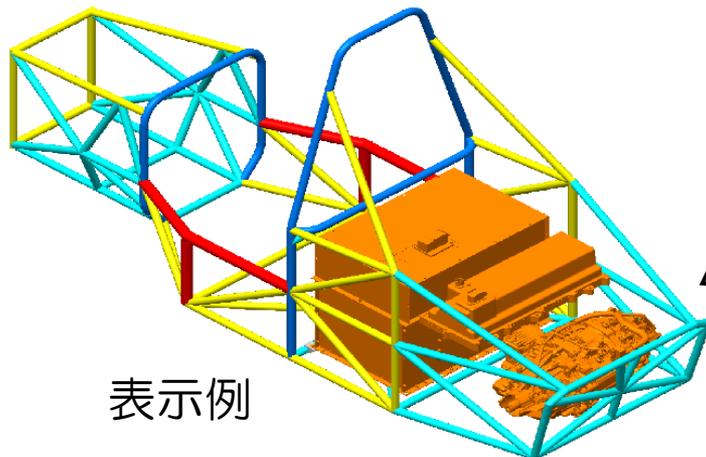
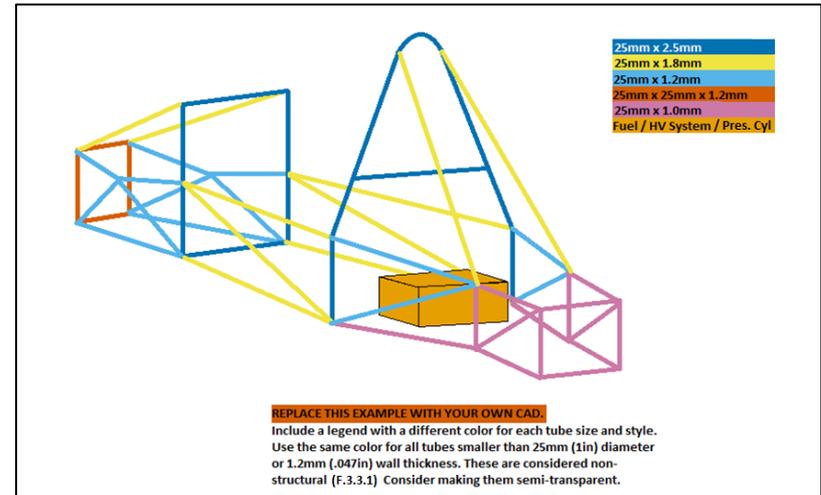
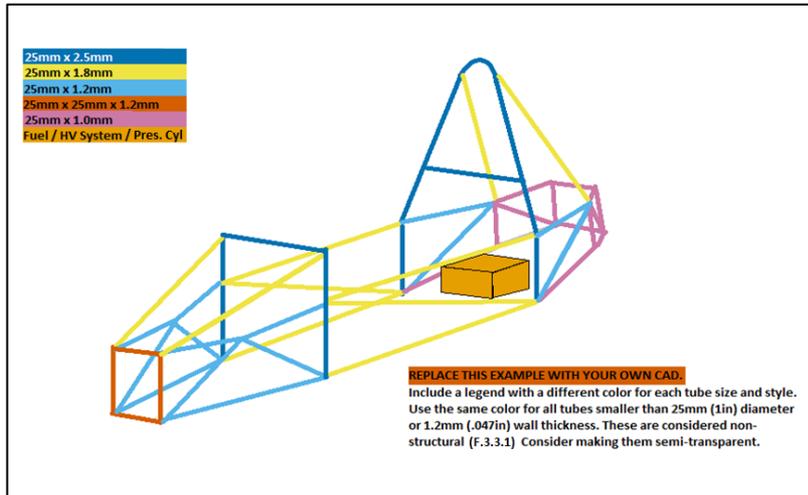


# SES(等価構造計算書)

## EVの場合の注意点

# HV Systems の表示

Show accumulator installation/removal.  
Use different colors for square and round.  
Include a legend that shows each color and size.  
Fuel tank, HV systems, pressurized tanks shown in orange.



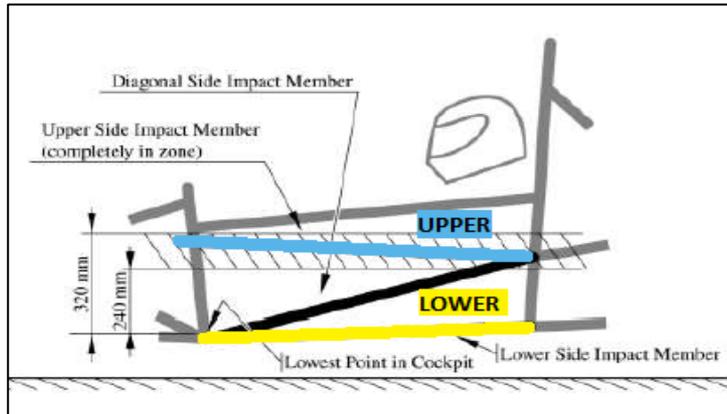
## HV systems として必要な表示

- Accumulator Container
- Inverter System
- Tractive System

これらを全て表示すること

# Accumulator Side Protection

Protectionの要否は、Upper Side Impact Memberの高さを基準にする



F.11.2.1

All Accumulator Containers must be protected from side impact or rear impact by Side Impact Structure (F.6.4, F.7.6, or Equivalent)

- The Accumulator Container must not form part of the equivalent structure.

Accumulator Container は Major Structure の高さ以内であること。



Fig. 1 はルール通り。

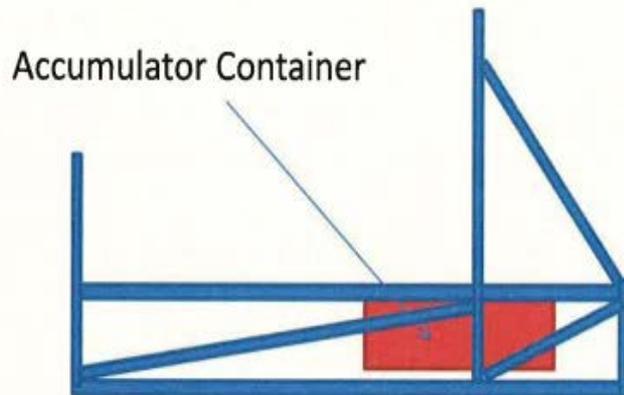


Fig. 1



Accumulator Container が Major Structure より高くなる場合、Fig.2の様に、飛び出した部分を三角構造によって保護すること。

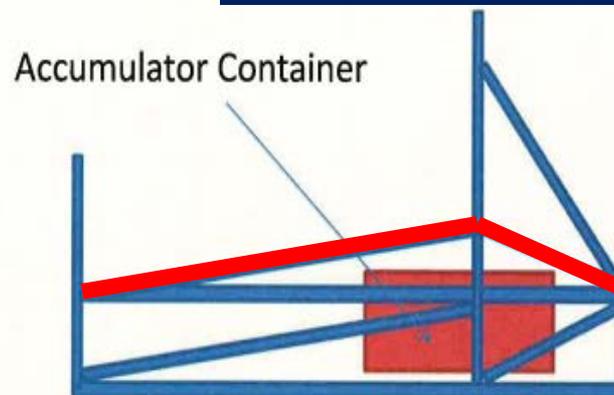


Fig. 2

# Tractive Side Protection

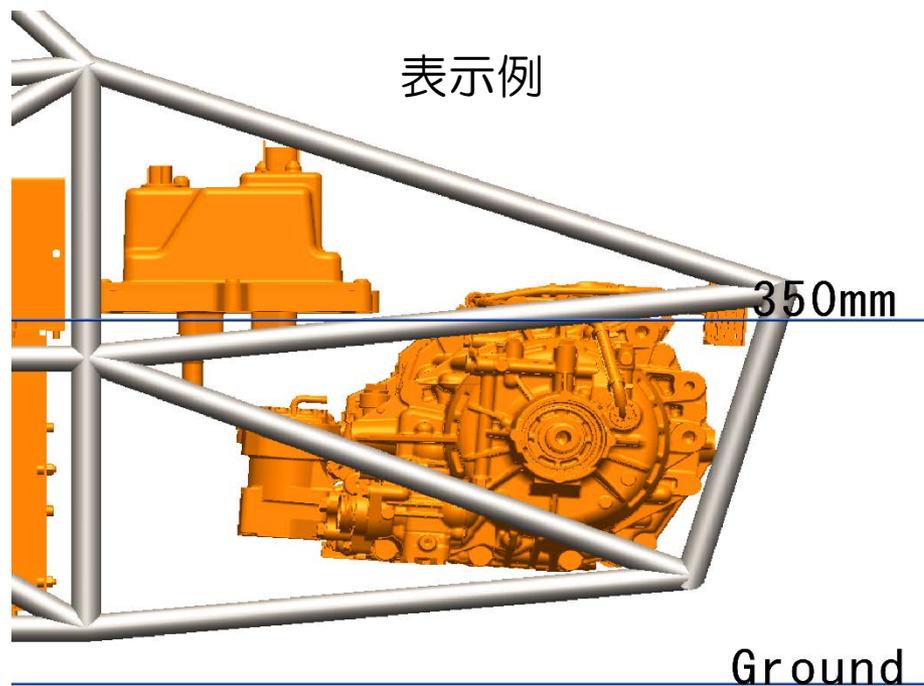
Protectionの要否は、地上から350mmの高さを基準にする

F.11.2.3 Tractive System parts in a position below 350 mm from the ground must be:

a. Protected from:

- Side impact
- Rear impact
- Intrusion by non-crushable objects (such as a differential)

b. Protected by structure meeting F.5.13 Component Protection



# Rear Impact Protection

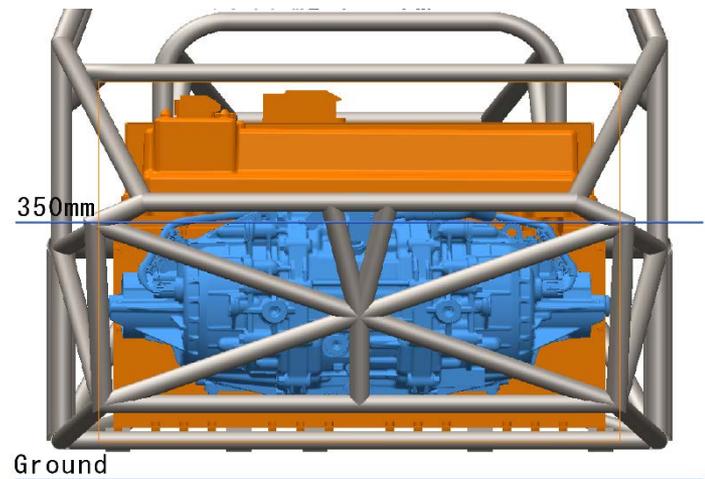
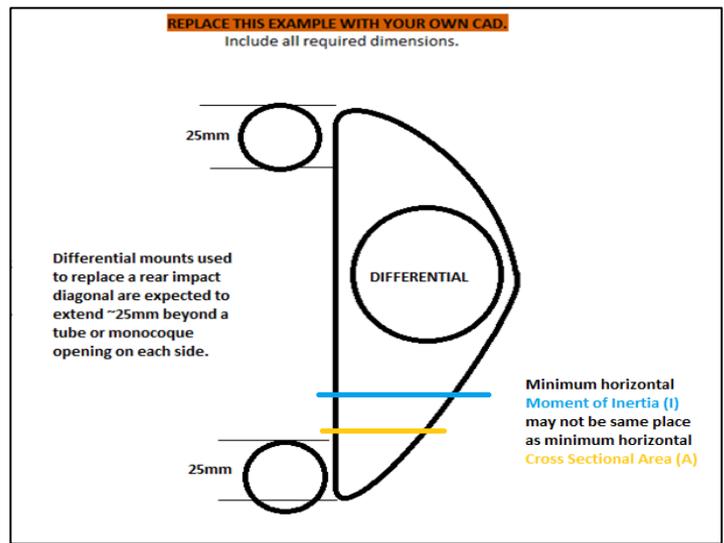
Tractive Rear Impact Protection か Accumulator Rear Impact Protection で選択が分かれる

F.11.2.3 Your motor or diff could fit between the acc.and rear impact?  Yes  
**Tractive Rear Impact Protection** Minimum Tube Used  
 F.3.2.1 Example: 25.4mm x 1.2mm round Size C  Round

F.11.2.3	Rear Impact Diagonal:	<input type="checkbox"/> Differential Mounts
	Tractive Rear Impact Protection	Minimum <u>Tube Used</u>
F.11.2.3	Rear Impact Diagonal:	<input type="checkbox"/> Tube
	Tractive Rear Impact Protection	Minimum <u>Tube Used</u>

F.11.2.1 Your motor or diff could fit between the acc.and rear impact?  No  
**Accumulator Rear Impact Protection** Minimum Tube Used  
 F.3.2.1 Example: 25.4mm x 1.6mm round Size B  Round

F.11.2.1	Rear Impact Diagonal:	<input type="checkbox"/> Differential Mounts
	Accumulator Rear Impact Protection	Minimum <u>Tube Used</u>
F.11.2.1	Rear Impact Diagonal:	<input type="checkbox"/> Tube
	Accumulator Rear Impact Protection	Minimum <u>Tube Used</u>
F.3.2.1	Example: 25.4mm x 1.6mm round	Size C <input checked="" type="checkbox"/> Round



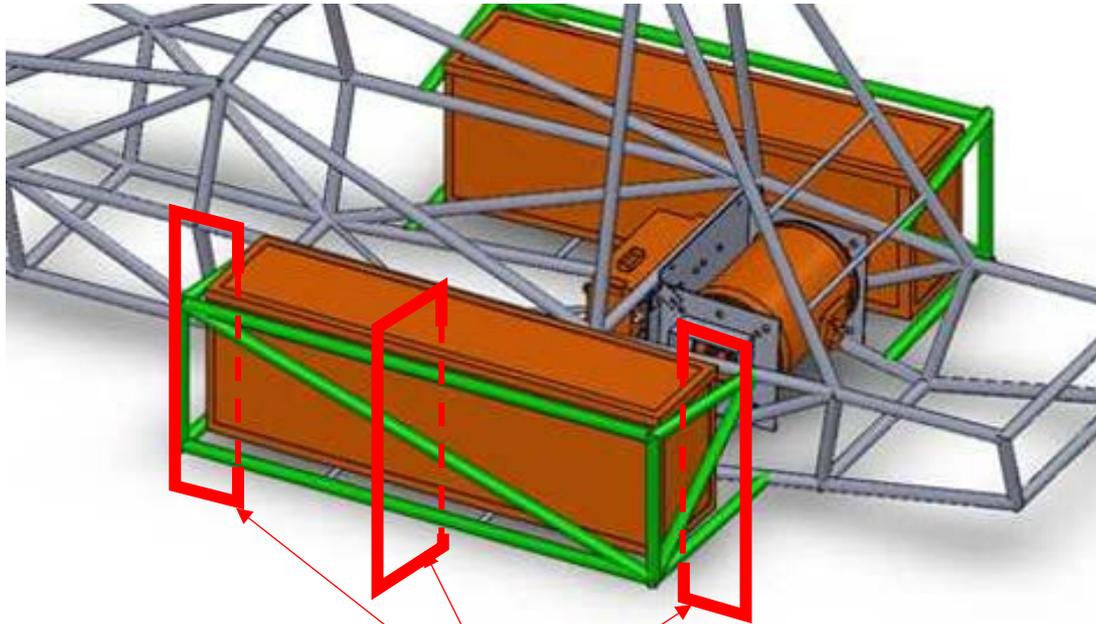
表示例

# EV Protectionの強度計算

## EVのAccumulator 及びTractive System Protectionについて

基本的な考え方はSide Impact Structureと同じ

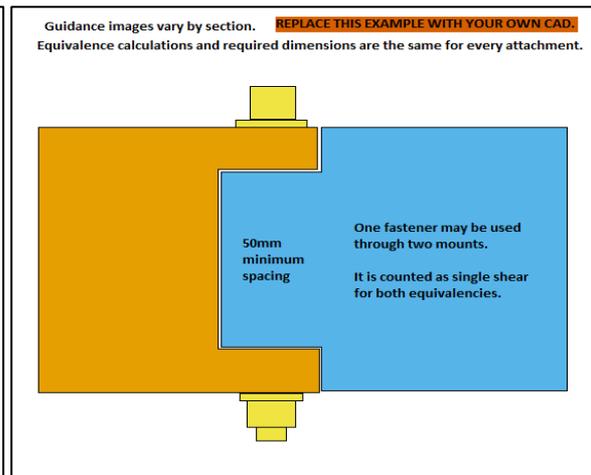
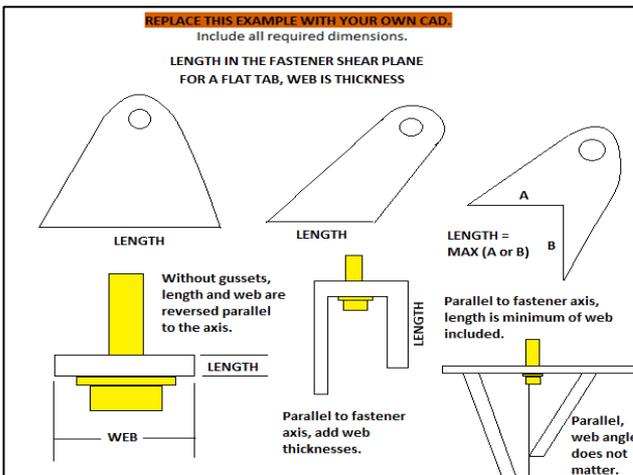
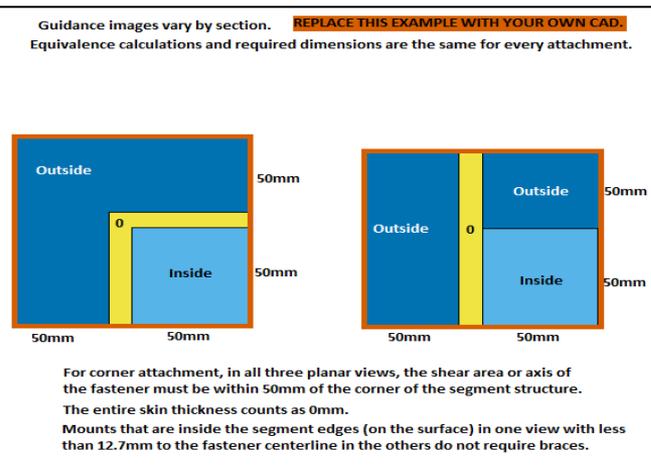
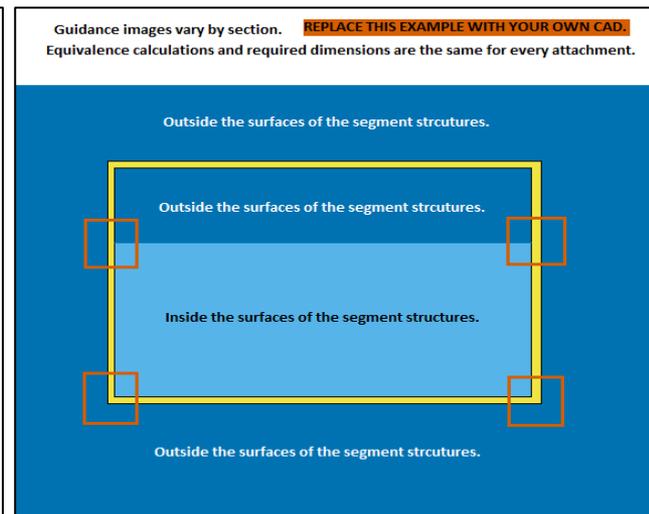
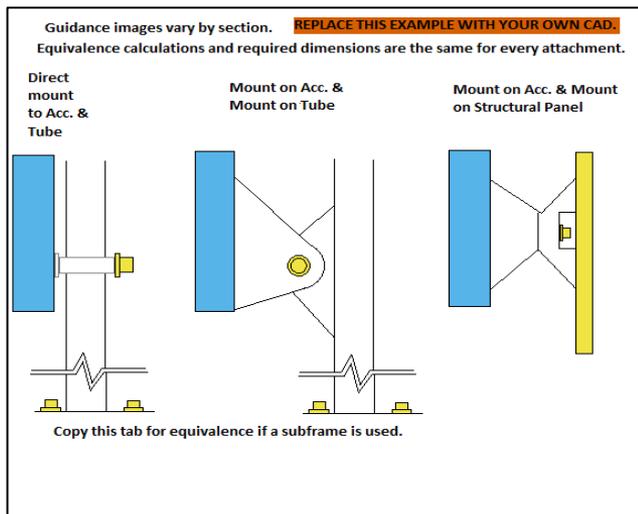
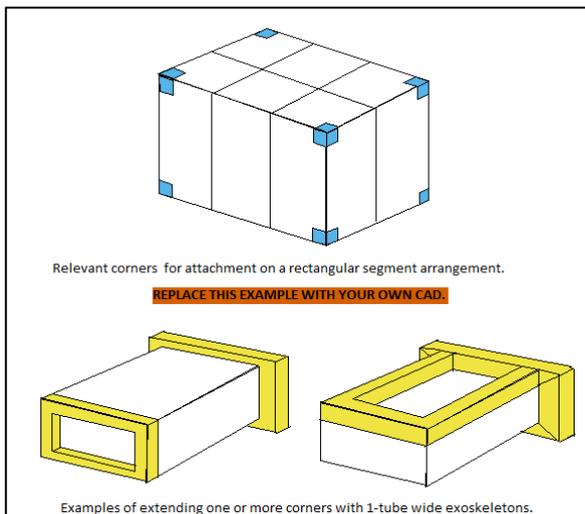
最も弱い1面の最も弱い垂直断面の構成パイプで計算すること



最も弱い断面の構成パイプで計算すること

# EV Accumulator の記載

EVのAccumulator については、図解を参考に正しく記載すること。



# Accumulator Segment について

Accumulator Segment については、以下ルールが基準である。  
別途登録のESFとの整合を確認すること。

①	EV.3.1.2	Maximum segment voltage:
②	EV.3.1.2	Nominal segment capacity:
③	EV.1.3.2	Maximum accumulator voltage:

BLANK			
	Cell type:	Cylindrical	EQ
	Maximum Voltage:	V	BLANK
	Nominal Voltage:	V	BLANK
	Nominal Capacity:	mAh	BLANK
	Maximum segment cells in series:		BLANK
	Maximum segment cells in parallel:		BLANK
EV.4.1.2	Maximum segment voltage:	0 V	EQ
EV.4.1.2	Nominal segment capacity:	0 MJ	EQ
	Total accumulator cells in series:		BLANK
	Total accumulator cells in parallel:		BLANK
EV.1.3.2	Maximum accumulator voltage:	0 V	EQ
	Nominal accumulator capacity:	0 kWh	EQ
BLANK			
F.10.2.3	Cell mounting and bracing material:	E: Pa	BLANK
		UTS: Pa	BLANK
		Shear: Pa	BLANK
	Assembled Segment moment of inertia, Lateral cross section:	mm <sup>4</sup>	BLANK
	Assembled Segment moment, Longitudinal cross section:	mm <sup>4</sup>	BLANK
	Maximum segment length:	mm	BLANK
	Maximum segment width:	mm	BLANK
	Maximum segment height:	mm	BLANK
BLANK			
F.10.2.3	Restraint Method:	Examples: Bolted, Friction, Adhesive	BLANK