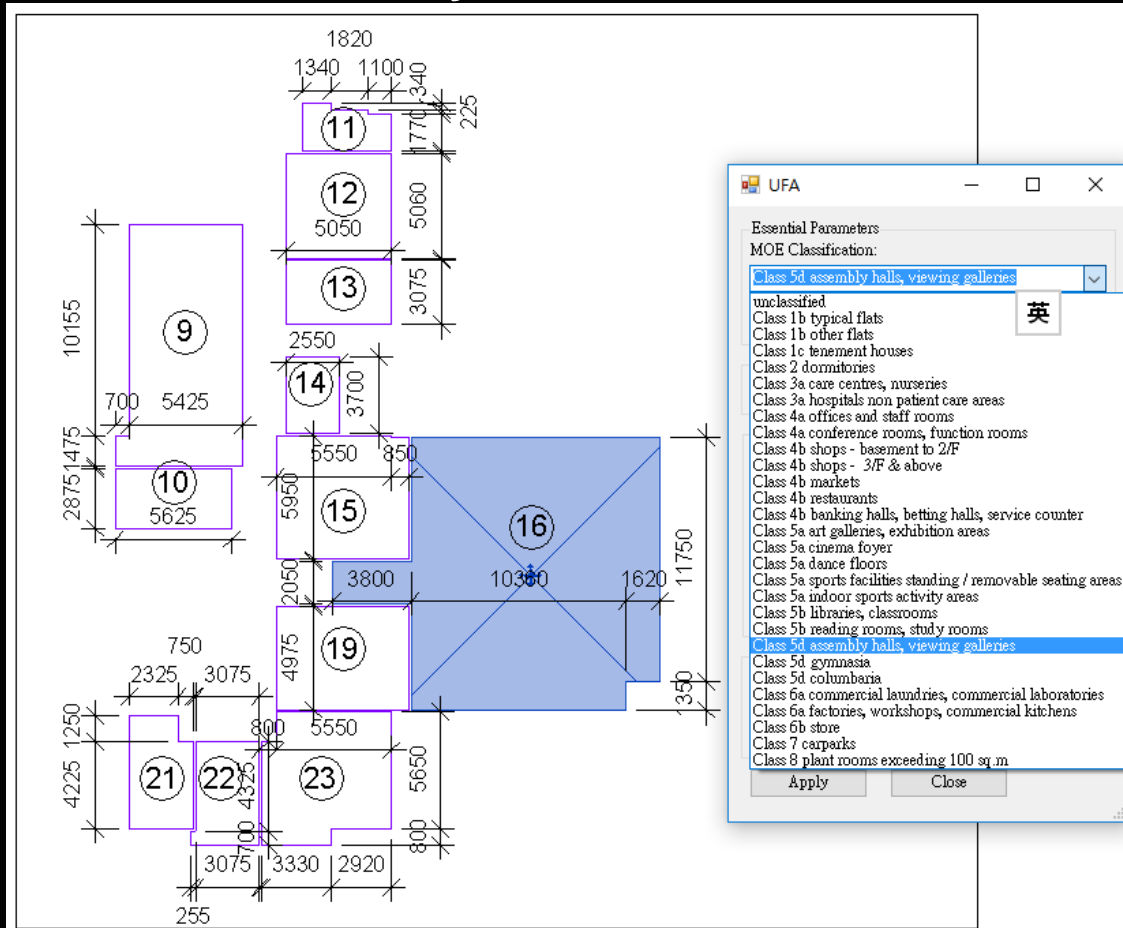
LIFT SHAFT SUMMARY

OFFICE ACCOMMODATION	
OVERALL OFFICE GFA (SQ.M):	2266.734
OFFICE LIFT SHAFT AREA (SQ.M):	41.400
MAXIMUM EXEMPTED GFA (SQ.M):	$2266.734 \times 3\%$ 68.002
ACTUAL EXEMPTED GFA (SQ.M):	$41.400 - 2266.734 \times 5\%$ 0 (MAX. 68.002)
ACTUAL OFFICE GFA (SQ.M):	$2266.734 - 0$ 2266.734

- UFA Calculation for MOE & SanFit (Create Rooms)
- Rooms were more preferable for UFA Calculations



- UFA Calculation for MOE (Area Classification)
- Classify the MOE Factor
- Calculate floor by floor

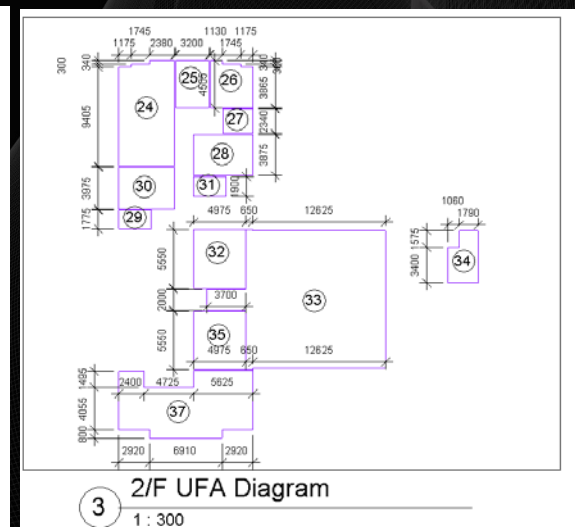
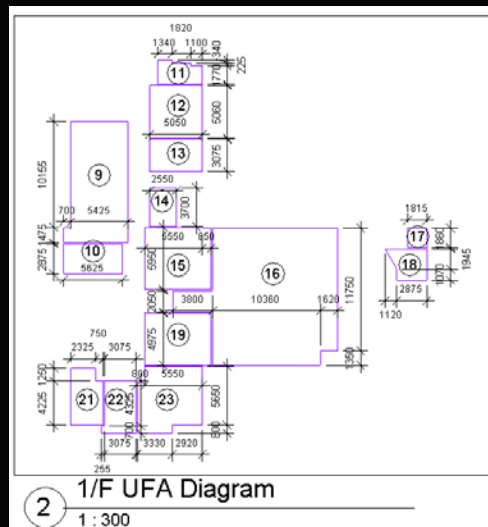
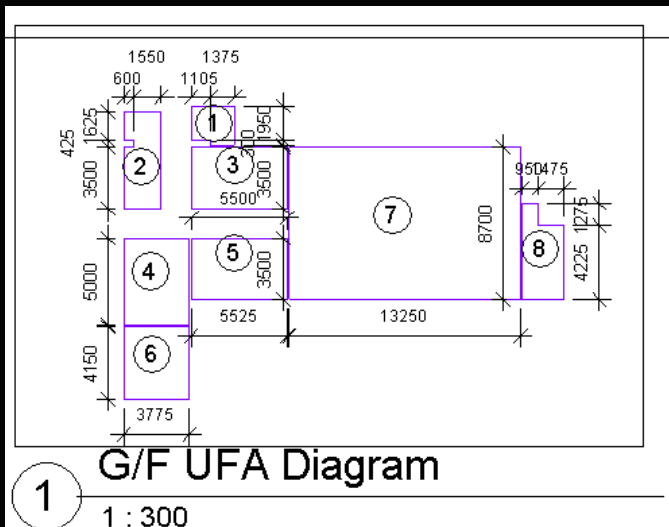


- UFA Calculation (Calculation)
- Run MOE Sanitary Fitment Calculation
- Results of Schedule of Persons for Means of Escape

SCHEDULE OF PERSONS FOR MEANS OF ESCAPE														
AREA ID	USE	USABLE FLOOR AREA (SQ.M)	MOE PERMITTED CAPACITY DENSITY	ROOM CAPACITY	MIN. NO. OF EXIT ROUTE		MIN. TOTAL WIDTH OF				MIN. WIDTH OF EACH			
					REQ'D	PRO'D	EXIT DOORS		EXIT ROUTES		EXIT DOOR		EXIT ROUTE	
							REQ'D	PRO'D	REQ'D	PRO'D	REQ'D	PRO'D	REQ'D	PRO'D
G/F														
1	ROOM	5.249	30	1	1		-		-		-		-	
2	ROOM	11.678	9	2	1		-		-		-		-	
3	ROOM	19.25	9	3	1		-		-		-		-	
4	ROOM	18.875	9	3	1		-		-		-		-	
5	ROOM	19.338	9	3	1		-		-		-		-	
6	ROOM	15.666	9	2	1		-		-		-		-	
7	ROOM	115.275	2	58	2		1750		2100		850		1050	
8	ROOM	11.457	30	1	1		-		-		-		-	

SCHEDULE OF PERSONS FOR MEANS OF ESCAPE														
AREA ID	USE	USABLE FLOOR AREA (SQ.M)	MOE PERMITTED CAPACITY DENSITY	ROOM CAPACITY	MIN. NO. OF EXIT ROUTE		MIN. TOTAL WIDTH OF				MIN. WIDTH OF EACH			
					REQ'D	PRO'D	EXIT DOORS		EXIT ROUTES		EXIT DOOR		EXIT ROUTE	
							REQ'D	PRO'D	REQ'D	PRO'D	REQ'D	PRO'D	REQ'D	PRO'D
25	ROOM	14.416	2	8	1		-		-		750		1050	
26	ROOM	16.9	2	9	1		-		-		750		1050	
27	ROOM	6.669	30	1	1		-		-		-		-	
28	ROOM	21.797	2	11	1		-		-		750		1050	
29	ROOM	5.458	30	1	1		-		-		-		-	
30	ROOM	21.068	2	11	1		-		-		750		1050	
31	ROOM	5.89	30	1	1		-		-		-		-	
32	ROOM	27.611	30	1	1		-		-		-		-	
33	ROOM	181.433	0.5	363	2		3000		3000		1050		1050	
34	ROOM	12.509	30	1	1		-		-		-		-	
35	ROOM	27.611	30	1	1		-		-		-		-	
37	ROOM	69.649	2	35	2		1750		2100		850		1050	
3/F														
38	ROOM	21.269	2	11	1		-		-		750		1050	

- UFA Calculation (Calculation)
- Run MOE Sanitary Fitment Calculation
- Results of Schedule of Sanitary Fitments Provisions



SCHEDULE OF SANITARY FITMENTS PROVISIONS														
LOCATION	USE	CAPACITY			W.C.				BASIN				URINAL	
		TOTAL	M.	F.	M.		F.		M.		F.		REQ'D	PRO'D
					REQ'D	PRO'D	REQ'D	PRO'D	REQ'D	PRO'D	REQ'D	PRO'D		
G/F	OFFICE	11	8	3	1		1		1		1		0	
G/F	PLACE OF PUBLIC	62	31	31	1		2		1		1		1	
1/F - 3/F	OFFICE	8	6	2	1		1		1		1		0	
1/F - 3/F	PLACE OF PUBLIC	881	441	440	5		7		5		5		9	

! Thank you !