



# ANZAC RED FORCE BATTLE BOOK



## PART 2: ORBATS and Equipment

POC

SMIS

10/11/2023

VER 1.0

## Contents

Chapter 1 Overarching Organisation and Formation Forces .....	1-1
3 Operational Strategic Command (3 OSC) .....	1-1
Chapter 2 – MEF DIVISION ORBATS .....	2-2
Marine Expedition Force (MEF) Division .....	2-2
MEF Marine Mechanised Infantry Brigade .....	2-3
MEF Brigade Marine Mechanised Infantry Battalion .....	2-4
Marine Mechanised Infantry Company.....	2-5
Marine Mechanised Infantry Platoon .....	2-5
MEF Brigade Marine Tank Battalion.....	2-6
MEF Brigade Artillery Battalion .....	2-7
MEF Brigade Anti-Tank Battalion .....	2-8
MEF Brigade Air Defence Battalion .....	2-9
MEF Brigade Beach Reconnaissance Battalion.....	2-10
MEF Brigade Reconnaissance Company.....	2-11
MEF Brigade Engineer Company .....	2-12
MEF Division Naval Helicopter Regiment.....	2-13
MEF Division Multiple Rocket Launcher Battalion .....	2-14
MEF Division Air Defence Battalion.....	2-15
MEF Division Combat Engineer Battalion (Cont).....	2-17
MEF Division Signals Battalion .....	2-18
MEF Division Material Support Battalion .....	2-19
MEF Division Chemical Defence Battalion .....	2-20
MEF Division UAV Company.....	2-20
MEF Division Information Warfare Battalion .....	2-21
Chapter 3 Standard Division Tactical Group ORBATS .....	3-22
Standard Division Tactical Group .....	3-22
Light Brigade Tactical Group .....	3-23
Light Infantry Battalion.....	3-24
Light Infantry Company.....	3-25
Light Brigade Reconnaissance Battalion.....	3-26
Light Brigade Artillery Battalion .....	3-26
Brigade Anti-Tank Company.....	3-27
Light Brigade Air Defence Battalion .....	3-27
Light Brigade Engineer Company .....	3-28
Brigade Chemical Defence Coy.....	3-29

Brigade Signals Company .....	3-29
Medium Brigade Tactical Group.....	3-30
Medium Mechanised Infantry Battalion .....	3-31
Medium Mechanised Infantry Company.....	3-32
Medium Brigade Reconnaissance Battalion .....	3-33
Medium Brigade Artillery Battalion .....	3-33
Brigade Anti-Tank Company.....	3-34
Medium Brigade Air Defence Battalion.....	3-34
Medium Brigade Engineer Battalion .....	3-35
Medium Brigade Combat Engineer Company .....	3-36
Medium Brigade Engineer Battalion CSS Platoon .....	3-36
Heavy Brigade Tactical Group .....	3-37
Heavy Combined Arms Battalion .....	3-38
Heavy Mechanised Infantry Company .....	3-39
Heavy Brigade Reconnaissance Battalion .....	3-40
Heavy Brigade Artillery Battalion .....	3-40
Heavy Brigade Anti-Tank Company.....	3-41
Heavy Brigade Air Defence Battalion .....	3-41
Heavy Brigade Combat Engineer Battalion .....	3-42
Heavy Brigade Combat Engineer Company.....	3-43
Heavy Brigade Combat Engineer Battalion CSS Platoon .....	3-43
Heavy Brigade Chemical Defence Coy.....	3-44
Divisional Artillery Regiment (Summary) .....	3-45
Divisional Air Defence Battalion (Summary) .....	3-45
Divisional Engineer Regiment (Summary) .....	3-46
Divisional Chemical Defence Battalion (Summary) .....	3-47
Divisional Helicopter Regiment (summary).....	3-47
Small Arms and Direct Fire Weapons.....	3-48
Chapter 4 Equipment Characteristics .....	4-48
Anti-Tank Systems.....	4-51
Command and Armoured Vehicles .....	4-53
Mortars.....	4-57
Artillery.....	4-58
Air Defence Systems.....	4-62
Engineer Equipment.....	4-67
Aircraft / Drones.....	4-79
Chemical Vehicles.....	4-81
RADAR Systems .....	4-83

General Vehicles.....	4-85
Electronic Warfare / Miscellaneous .....	4-88
Communication Systems.....	4-91

## Chapter 1 Overarching Organisation and Formation Forces

### 3 Operational Strategic Command (3 OSC)

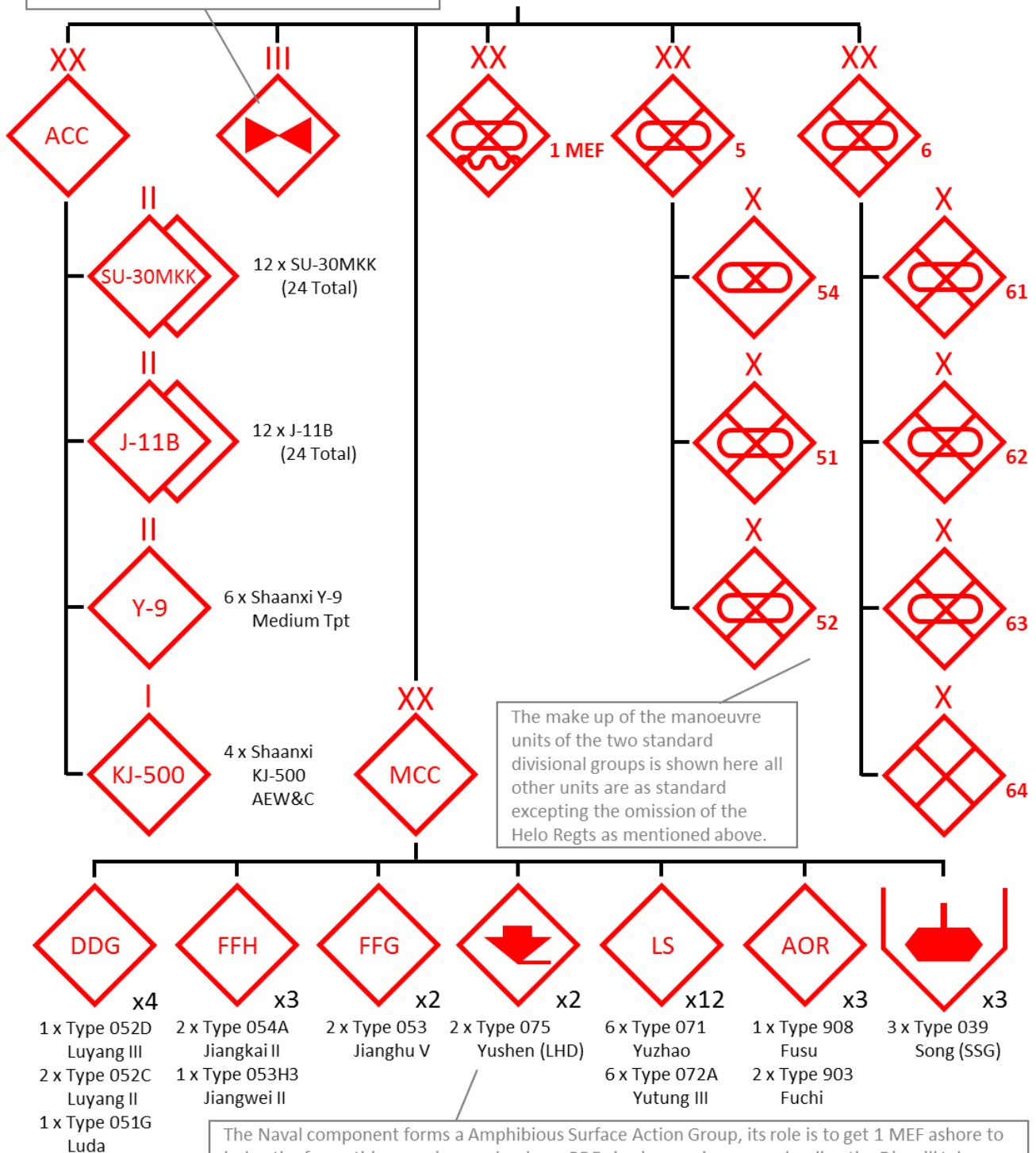
The Helicopter Regiment held under 3 OSC HQ replaces the Helicopter Regiments usually held in the standard Div ORBAT. In this scenario North Torbia has been unable to procure enough helicopters to support both Divs, therefore a Helo Regt has been brigaded at the OSC level. 1 MEF retains its Helo Regt as normal, 3 OSC therefore has two in total.

XXXX

OSC

3

3 OSC is a Tac School construct for exercise Swift Defender, it is directly applicable to all personnel working within this Exercise. Otherwise it is an example of how an OSC can be constructed in response to a perceived need.

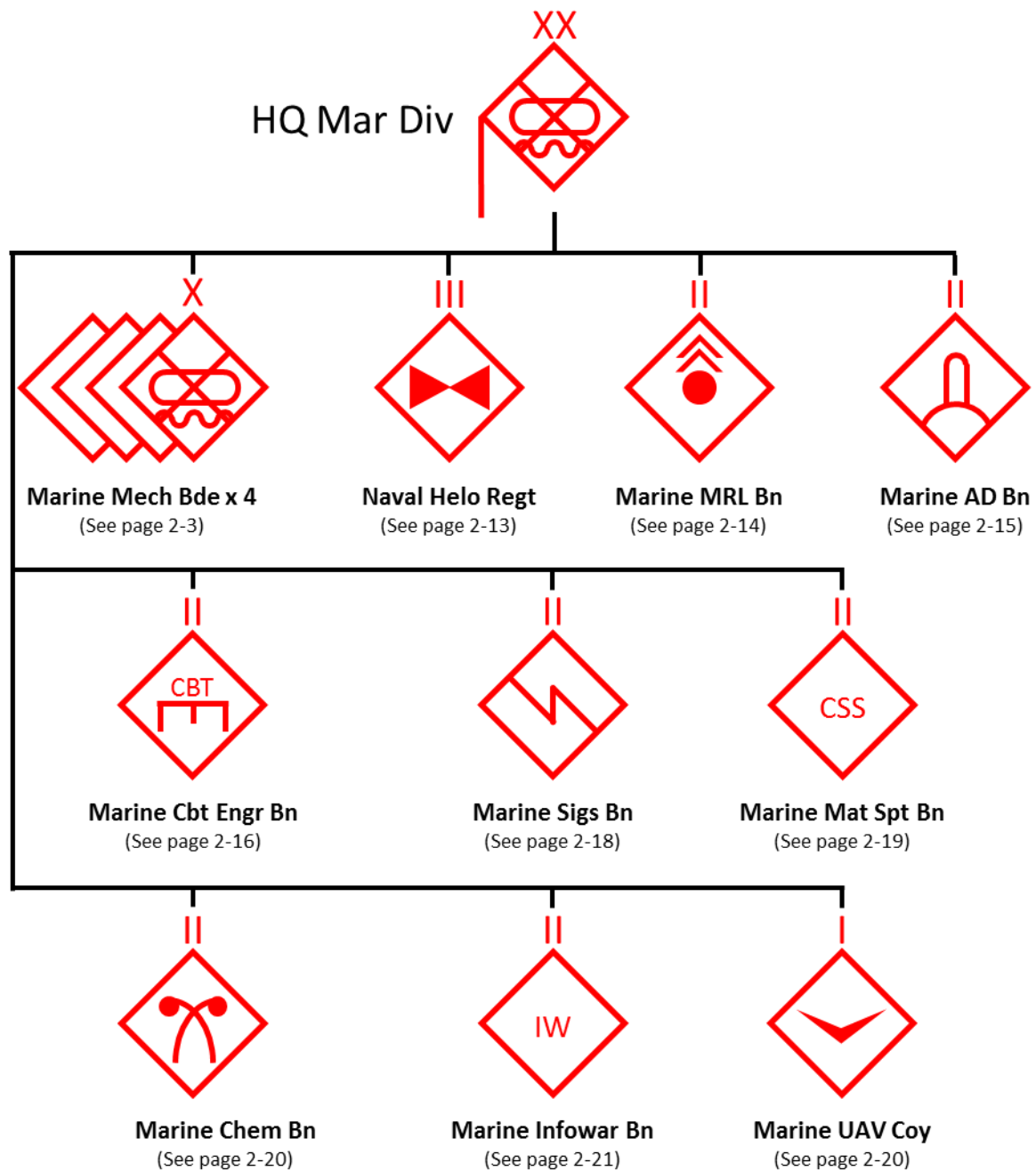


The make up of the manoeuvre units of the two standard divisional groups is shown here all other units are as standard excepting the omission of the Helo Regts as mentioned above.

The Naval component forms a Amphibious Surface Action Group, its role is to get 1 MEF ashore to lodge the force, this grouping can land one BDE sized group in one go, landing the Div will take multiple trips. Submarines and Surface combatants are for the protection of the landing and replenishment ships, the 2 x LHD's are critical to their mission (HVT).

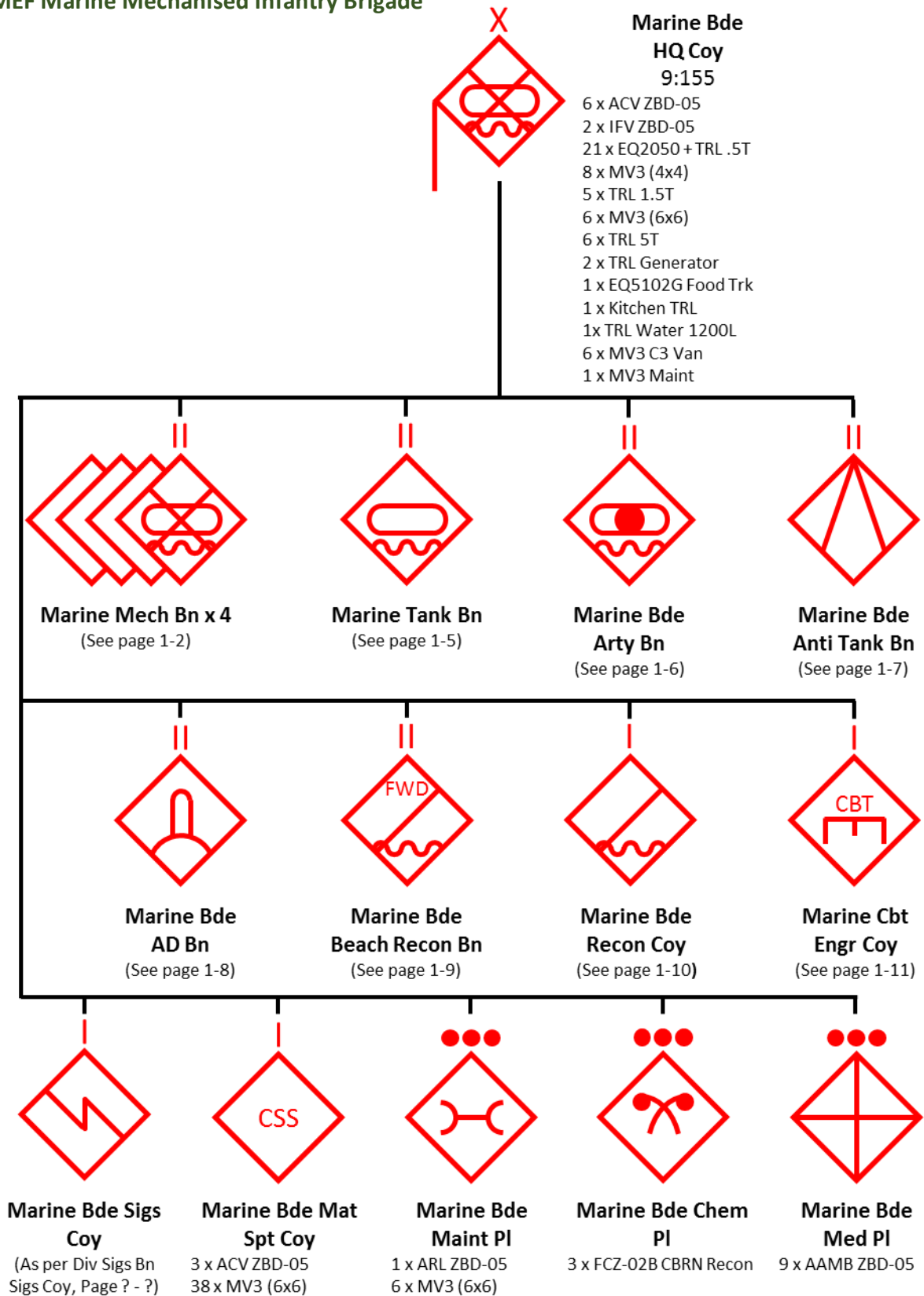
## Chapter 2 – MEF DIVISION ORBATS

### Marine Expedition Force (MEF) Division

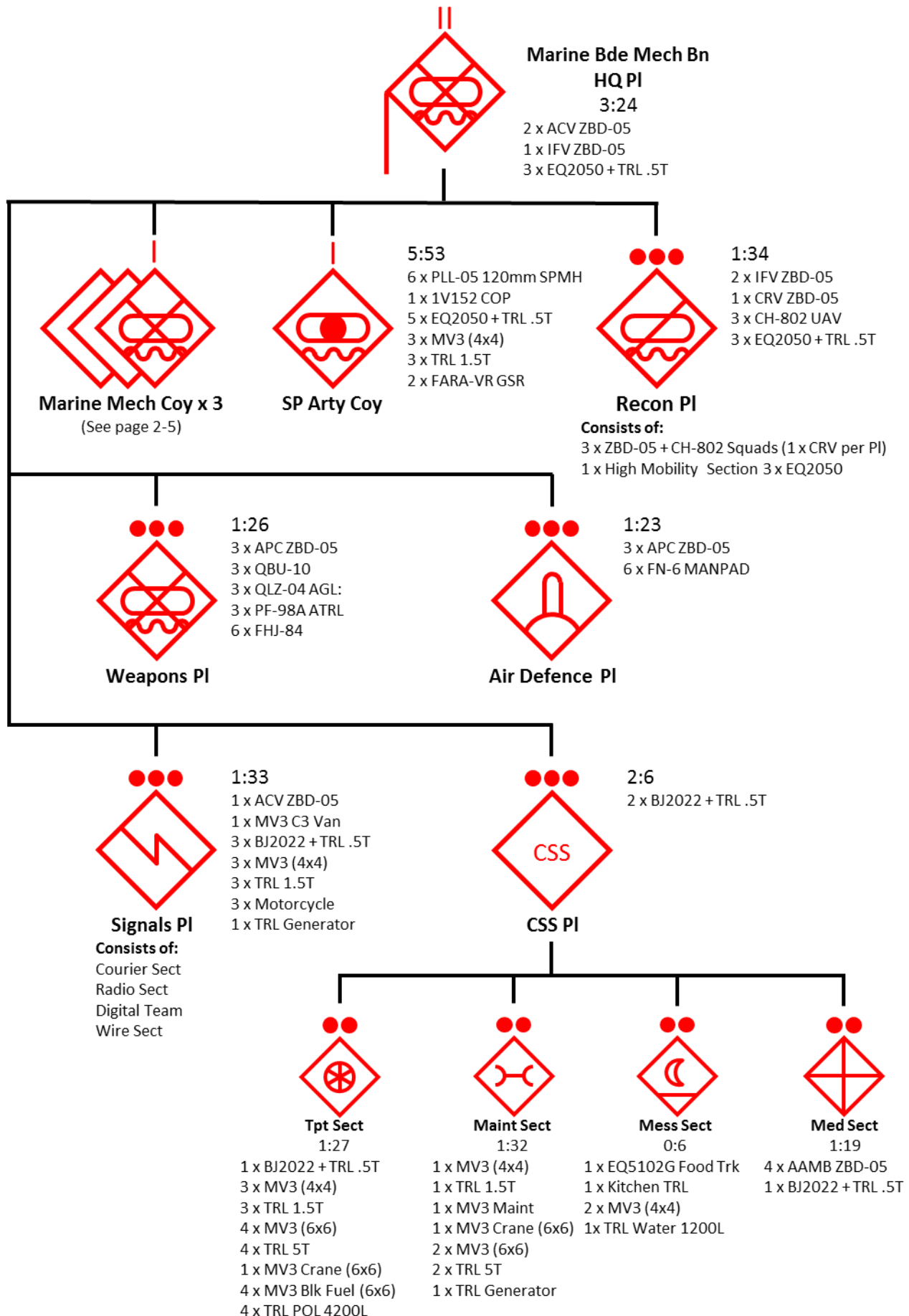




## MEF Marine Mechanised Infantry Brigade

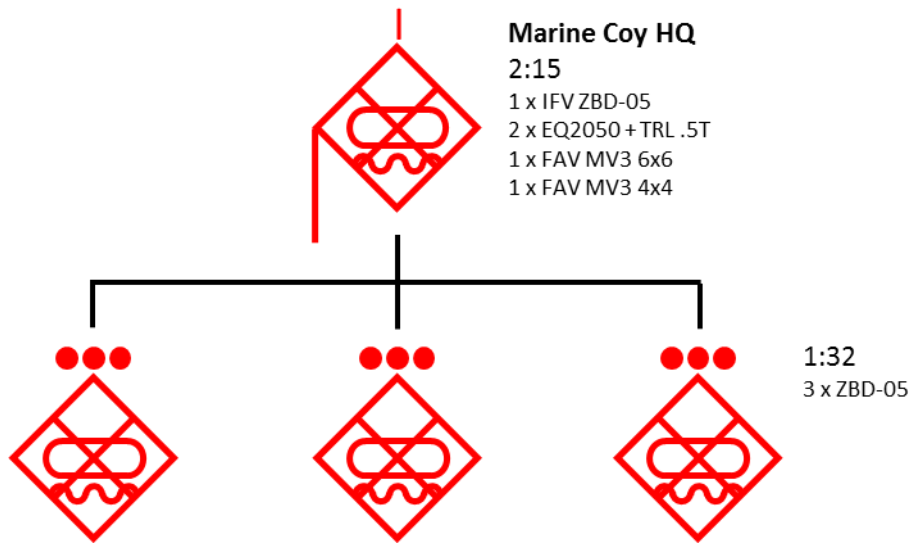


## MEF Brigade Marine Mechanised Infantry Battalion

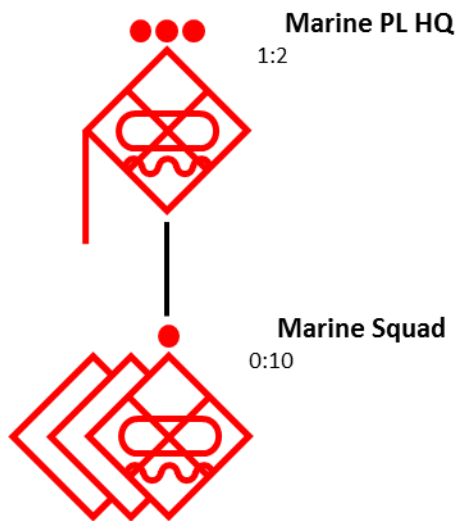




## Marine Mechanised Infantry Company

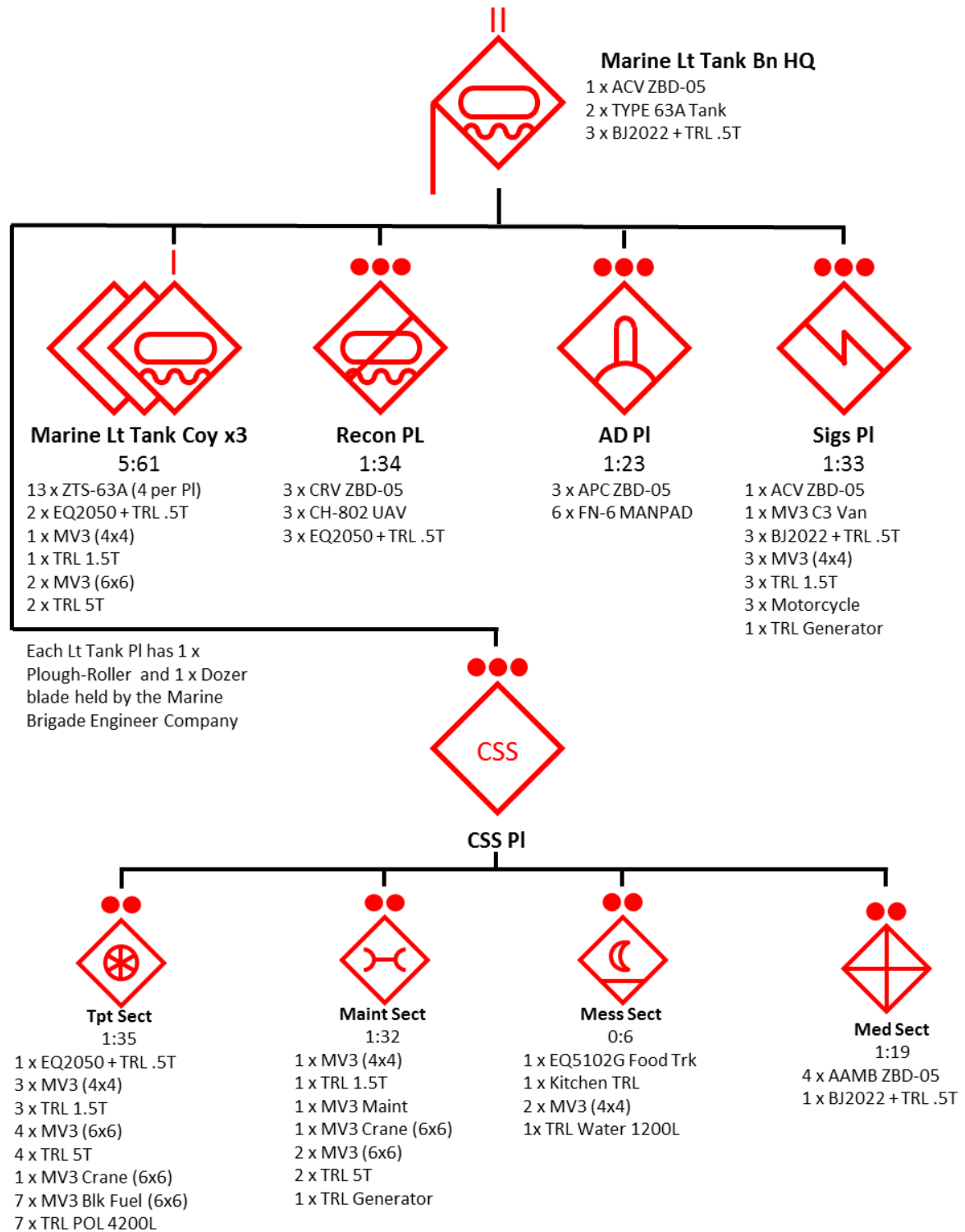


## Marine Mechanised Infantry Platoon

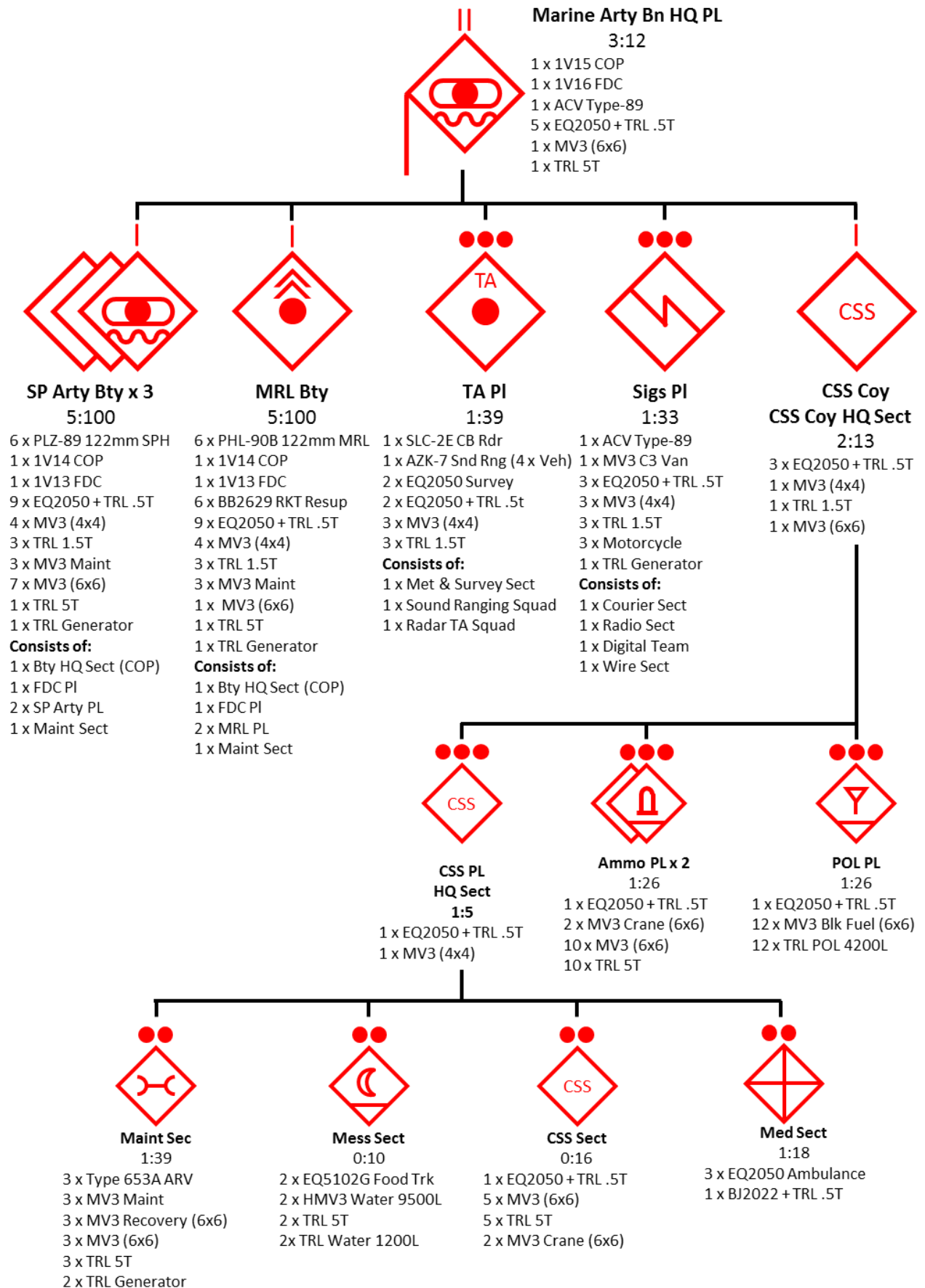


Marine Inf Squad			
	Position	Primary Wpn	Secondary Wpn
FT1	Section Cdr	QBZ-95	TBR-002 VHF Transceiver
	Gunner	QBB-95	Nil
	Rifleman	QBZ-95	FHJ-84 if issued
	Grenadier	QBZ-95	QLG-10 UBGL
FT2	Grenadier/2IC	QBZ-95	QLG-10 UBGL
	Marksman	QBU-88	Nil
	ATGL	PF-89	QBZ-95
IFV Crew	Crew Cdr	QBZ-95B	Nil
	Gunner	QBZ-95B	Nil
	Driver	QBZ-95B	Nil

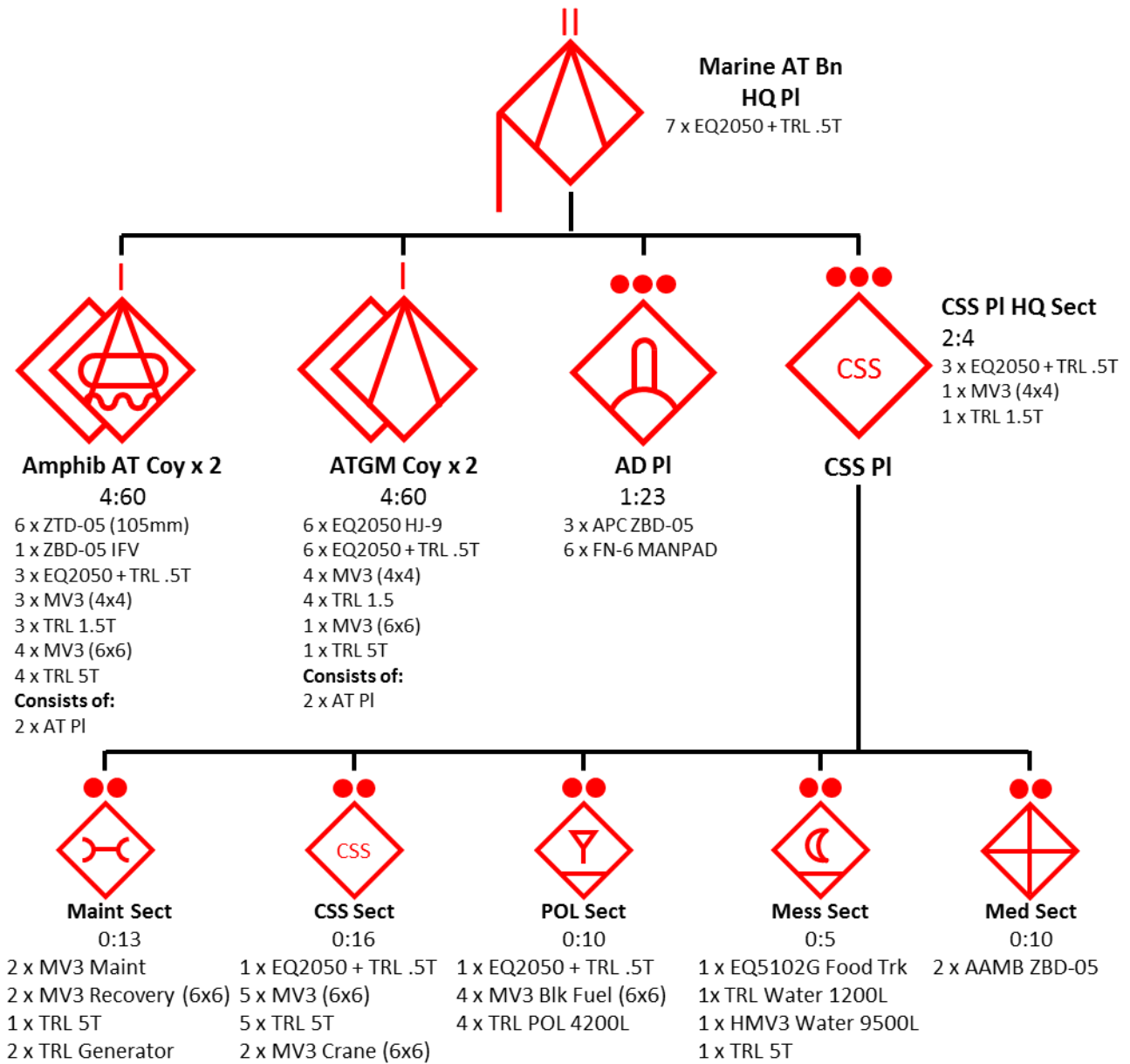
## MEF Brigade Marine Tank Battalion



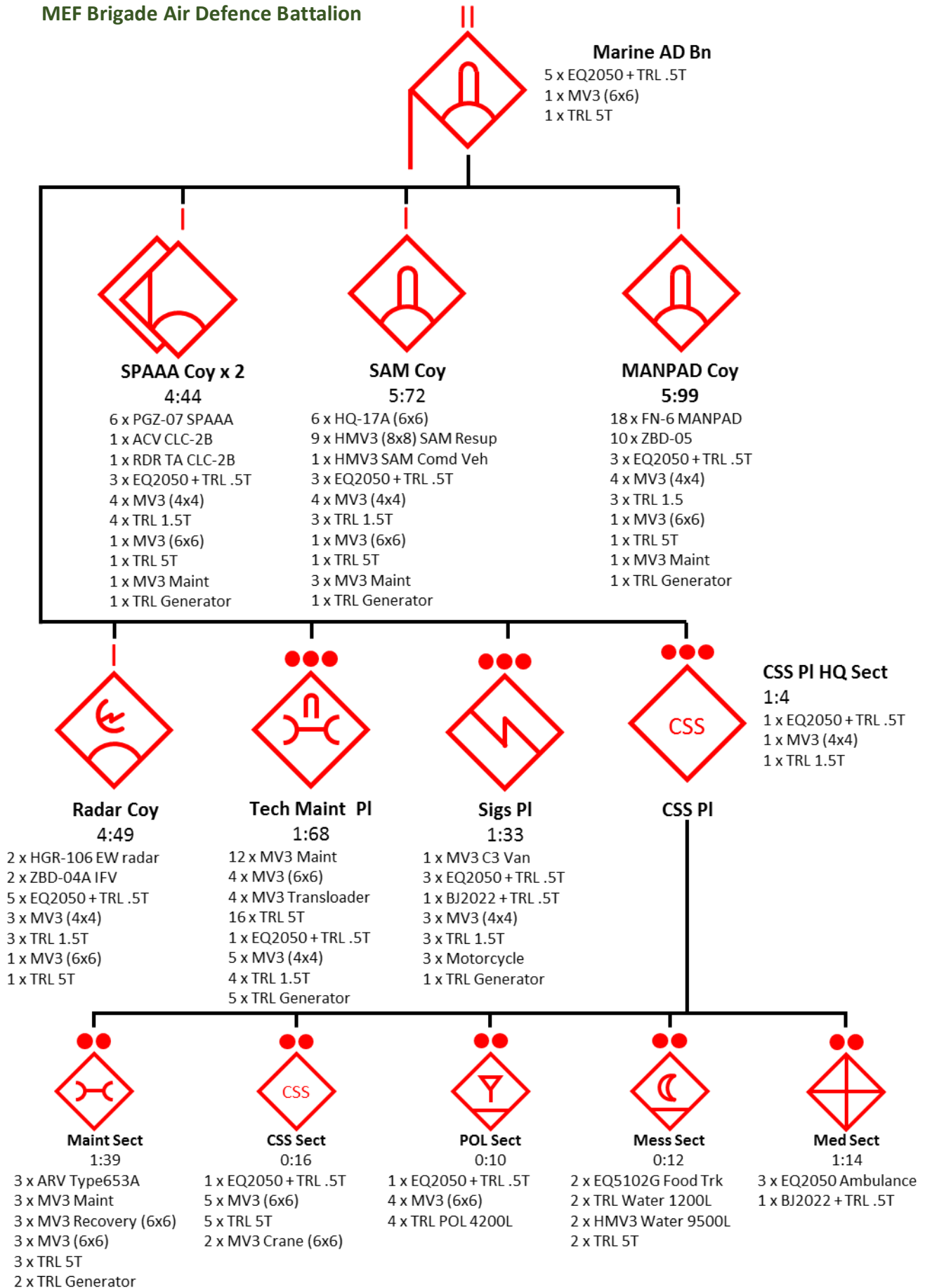
## MEF Brigade Artillery Battalion



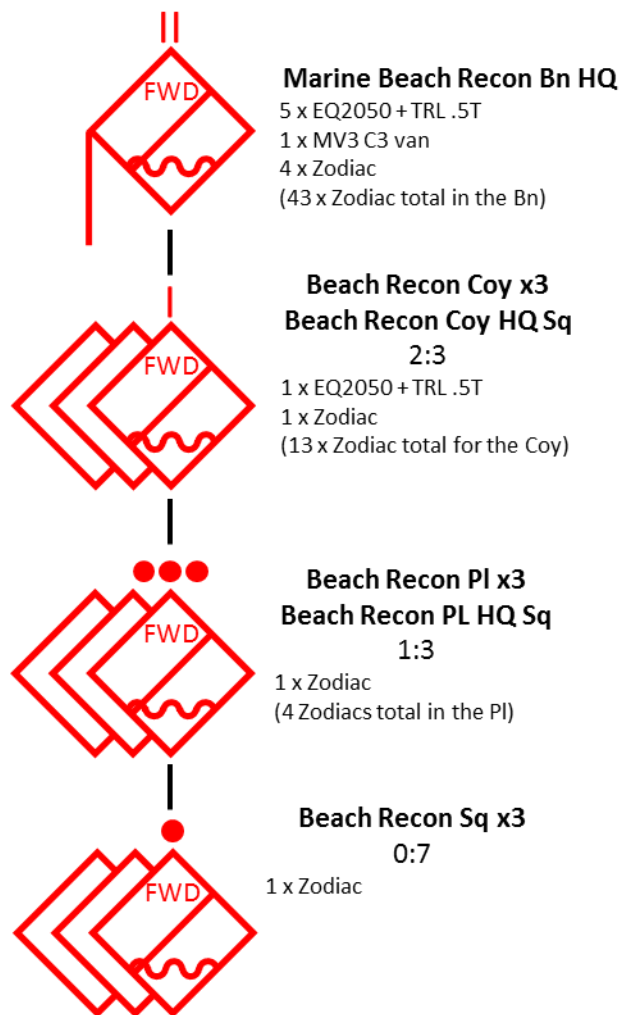
## MEF Brigade Anti-Tank Battalion



## MEF Brigade Air Defence Battalion



## MEF Brigade Beach Reconnaissance Battalion



The Beach Recon Bn is used to provide close target reconnaissance of a potential landing zone for the MEF Brigades. These elements attempt to infiltrate pre-identified beaches IOT provide final reconnaissance of the area in preparation for the landing of the MEF Infantry in ZBD-05 amphibious vehicles.

Opposed amphibious landings are exceptionally dangerous, therefore the Beach reconnaissance teams will try to exploit any period before the start of conflict to get ashore, and extensively use deception or ambiguity in regards to their mission, this could include the use of civilian shipping as their launch vessel.

As the landing is attempted Beach recon units will attempt to secure dominating ground IOT cover the landing, if unable to do this they will attempt to disrupt opposition to the landing. IOT achieve this they may receive an over issue of anti armour weapons (incl PF-98A) or MANPADs, in support of their lodgment. Heli infil can also be considered if available.

Once the MEF have lodged these units have no further dedicated role in subsequent operations, and have no organic logistical elements dedicated to their support. It can be assumed that these forces will be included into RASO operations or static defense/foot recon tasks if not withdrawn completely.

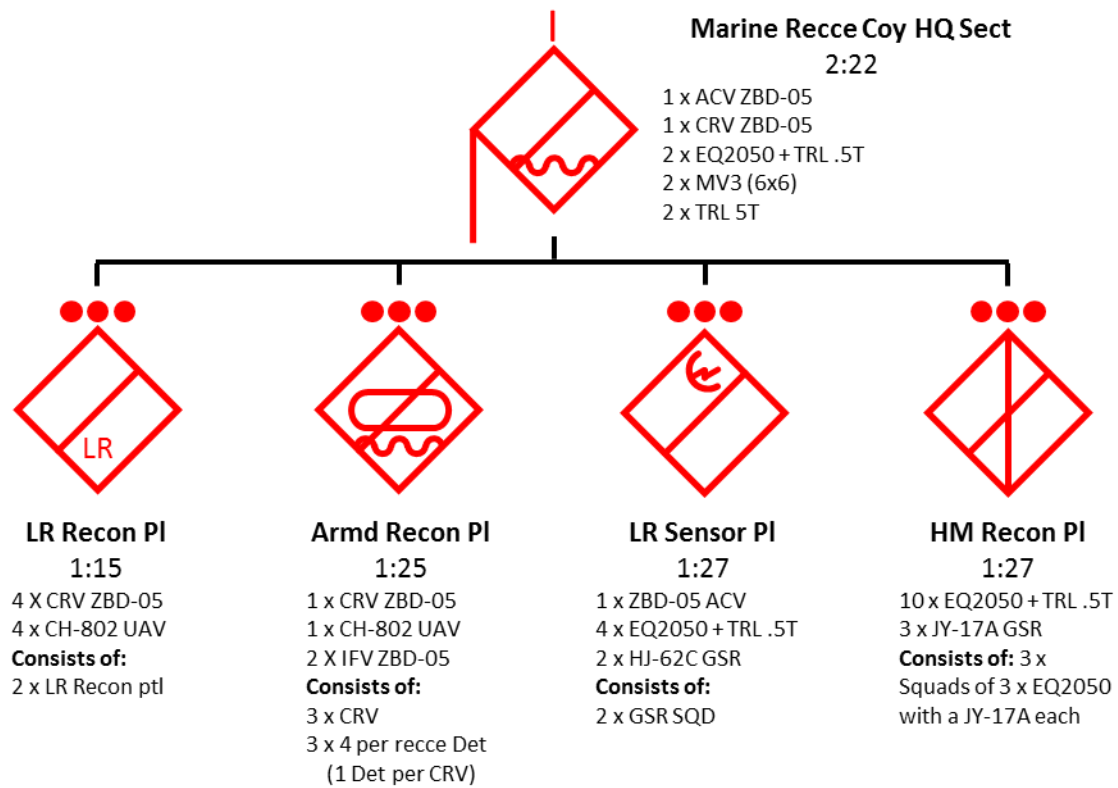
Squad leaders and officers up to the Coy Cmdr use the TBR-002 for communication. Dedicated HQ elms such as Pl, Coy and Bn command use TBR-119 radios.

The Beach recon Bn HQ may not lodge with the Coys, landing later with later echelons, with all remaining vehicles and equipment. If the Bn HQ lodges with the Coys it will be a light Tac style HQ in 4 x Zodiacs.

Beach Recon Squad		
Position	Primary Wpn	Secondary Wpn
Section Cdr	QBZ-95	TBR-002 VHF Radio
Gunner	QBB-95	Nil
Marksman	QBU-88	PF-89
Grenadier /2IC	QBZ-95	QLG-10 UBGL
Grenadier	QBZ-95	QLG-10 UBGL
Rifleman	QBZ-95	FHJ-84 if issued
ATGL	PF-89	QBZ-95



MEF Brigade Reconnaissance Company

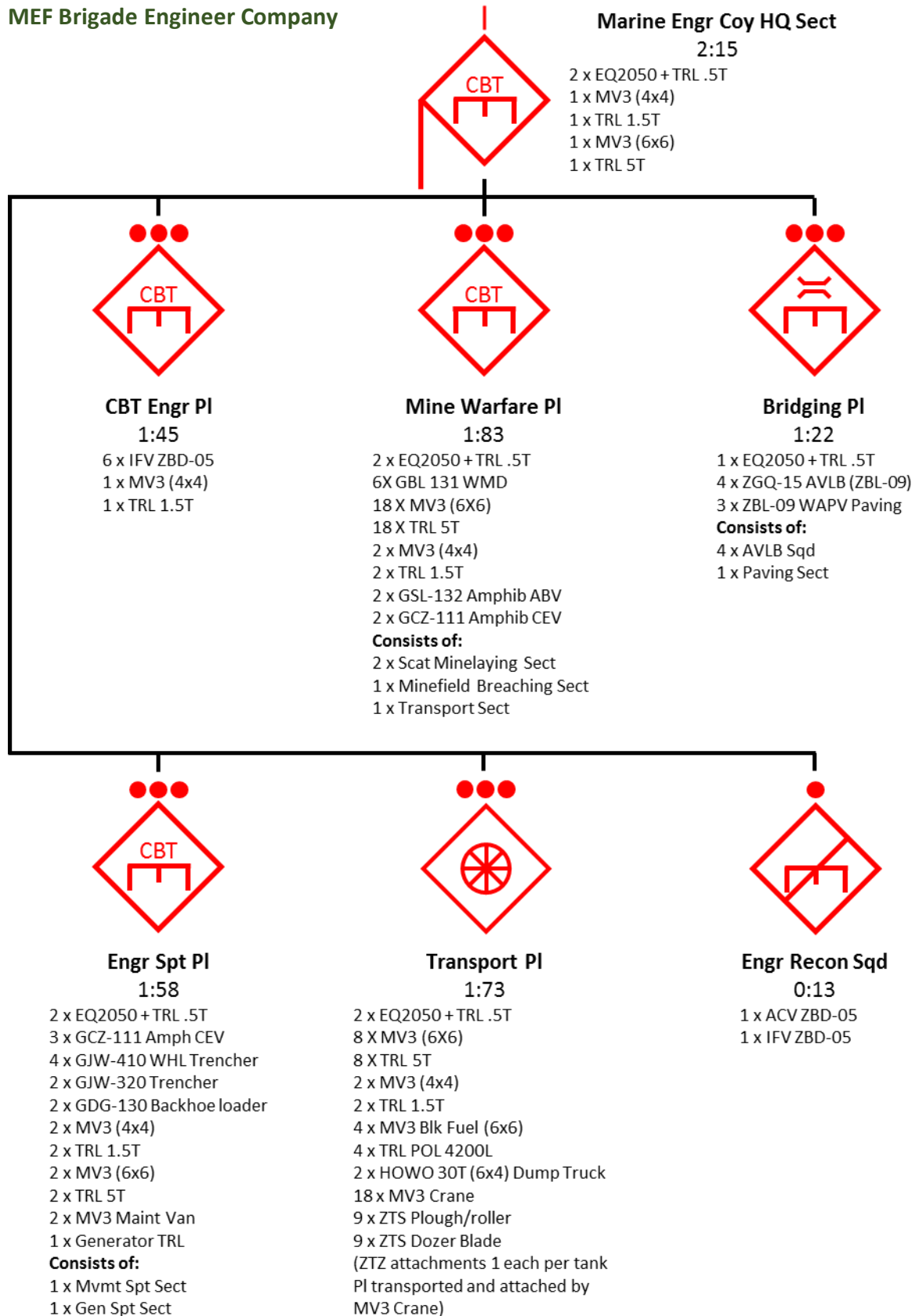


MEF Brigade Engineer Company

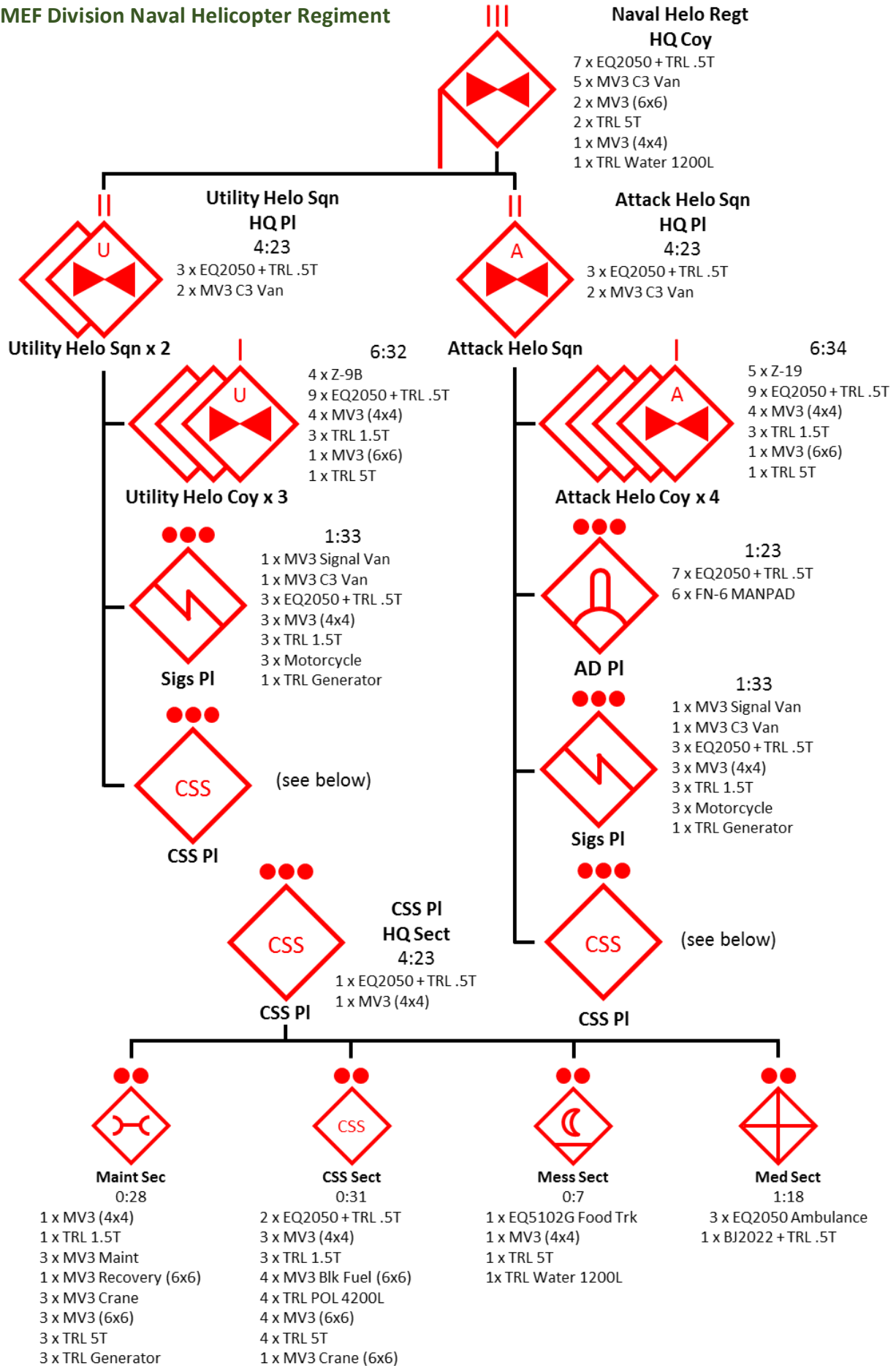
Marine Engr Coy HQ Sect

2:15

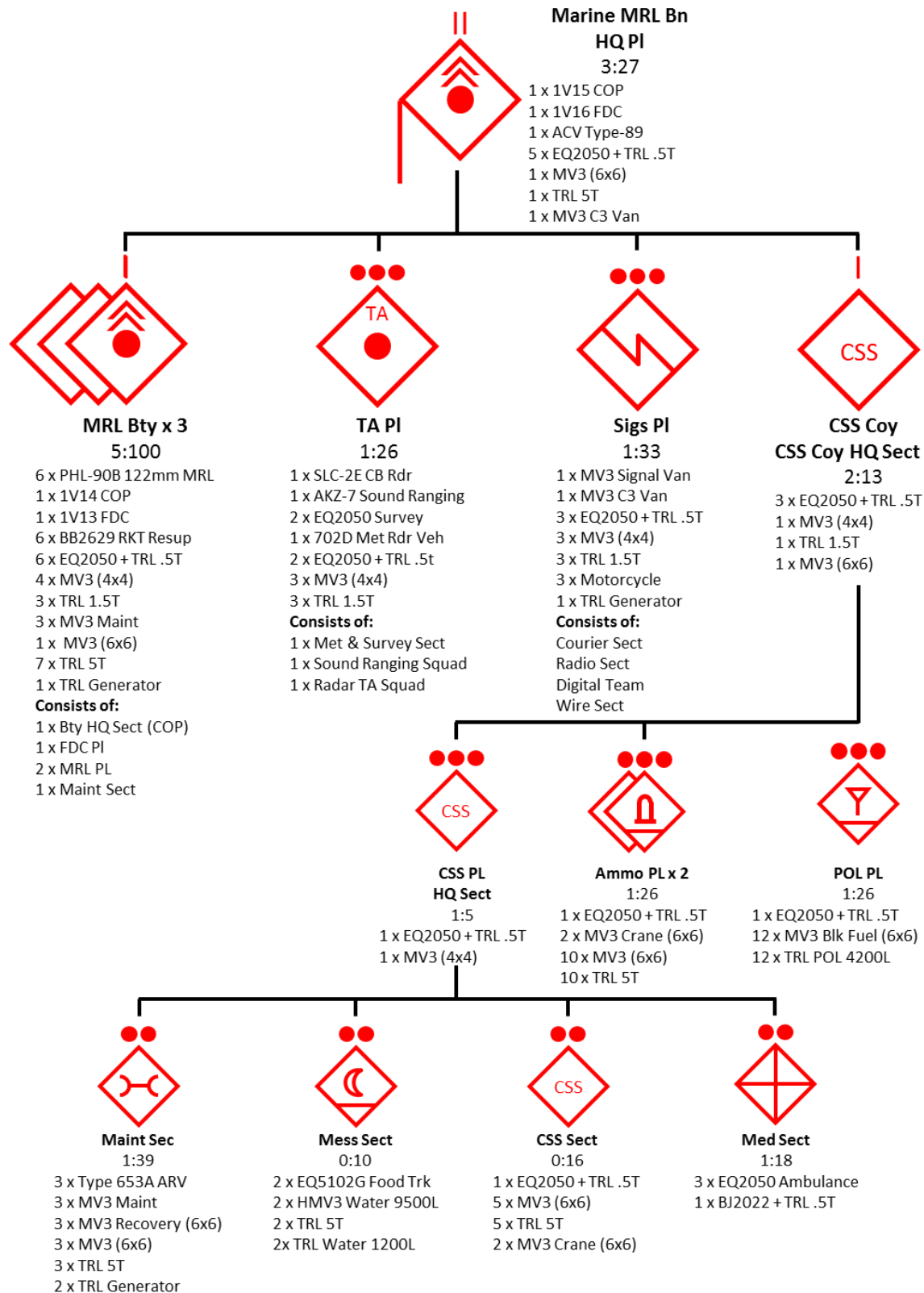
2 x EQ2050 + TRL .5T  
1 x MV3 (4x4)  
1 x TRL 1.5T  
1 x MV3 (6x6)  
1 x TRL 5T



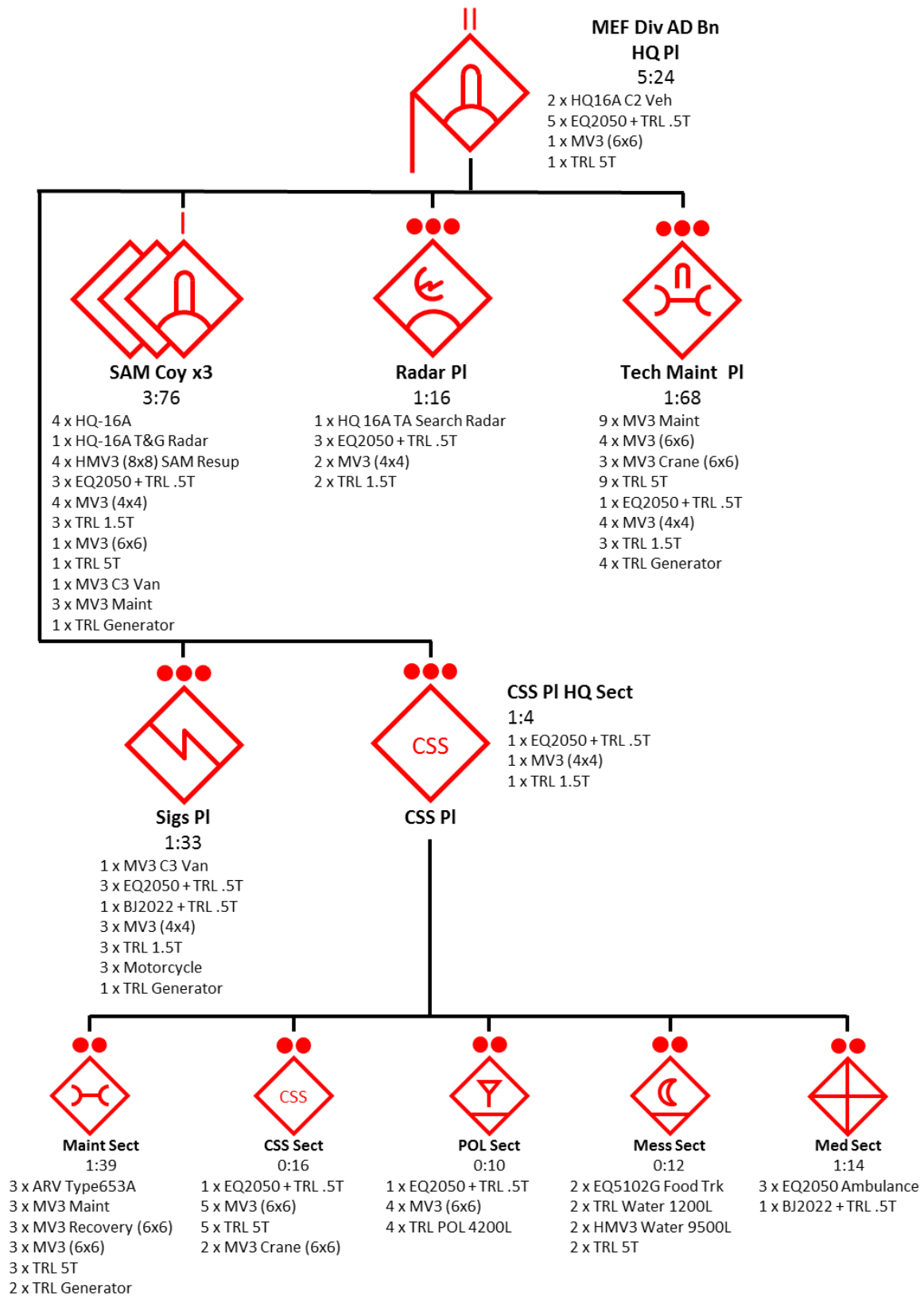
**MEF Division Naval Helicopter Regiment**



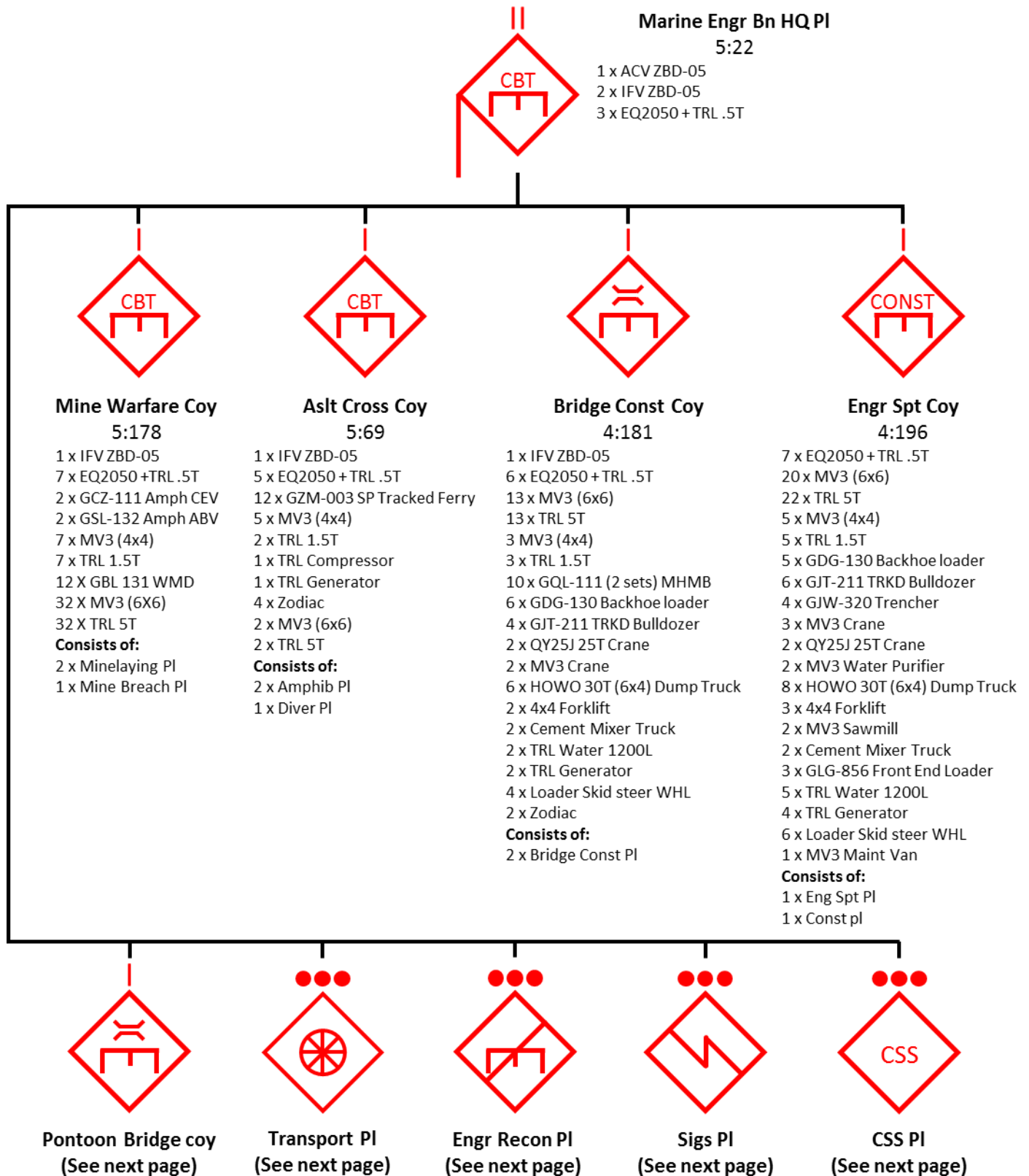
## MEF Division Multiple Rocket Launcher Battalion



## MEF Division Air Defence Battalion



# MEF Division Combat Engineer Battalion





## MEF Division Combat Engineer Battalion (Cont)



### Pontoon Bridge coy

4:119

1 x IFV ZBD-05  
4 x EQ2050 + TRL .5T  
2 x Type 79A Ribbon Bridge  
Complete (21 Vehs each).  
4 x GZM-003 SP Tracked  
Ferry  
1 x MV3 (4x4)  
1 x TRL 1.5T  
3 x MV3 (6x6)  
3 x TRL 5T  
**Consists of:**  
2 x Pontoon Bridge Pls  
1 x Ferry Sqd



### Transport PI

1:50

1 x EQ2050 + TRL .5T  
8 x HVM3 Recovery  
8 x HVM3 Semi-TRL  
10 x HVM3 (8x8)  
10 x TRL 5T  
2 x MV3 Crane  
**Consists of:**  
2 x Hvy Tpt Sect  
2 x Hvy Recovery Sqd



### Engr Recon PI

1:43

3 x ACV ZBD-05  
3 x IFV ZBD-05  
1 x EQ2050 + TRL .5T  
1 x MV3 (6x6)  
**Consists of:**  
3 x Engr Recon Sqd



### Sigs PI

1:33

1 x ACV Type-89  
1 x MV3 C3 Van  
3 x EQ2050 + TRL .5T  
3 x MV3 (4x4)  
3 x TRL 1.5T  
3 x Motorcycle  
1 x TRL Generator  
**Consists of:**  
1 x Courier Sect  
1 x Radio Sect  
1 x Digital Team  
1 x Wire Sect



### CSS PI HQ Sect

1:4

1 x EQ2050 + TRL .5T  
1 x MV3 (4x4)  
1 x TRL 1.5T

### CSS PI



### Maint Sect

1:39

3 x ARV Type653A  
3 x MV3 Maint  
3 x MV3 Recovery (6x6)  
3 x MV3 (6x6)  
3 x TRL 5T  
2 x TRL Generator



### CSS Sect

0:16

1 x EQ2050 + TRL .5T  
5 x MV3 (6x6)  
5 x TRL 5T  
2 x MV3 Crane (6x6)



### POL Sect

0:10

1 x EQ2050 + TRL .5T  
4 x MV3 (6x6)  
4 x TRL POL 4200L



### Mess Sect

0:12

2 x EQ5102G Food Trk  
2 x TRL Water 1200L  
2 x HVM3 Water 9500L  
2 x TRL 5T



### Med Sect

1:14

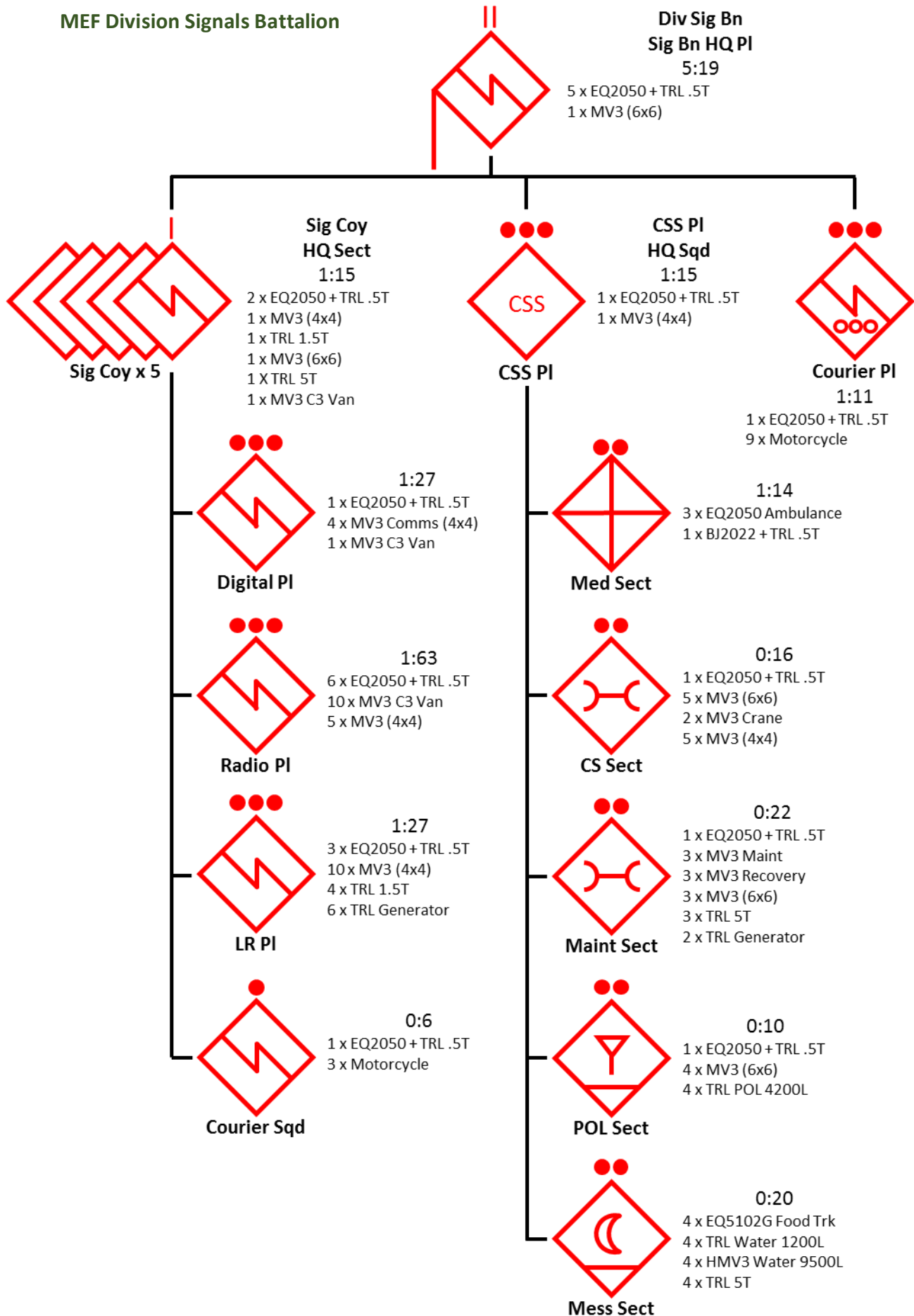
3 x EQ2050 Ambulance  
1 x BJ2022 + TRL .5T

UNCLASSIFIED  
2-18

# MEF Division Signals Battalion

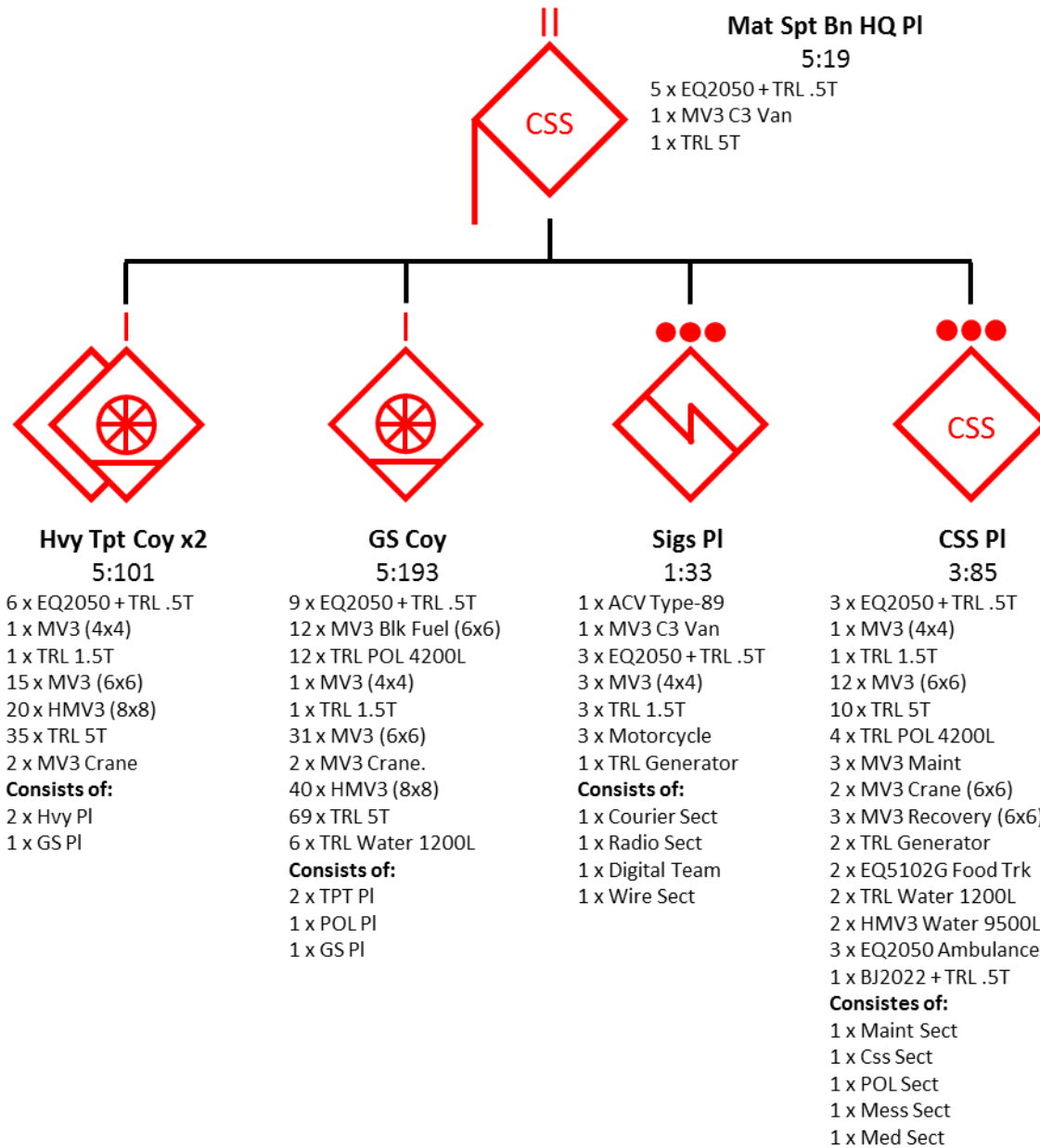
Div Sig Bn  
Sig Bn HQ PI  
5:19

5 x EQ2050 + TRL .5T  
1 x MV3 (6x6)

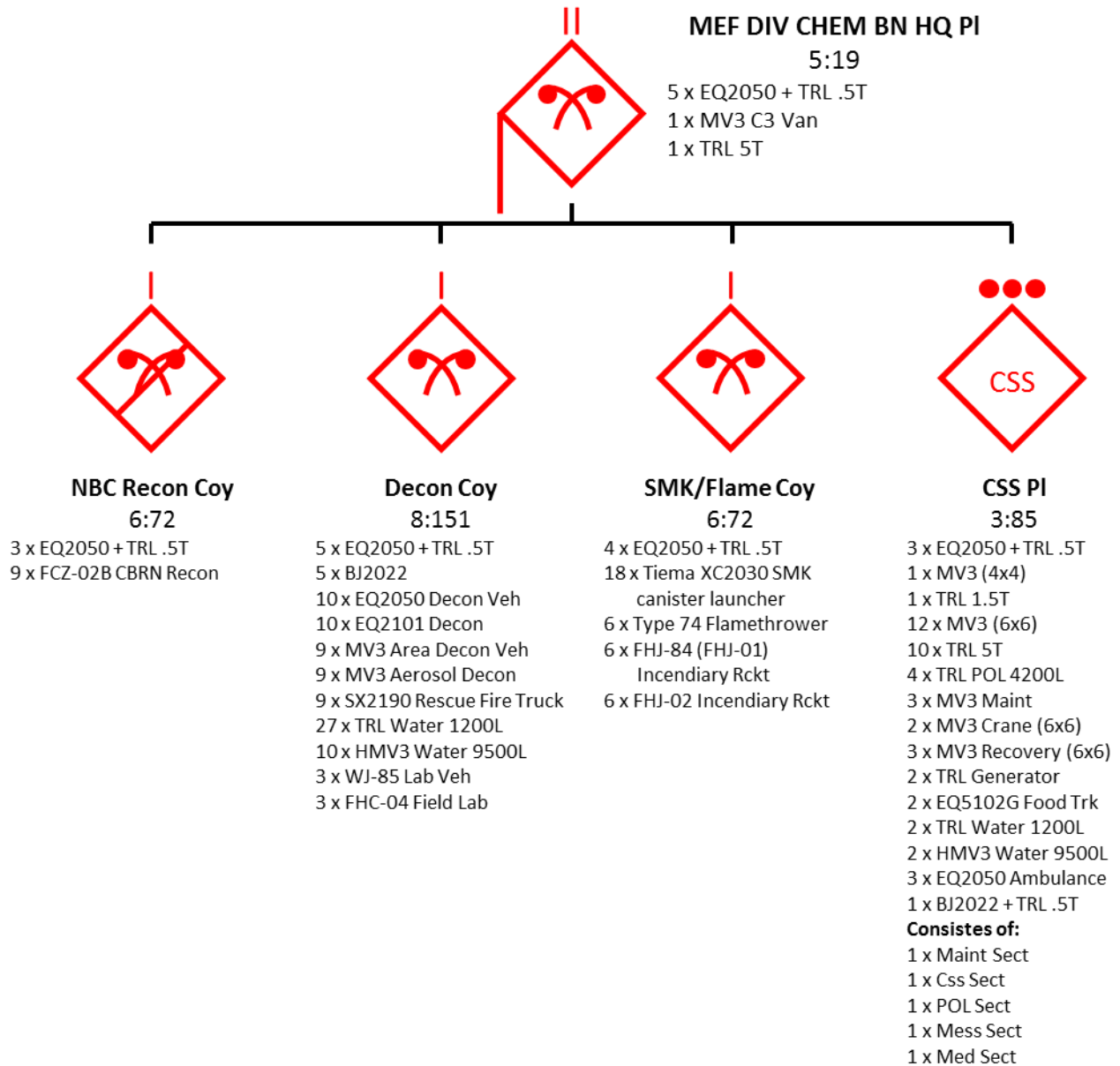


UNCLASSIFIED

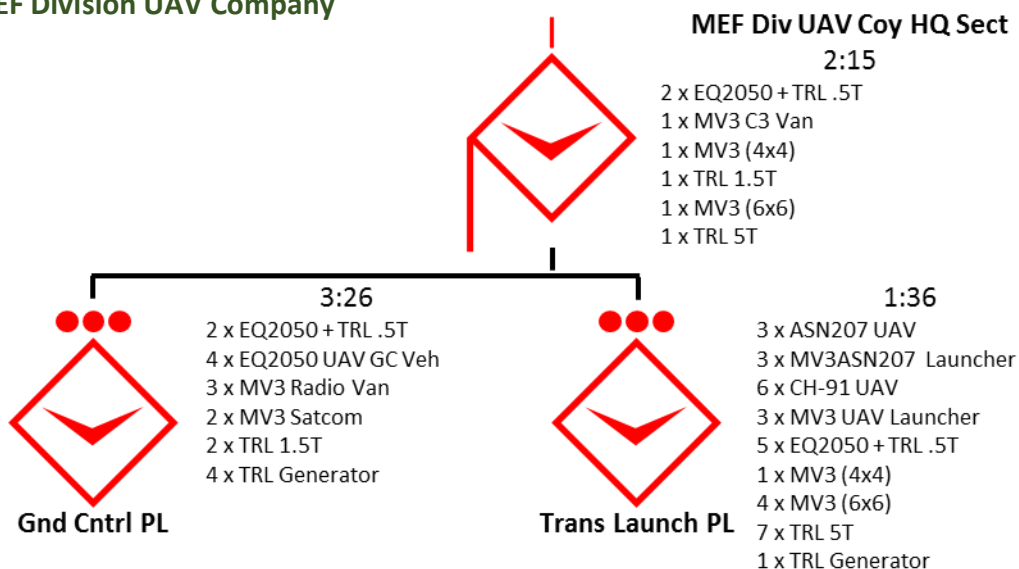
## MEF Division Material Support Battalion



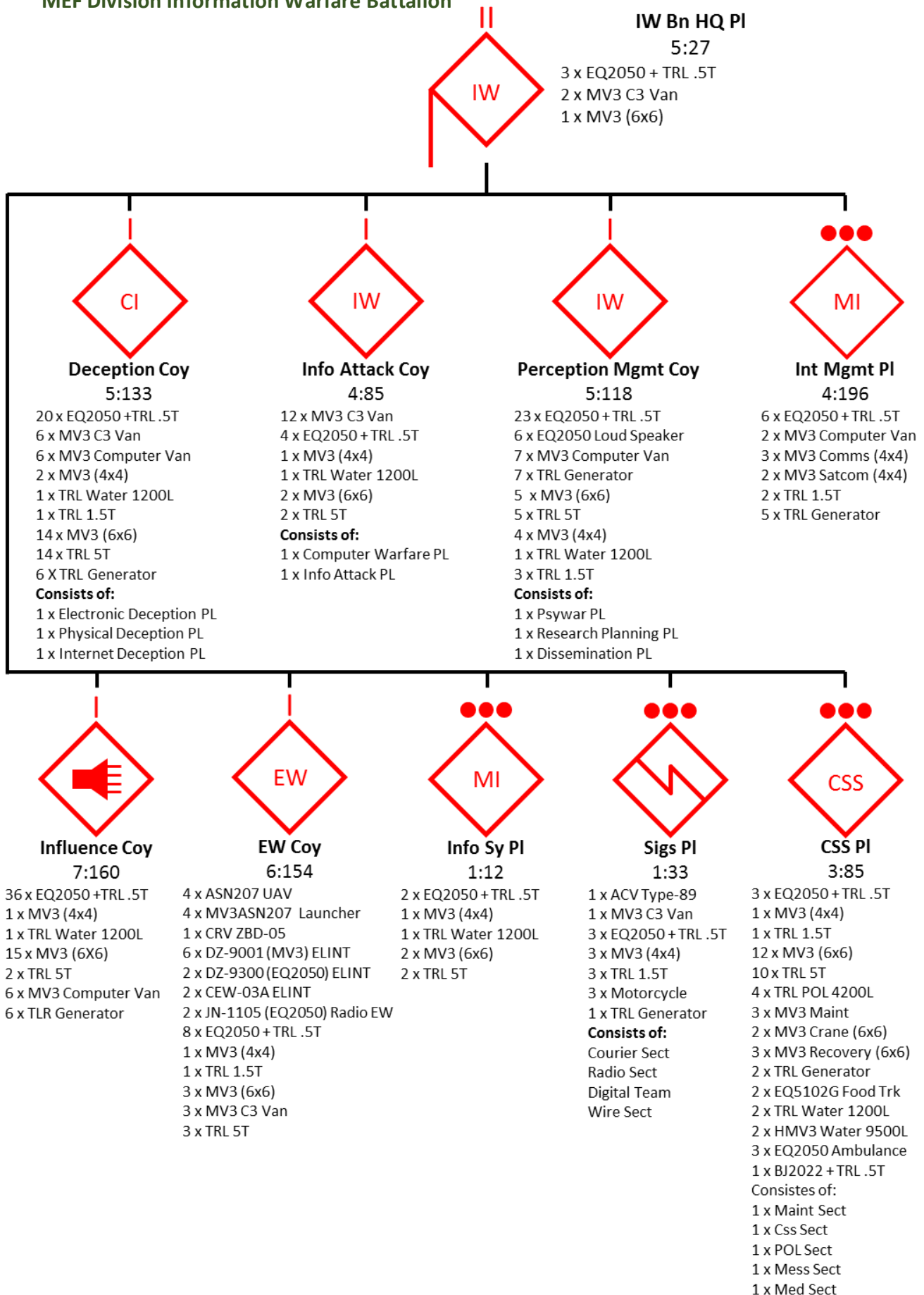
## MEF Division Chemical Defence Battalion



## MEF Division UAV Company

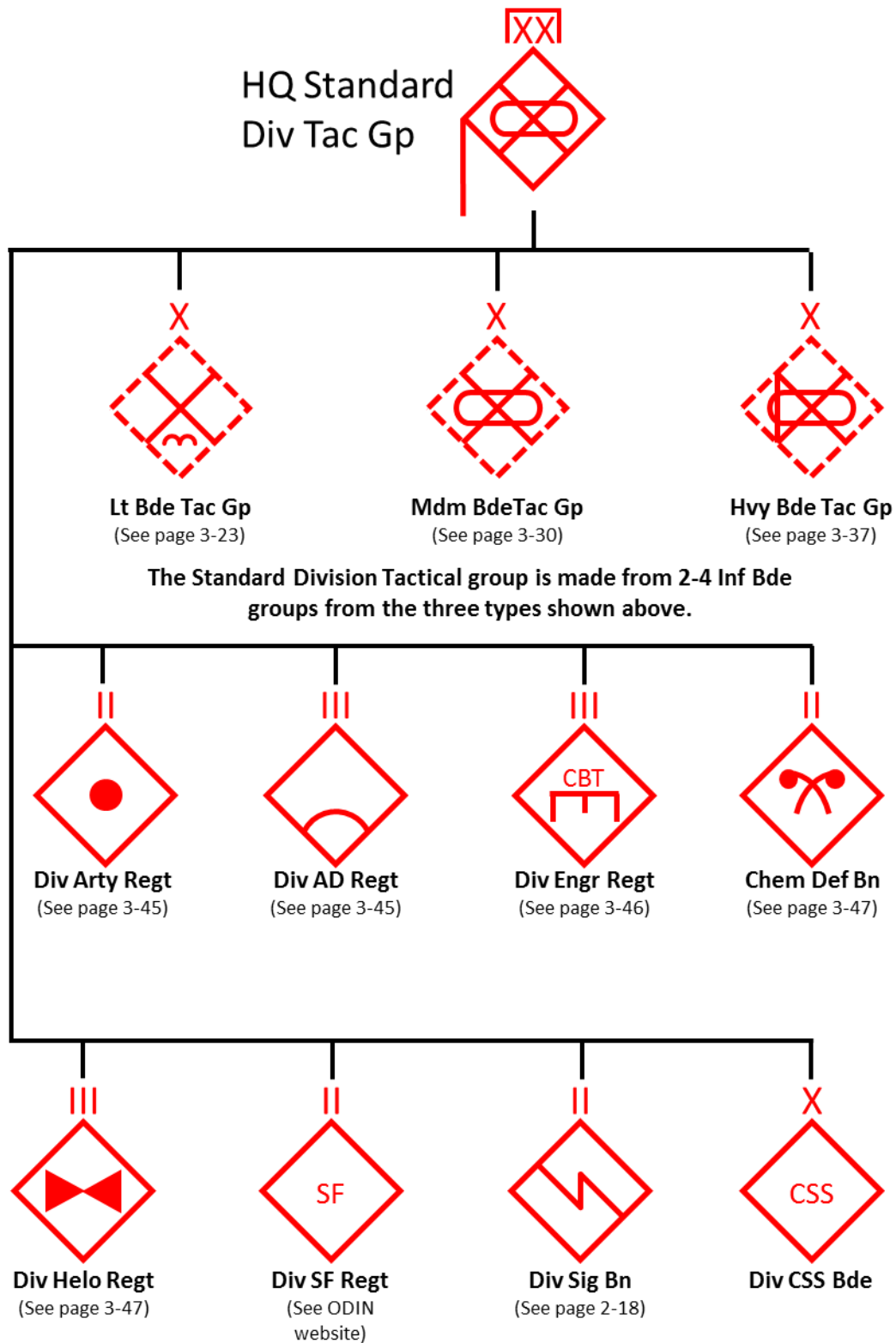


## MEF Division Information Warfare Battalion



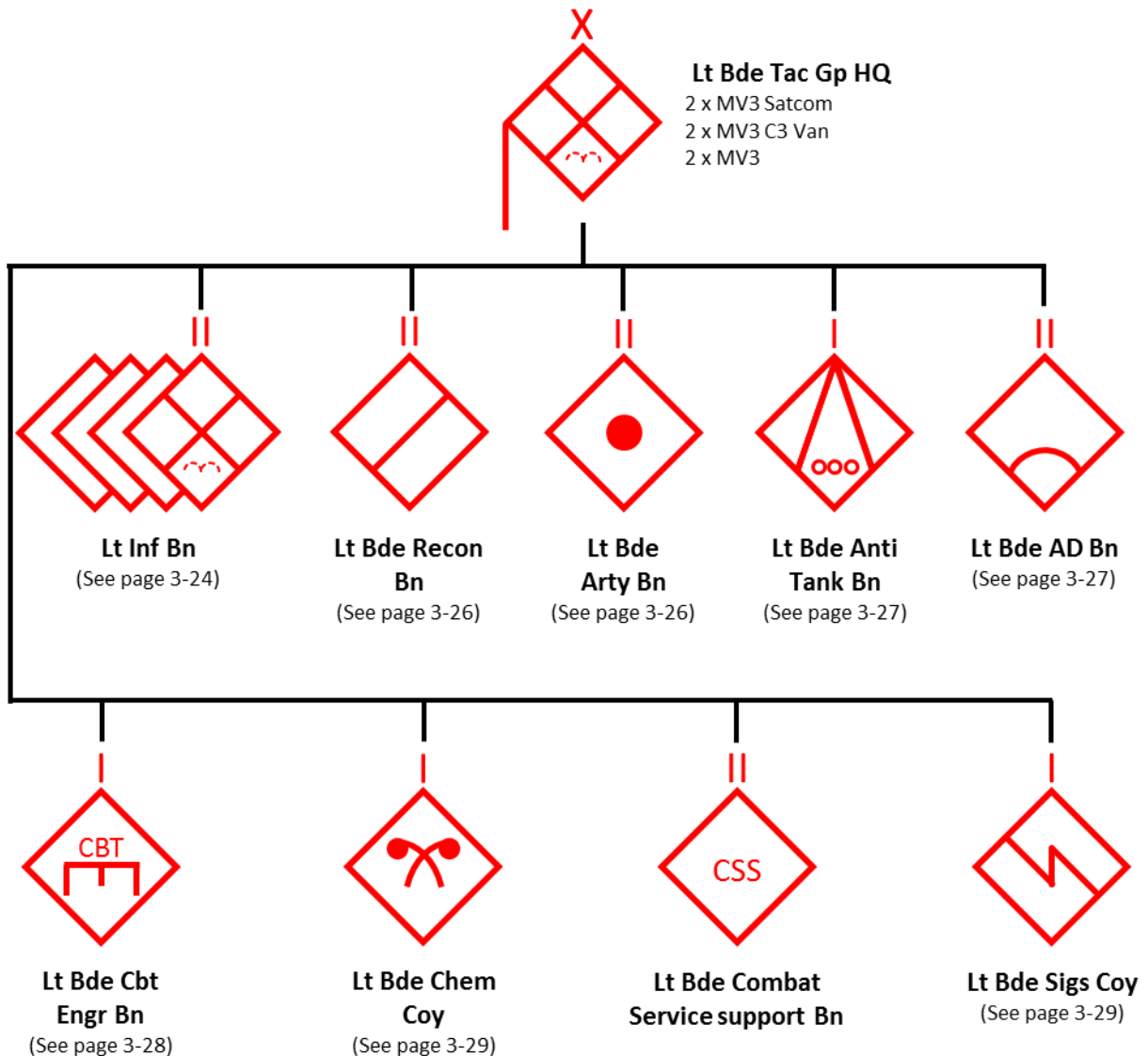
## Chapter 3 Standard Division Tactical Group ORBATs

### Standard Division Tactical Group





## Light Brigade Tactical Group

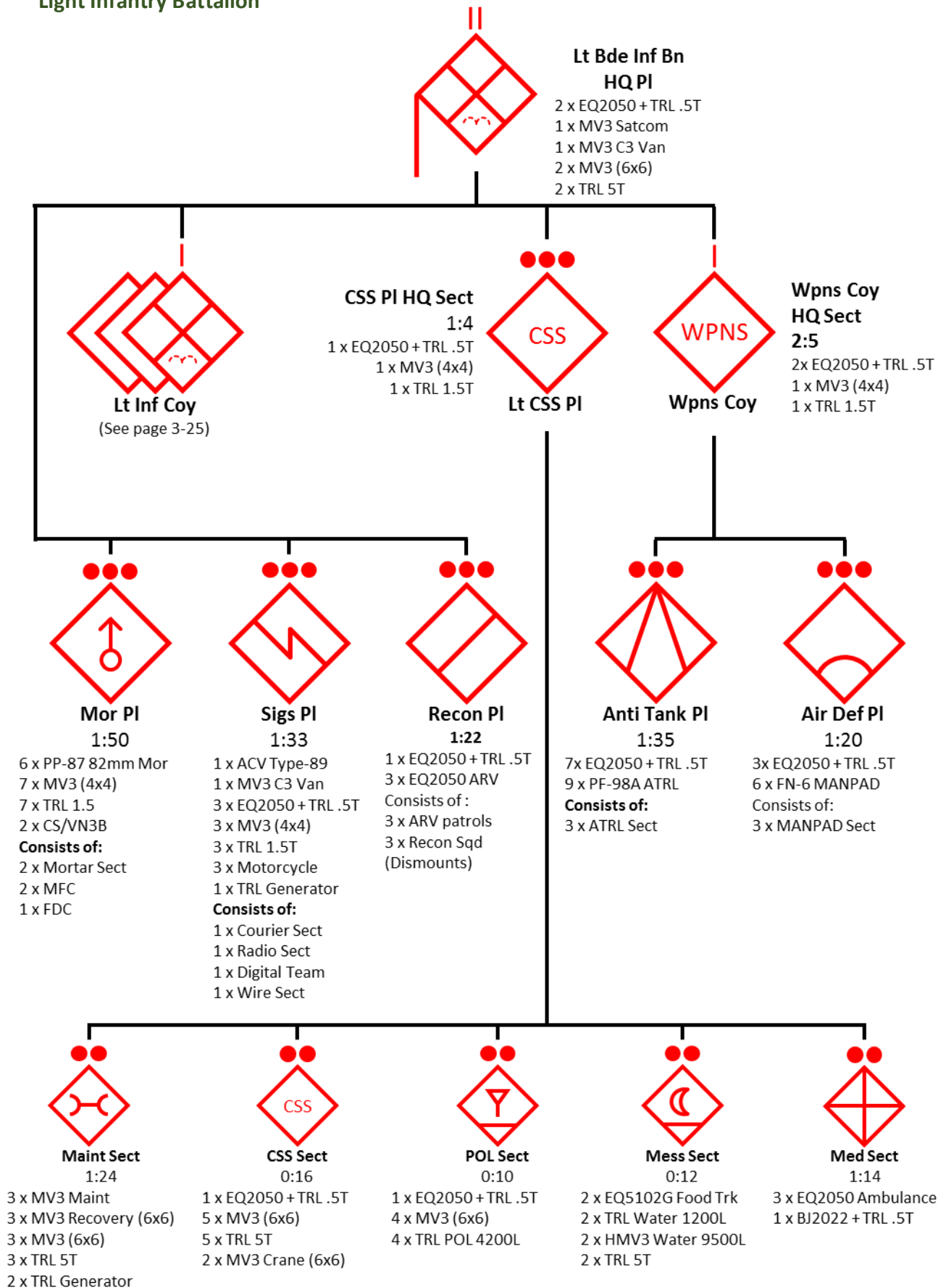


Light BTGs are primarily comprised of dismounted infantrymen. This provides their fighting force with a slow, but adaptable and versatile Tactical Group capable of operating in close and complex terrain. It can be deployed on foot and is transportable by air.

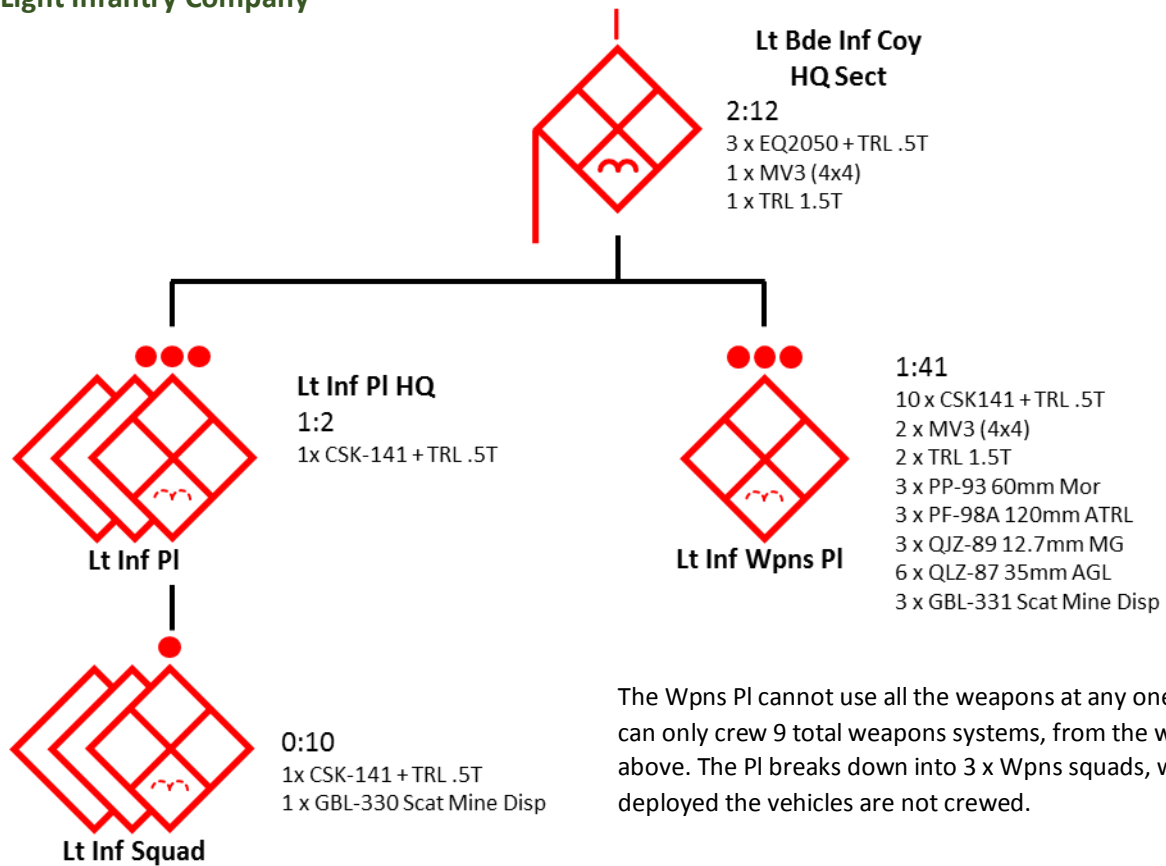
Light BTGs are a primarily infantry based organisation, however are supported by their own organic artillery and logistics. Light BTGs detachments can be used as Airmobile Detachments to seize Key Terrain in depth.

Light BTG's do not have any armour, however, have highly capable man-portable anti-armour weapon systems. The location and use of these AT systems can be a good indicator of Main Effort.

## Light Infantry Battalion



## Light Infantry Company



The Wpns PI cannot use all the weapons at any one time, they can only crew 9 total weapons systems, from the weapons listed above. The PI breaks down into 3 x Wpns squads, when deployed the vehicles are not crewed.

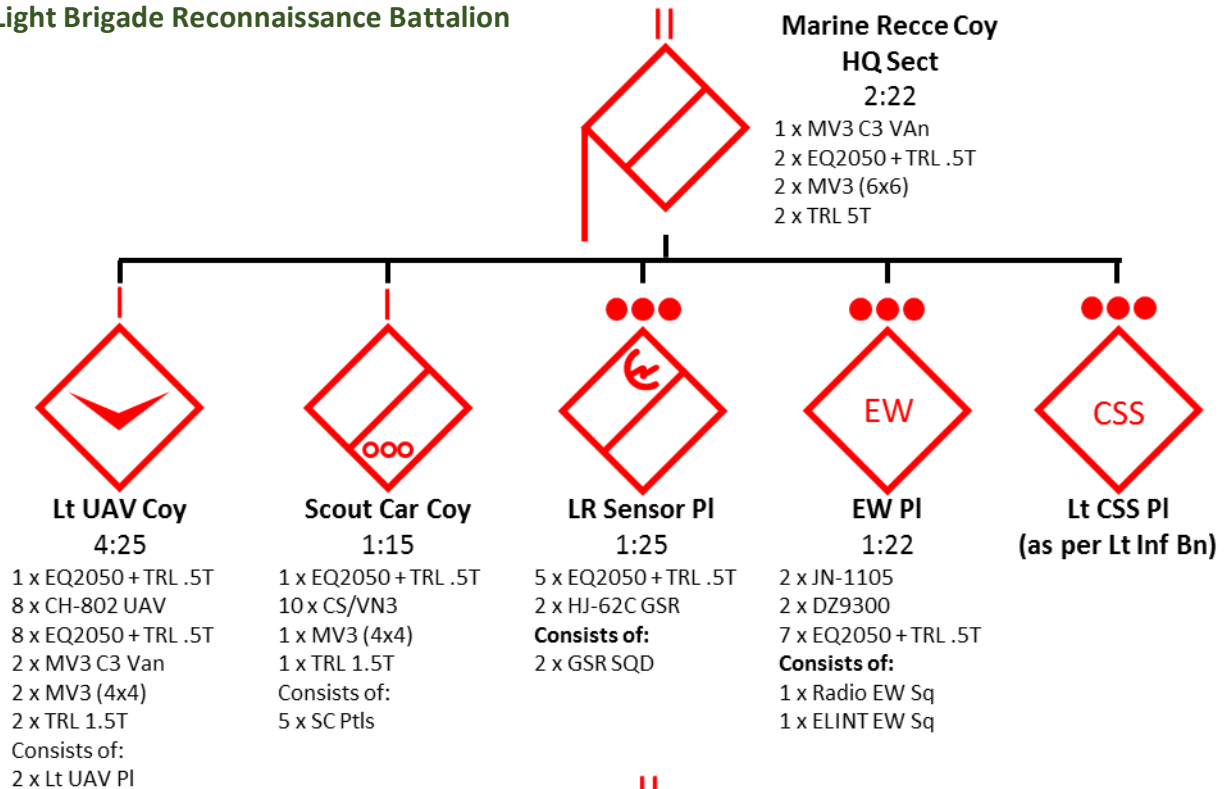
Light infantry companies conduct one tactical task at a time. This may see subordinate elements conducting separate tasks to achieve a company effect. For example, a company may be tasked as a Security element for an assault, which may see troops conducting screens and interdictions on route to provide the security.

Light infantry companies can operate independently up to 5km forward of their battalion. They may be deployed as an Exploitation or Disruption element, or as a Main Guard in a battalion advance. They will usually work inside the range of their organic IDF weapons.

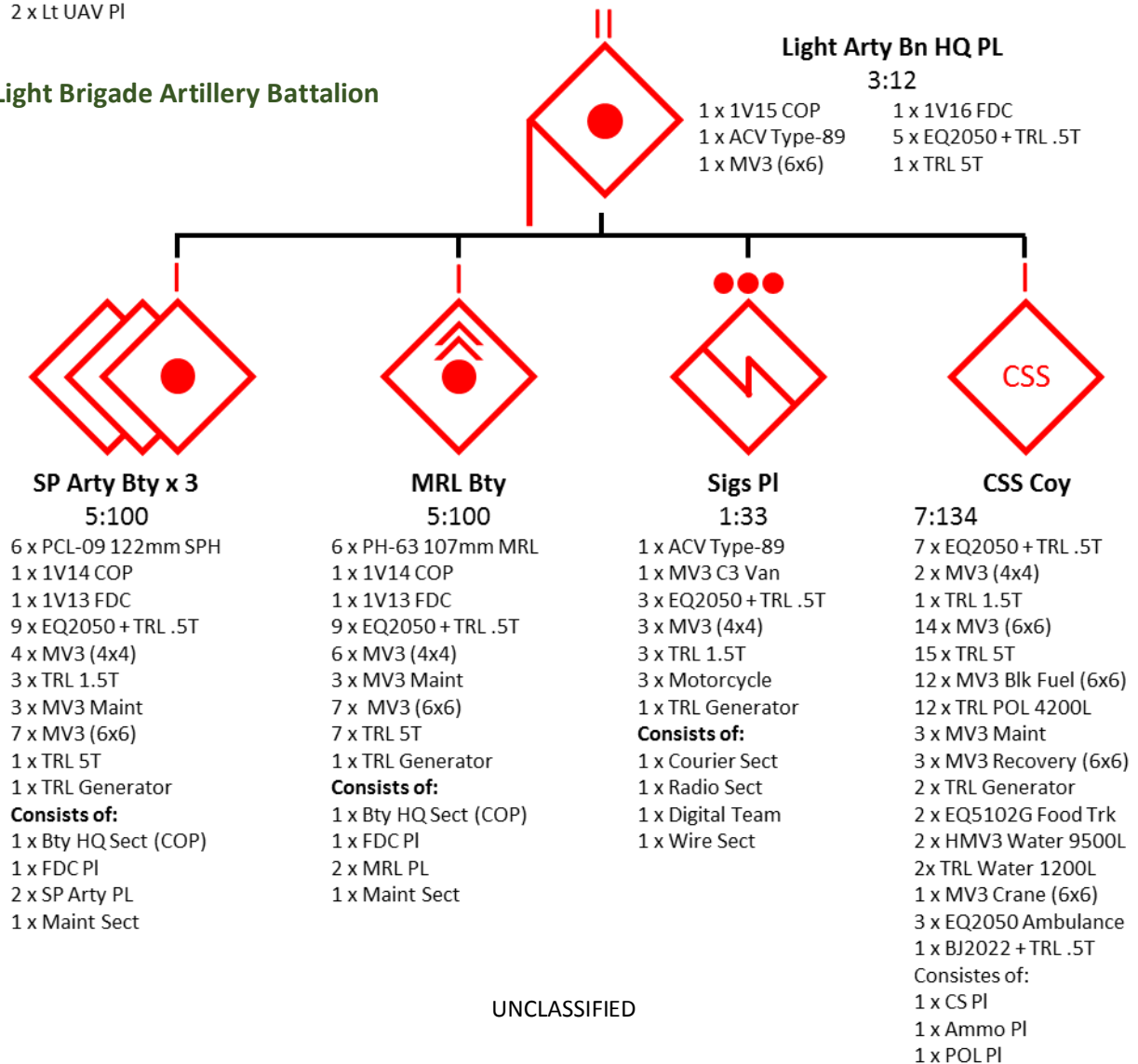
This ORBAT can be used as Airborne forces with the CSK-141 vehicles removed and the driver becoming a member of FT2. The Wpns PI can also be air portable without transport or can have CS/VP4 vehicles for mobility. In airborne operations often the units will receive and over issue of PF-89 and FHJ-84.

Lt Inf Squad Weapons			
	Position	Primary Wpn	Secondary Wpn
LT 1	Section Cdr	QBZ-95	TBR-002 VHF Transceiver
	Marksman	QBU-88	Nil
	Grenadier	QBZ-95	QLG-10 UBGL
	Rifleman	QBZ-95	Nil
	ATGL	PF-89	QBZ-95
FT 2	2IC	QBZ-95	TBR-002 VHF Transceiver
	Gunner	QBB-95	Nil
	Grenadier	QBZ-95	QLG-10 UBGL
	Rifleman	QBZ-95	FHJ-84 if issued
	Dvr /RFLM	QBZ-95B	Nil

## Light Brigade Reconnaissance Battalion

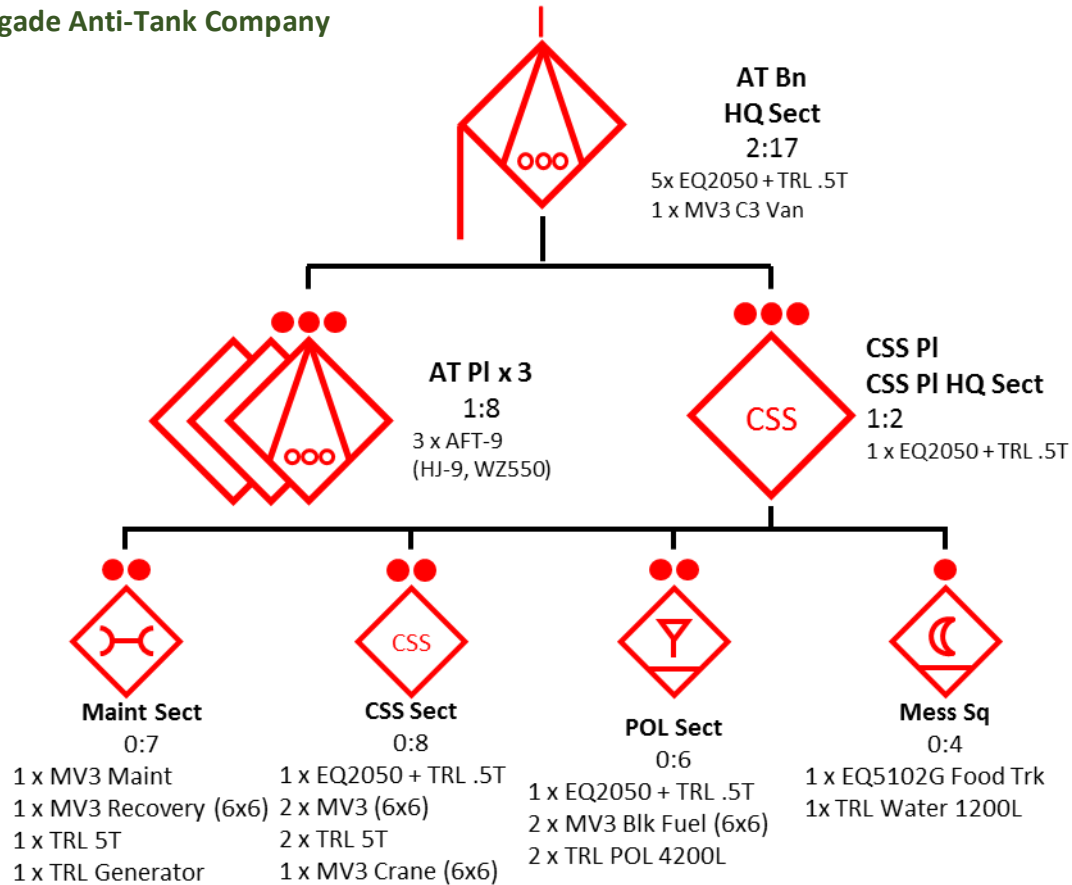


## Light Brigade Artillery Battalion

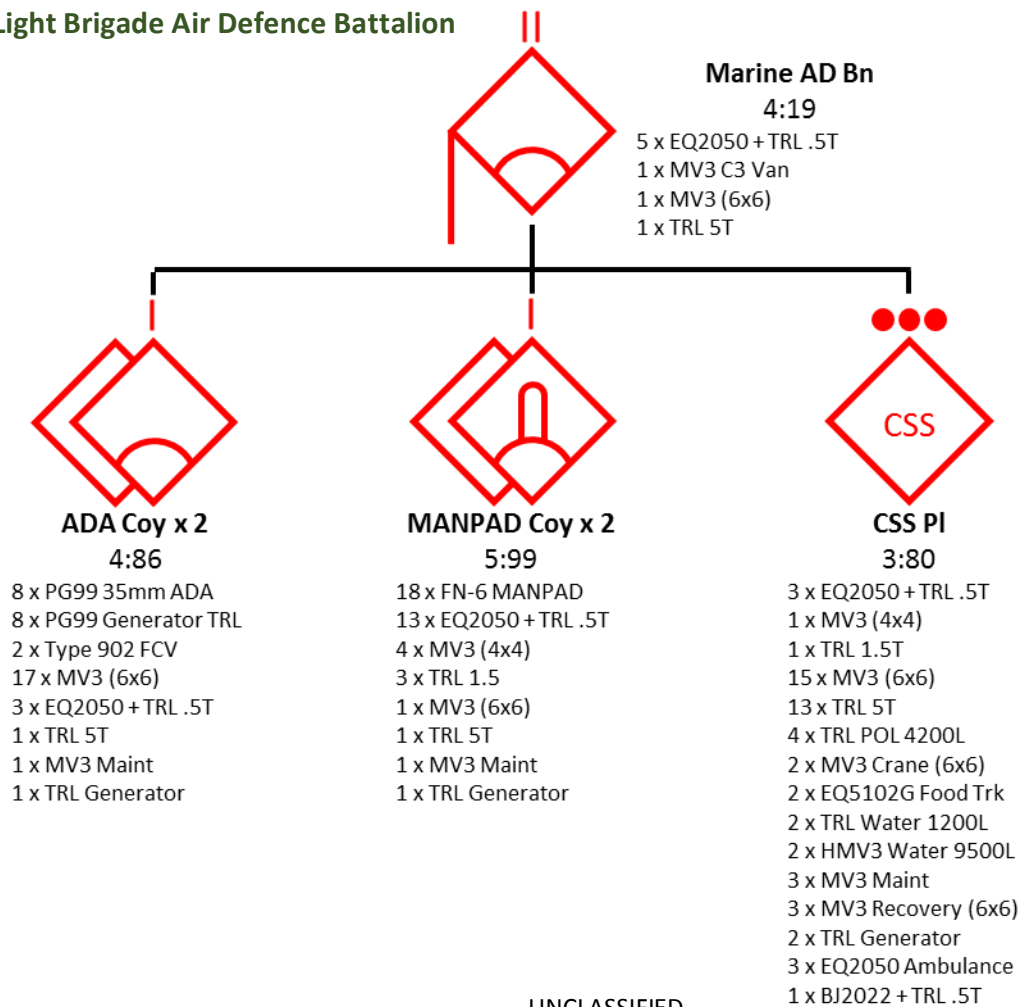


UNCLASSIFIED  
3-27

## Brigade Anti-Tank Company

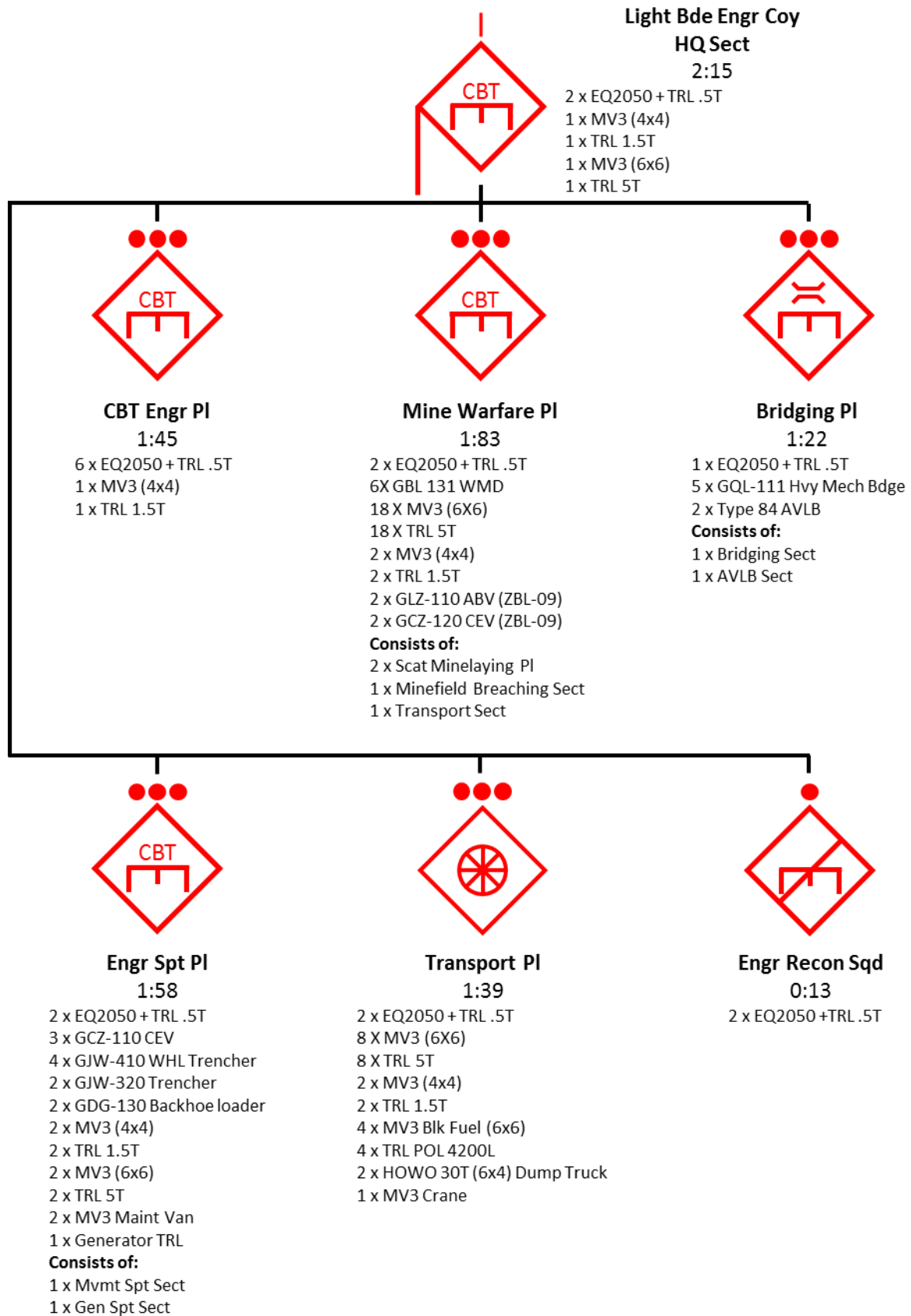


## Light Brigade Air Defence Battalion



UNCLASSIFIED

## Light Brigade Engineer Company



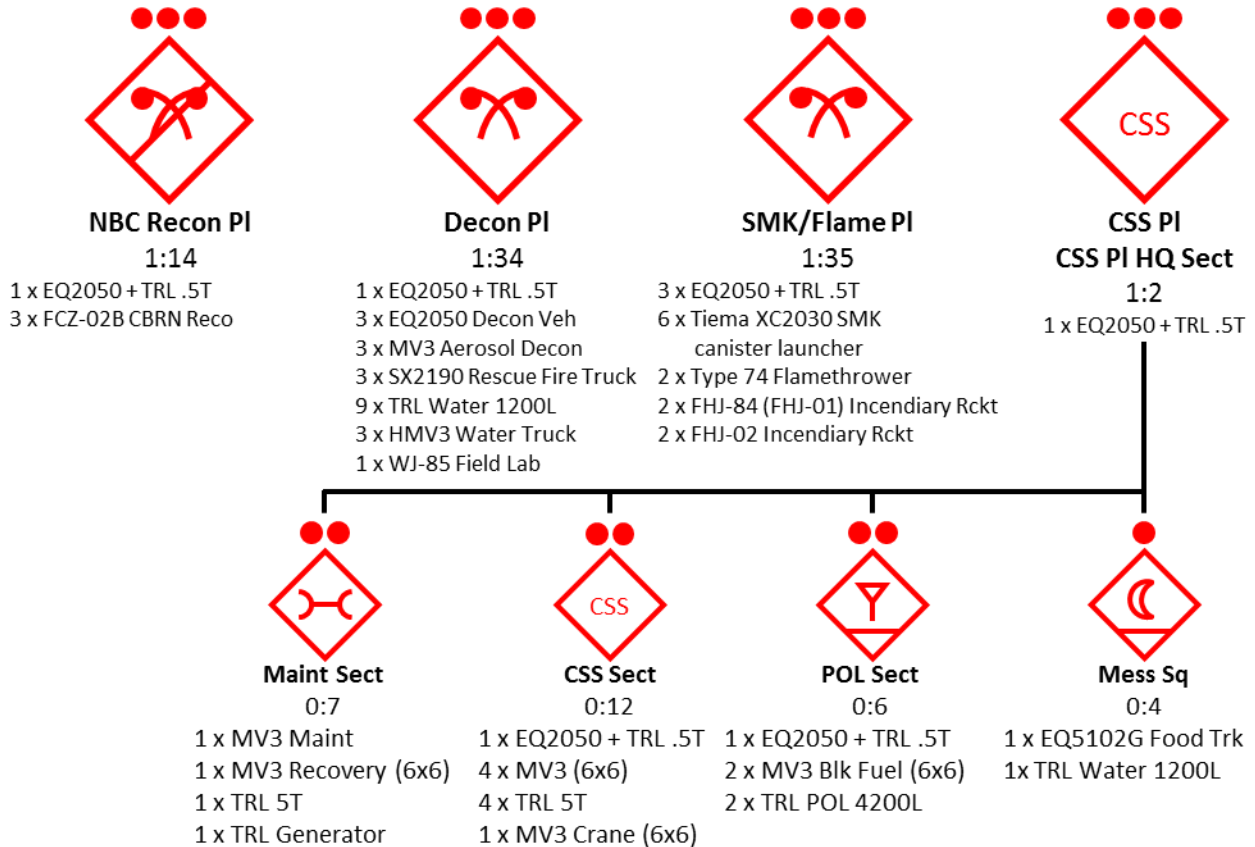


UNCLASSIFIED  
3-29

## Brigade Chemical Defence Coy

### Bde Chem Def Coy HQ Sect

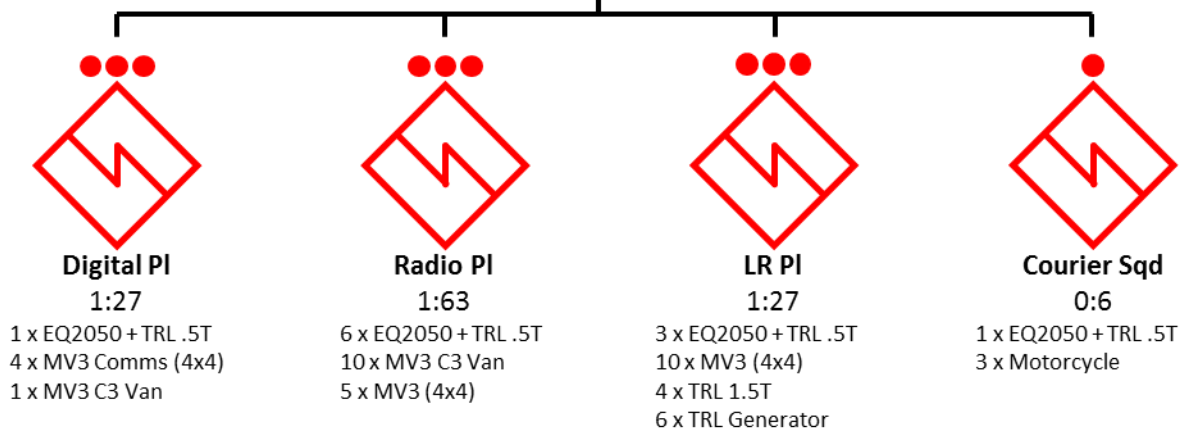
2:6  
2 x EQ2050 + TRL .5T



## Brigade Signals Company

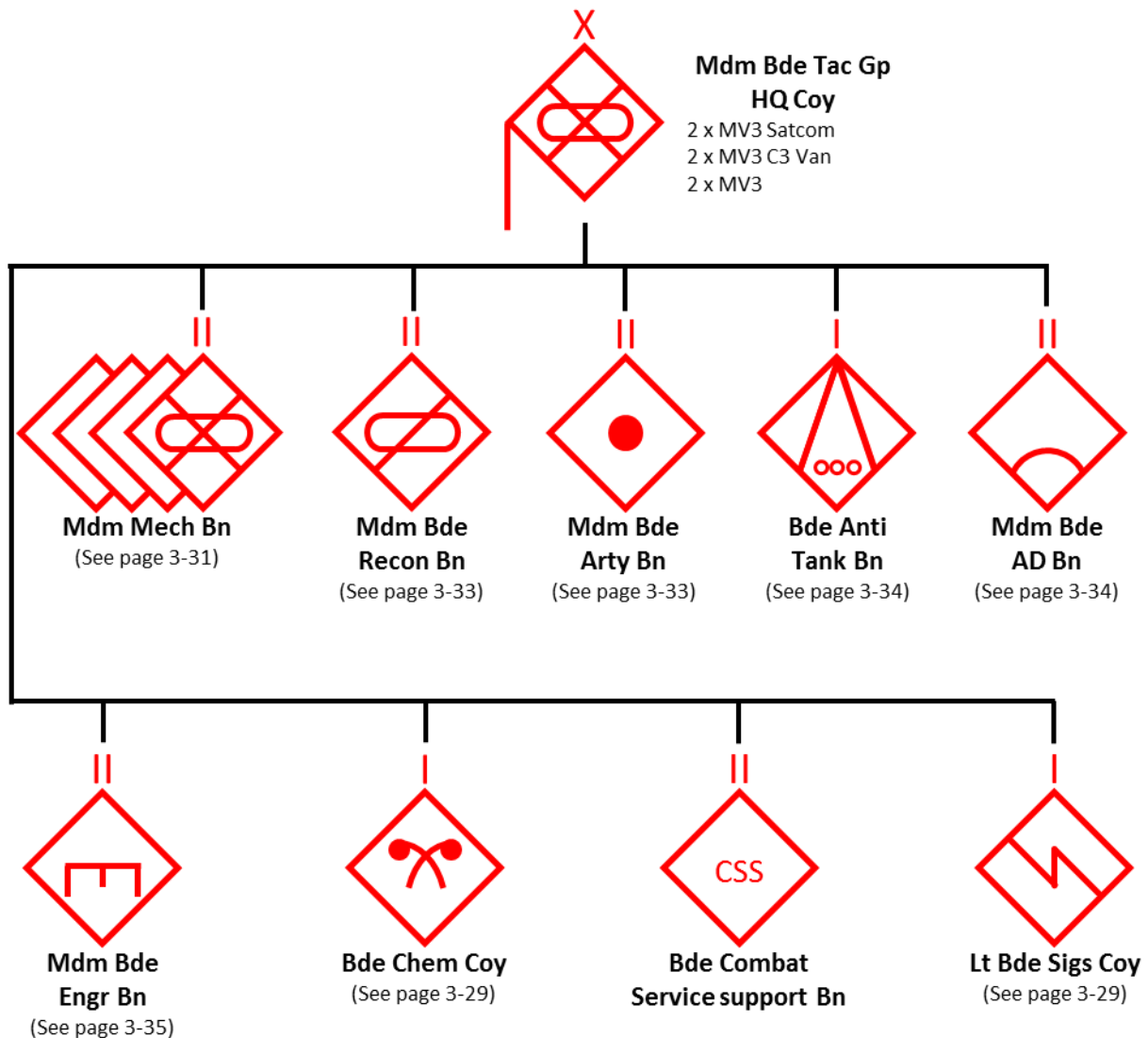
### Bde Sig Coy HQ Sect

1:15  
2 x EQ2050 + TRL .5T  
1 x MV3 (4x4)  
1 x TRL 1.5T  
1 x MV3 (6x6)  
1 x TRL 5T  
1 x MV3 C3 Van



UNCLASSIFIED

## Medium Brigade Tactical Group



Medium BTGs are based upon wheeled armoured vehicles. This provides their fighting force with good mobility while still being transportable by air. The entire BTG is based around having comparable mobility with the primary infantry fighting vehicle, the ZBL-09.

Medium BTGs are a primarily infantry based organisation, supplemented with armoured fighting vehicles. There is a significant amount of infantry in a Medium BTG that provides the organisation greater utility across different operating environments. Infantry and armour fight homogenously to achieve their tasks.

The Medium BTG does not have any heavy armour, however, has highly capable anti-armour assets. The location and use of these AT systems can be a good indicator of Main Effort...or used as deception.

UNCLASSIFIED

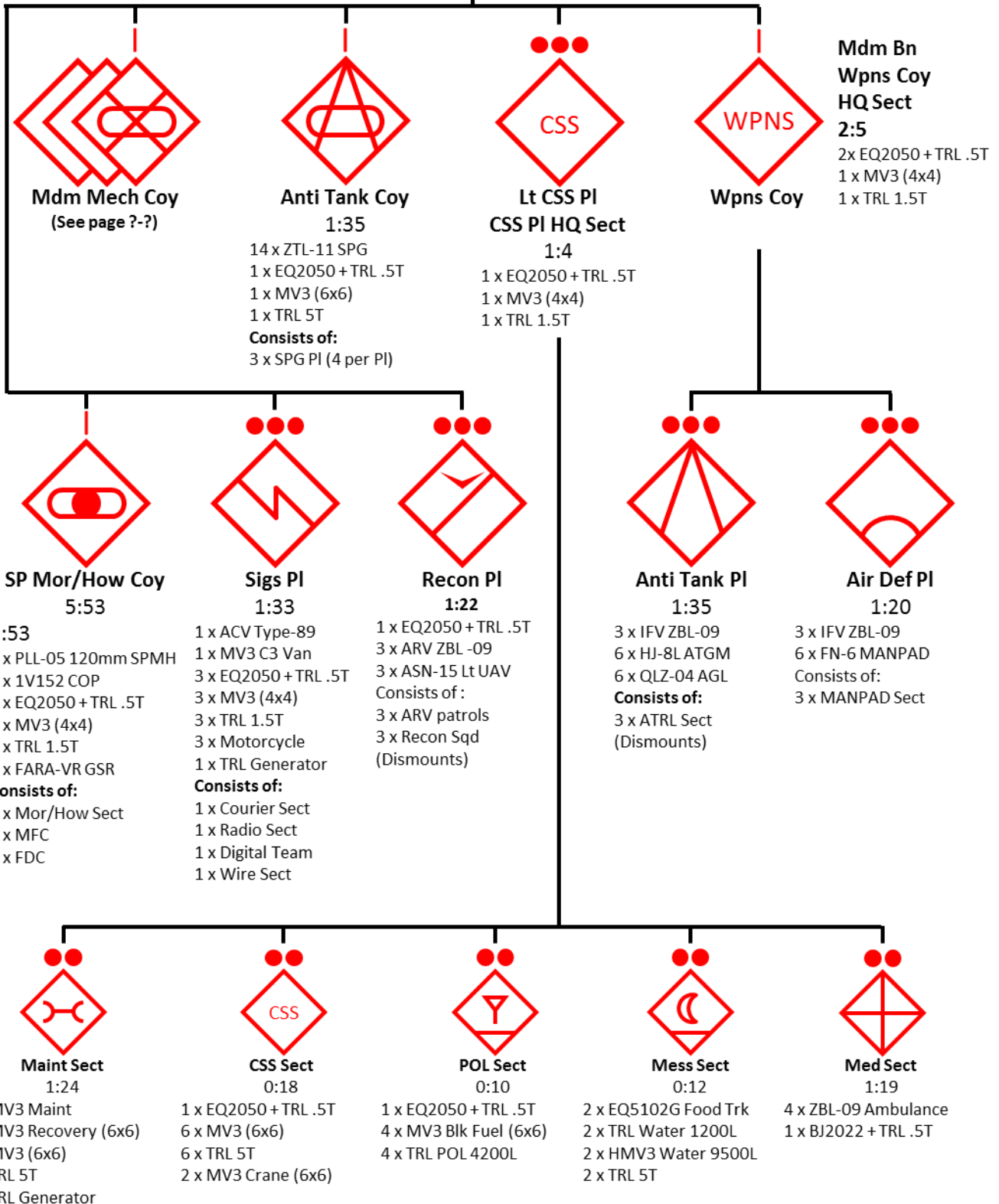
3-31

## Medium Mechanised Infantry Battalion

### Mdm Mech Bn

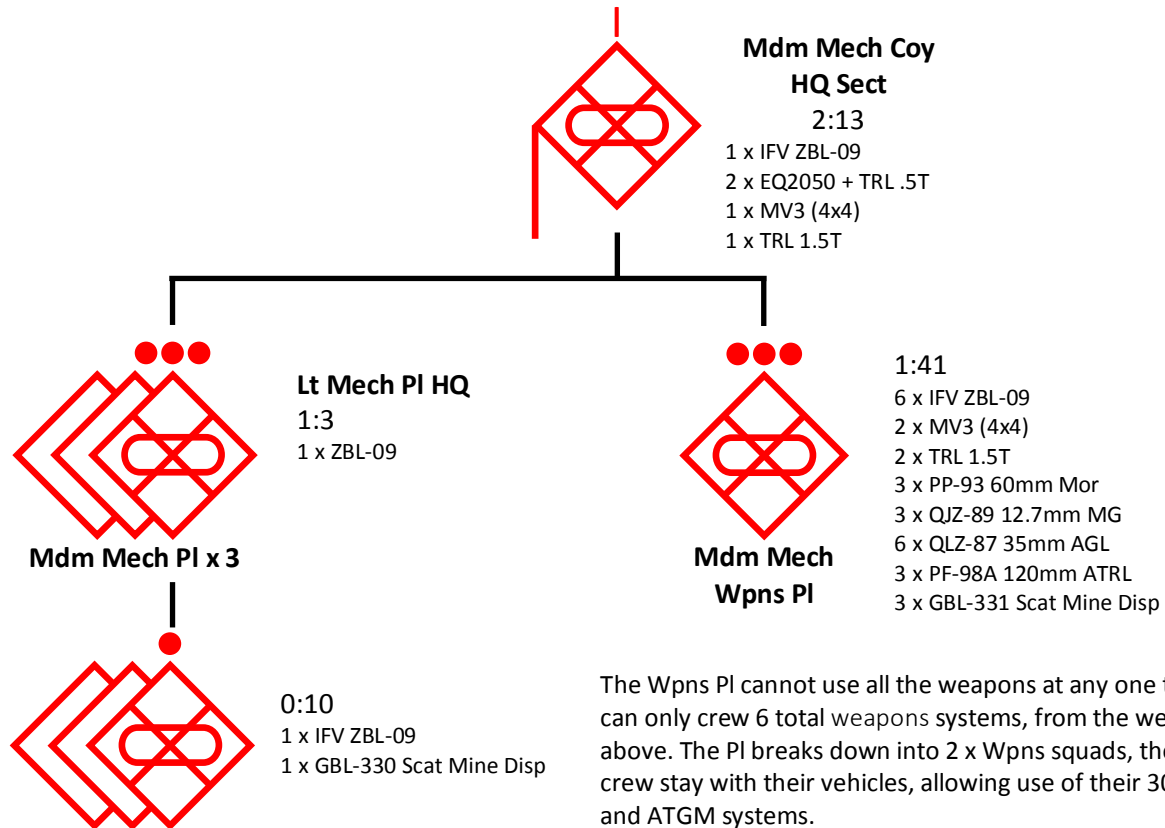
#### HQ PI

2 x ACV ZBL-09  
1 x MV3 Satcom  
1 x MV3 C3 Van  
2 x MV3 (6x6)  
2 x TRL 5T



UNCLASSIFIED

## Medium Mechanised Infantry Company



The Wpns PI cannot use all the weapons at any one time, they can only crew 6 total weapons systems, from the weapons listed above. The PI breaks down into 2 x Wpns squads, the ZBL-09 crew stay with their vehicles, allowing use of their 30mm cannon and ATGM systems.

### Mdm Mech Squad x 3

Mech infantry companies conduct one tactical task at a time. This may see subordinate elements conducting separate tasks to achieve a company effect. For example, a company may be tasked as a Security element for an assault, which may see troops conducting screens and interdictions on route to provide the security.

Mech infantry companies can operate independently up to 15km forward of their battalion. They may be deployed as an Exploitation or Disruption element, or as a Main Guard in a battalion advance. They will need to be supported by a fires unit if they do this.

Medium Inf Squad			
	Position	Primary Wpn	Secondary Wpn
FT1	Section Cdr	QBZ-95	TBR-002 VHF Transceiver
	Gunner	QBB-95	Nil
	Rifleman	QBZ-95	FHJ-84 if issued
	Grenadier	QBZ-95	QLG-10 UBGL
FT2	Grenadier/2IC	QBZ-95	QLG-10 UBGL
	Marksman	QBU-88	Nil
	ATGL	PF-89	QBZ-95
IFV Crew	Crew Cdr	QBZ-95B	Nil
	Gunner	QBZ-95B	Nil
	Driver	QBZ-95B	Nil

UNCLASSIFIED  
3-33

## Medium Brigade Reconnaissance Battalion

## Marine Recce Coy HQ Sect 2:22

1 x MV3 C3 Van  
2 x EQ2050 + TRL .5T  
2 x MV3 (6x6)  
2 x TRL 5T



### Mdm EW Coy 4:94

6 x DZ-9001 (MV3) ELINT  
2 x DZ-9300 (EQ2050) ELINT  
2 x CEW-03A ELINT  
2 x JN-1105 (EQ2050) Radio EW  
8 x EQ2050 + TRL .5T  
1 x MV3 (4x4)  
1 x TRL 1.5T  
3 x MV3 (6x6)  
3 x MV3 C3 Van  
3 x TRL 5T



### Armd Recce Coy 1:15

1 x EQ2050 + TRL .5T  
10 x CRV ZBL-09  
1 x MV3 (4x4)  
1 x TRL 1.5T  
Consists of:  
5 x SC Ptls



### LR Sensor PI 1:25

5 x EQ2050 + TRL .5T  
2 x HJ-62C GSR  
Consists of:  
2 x GSR SQD



### CSS PI (as per Lt Inf Bn)



### Lt UAV Coy 4:25

1 x EQ2050 + TRL .5T  
8 x CH-802 UAV  
8 x EQ2050 + TRL .5T  
2 x MV3 C3 Van  
2 x MV3 (4x4)  
2 x TRL 1.5T  
Consists of:  
2 x Lt UAV PI

## Medium Brigade Artillery Battalion

## Light Arty Bn HQ PL 3:12

1 x 1V15 COP  
1 x ACV Type-89  
1 x MV3 (6x6)  
1 x 1V16 FDC  
5 x EQ2050 + TRL .5T  
1 x TRL 5T



### SP Arty Bty x 3 5:100

6 x PLL-09 122mm SPH  
1 x 1V14 COP  
1 x 1V13 FDC  
9 x EQ2050 + TRL .5T  
4 x MV3 (4x4)  
3 x TRL 1.5T  
3 x MV3 Maint  
7 x MV3 (6x6)  
1 x TRL 5T  
1 x TRL Generator  
Consists of:  
1 x Bty HQ Sect (COP)  
1 x FDC PI  
2 x SP Arty PL  
1 x Maint Sect



### MRL Bty 5:100

6 x PHL-90B 122mm MRL  
1 x 1V14 COP  
1 x 1V13 FDC  
6 x BB2629 RKT Resup  
9 x EQ2050 + TRL .5T  
4 x MV3 (4x4)  
3 x TRL 1.5T  
3 x MV3 Maint  
1 x MV3 (6x6)  
1 x TRL 5T  
1 x TRL Generator  
Consists of:  
1 x Bty HQ Sect (COP)  
1 x FDC PI  
2 x MRL PL  
1 x Maint Sect



### Sigs PI 1:33

1 x ACV Type-89  
1 x MV3 C3 Van  
3 x EQ2050 + TRL .5T  
3 x MV3 (4x4)  
3 x TRL 1.5T  
3 x Motorcycle  
1 x TRL Generator  
Consists of:  
1 x Courier Sect  
1 x Radio Sect  
1 x Digital Team  
1 x Wire Sect

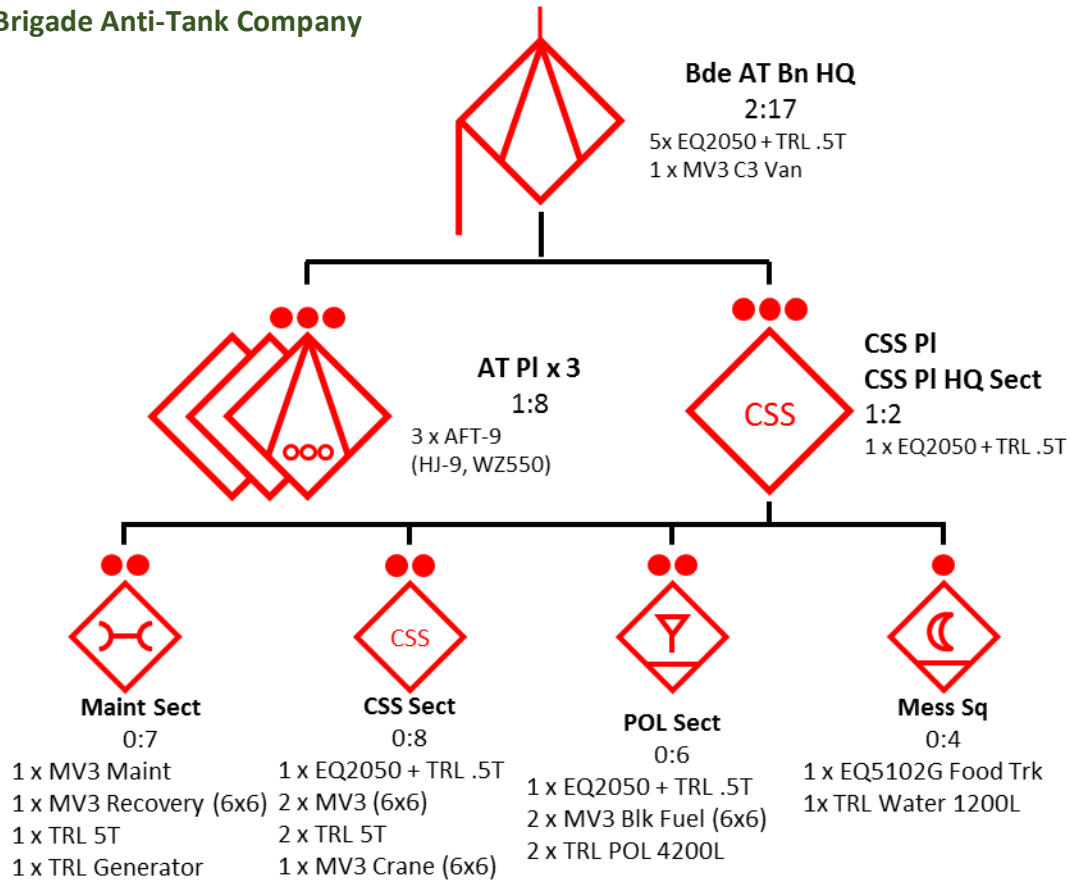


### CSS Coy 7:134

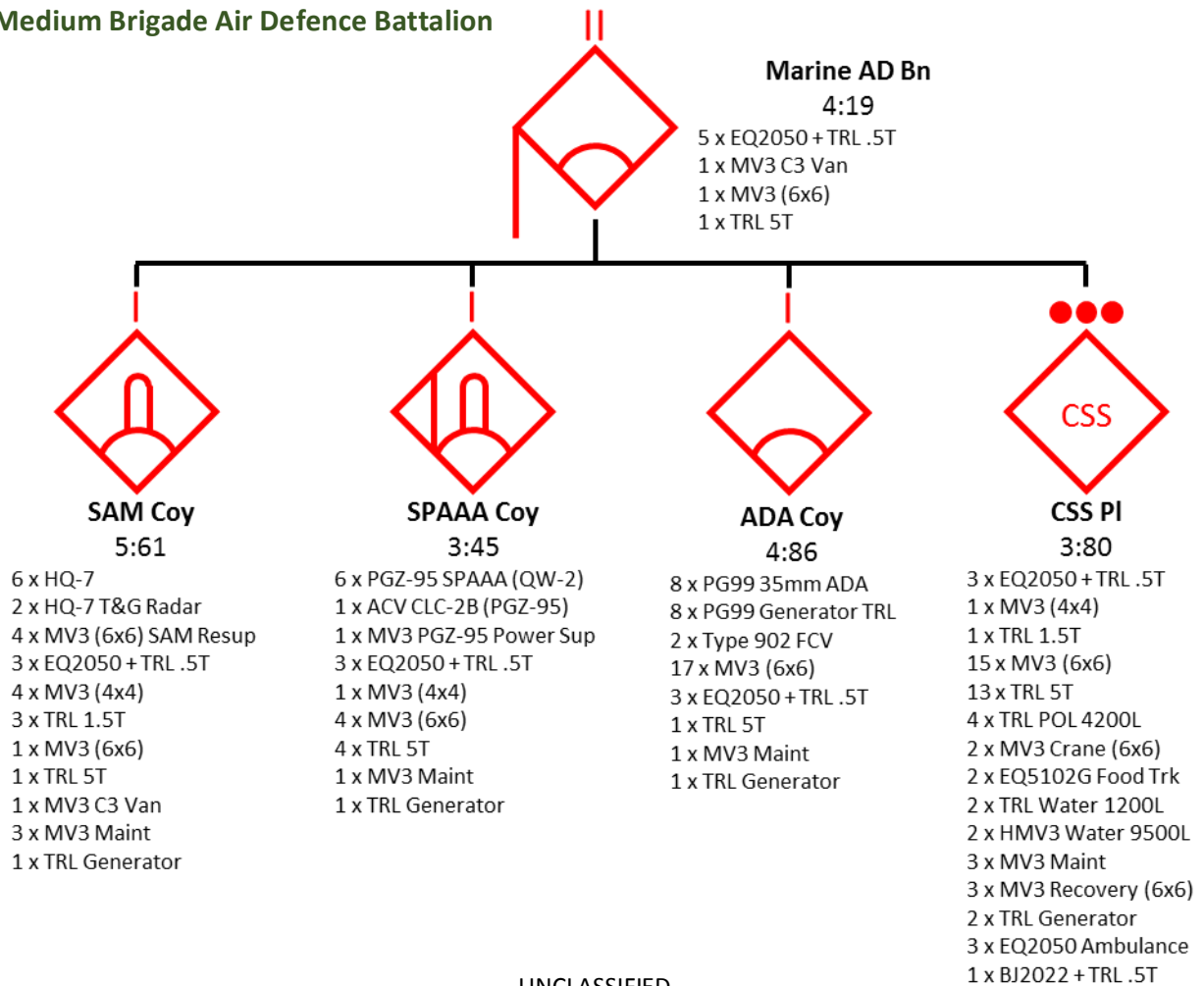
7 x EQ2050 + TRL .5T  
2 x MV3 (4x4)  
1 x TRL 1.5T  
14 x MV3 (6x6)  
15 x TRL 5T  
12 x MV3 Blk Fuel (6x6)  
12 x TRL POL 4200L  
3 x MV3 Maint  
3 x MV3 Recovery (6x6)  
2 x TRL Generator  
2 x EQ5102G Food Trk  
2 x HMOV3 Water 9500L  
2 x TRL Water 1200L  
1 x MV3 Crane (6x6)  
3 x EQ2050 Ambulance  
1 x BJ2022 + TRL .5T  
Consists of:  
1 x CS PI  
1 x Ammo PI  
1 x POL PI

UNCLASSIFIED

## Brigade Anti-Tank Company

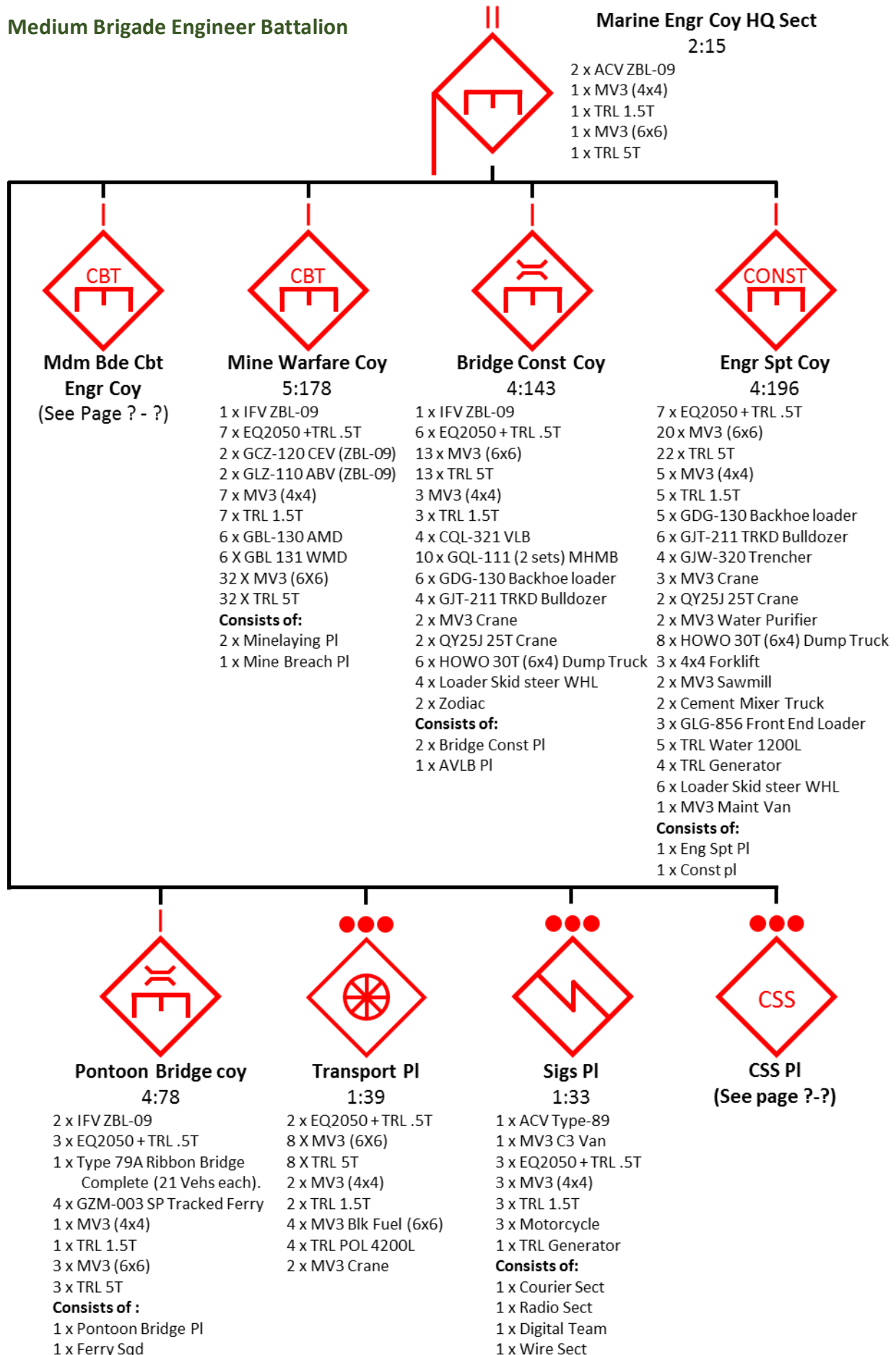


## Medium Brigade Air Defence Battalion



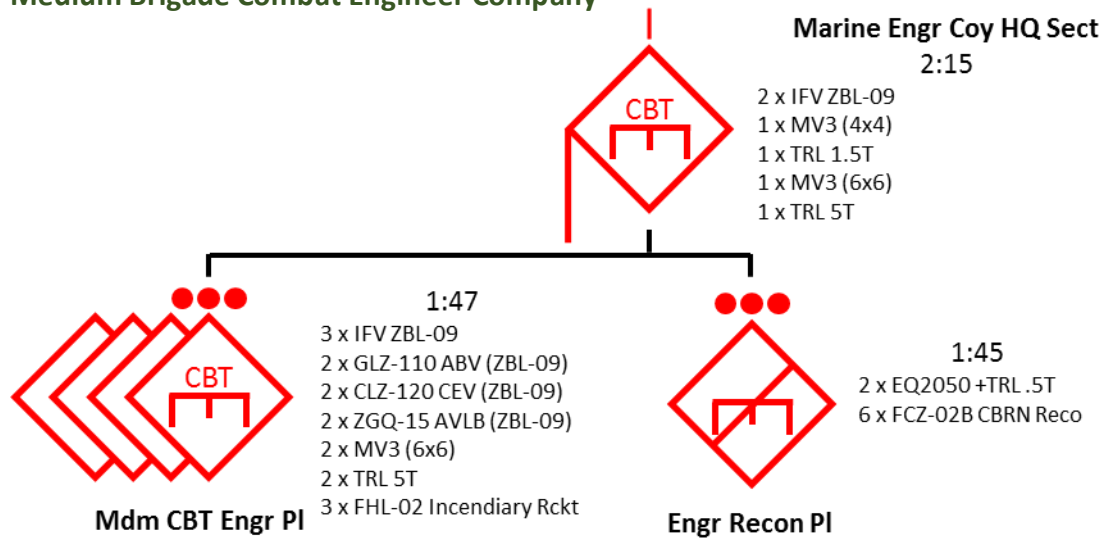
Medium Brigade Engineer Battalion

Marine Engr Coy HQ Sect  
2:15





## Medium Brigade Combat Engineer Company

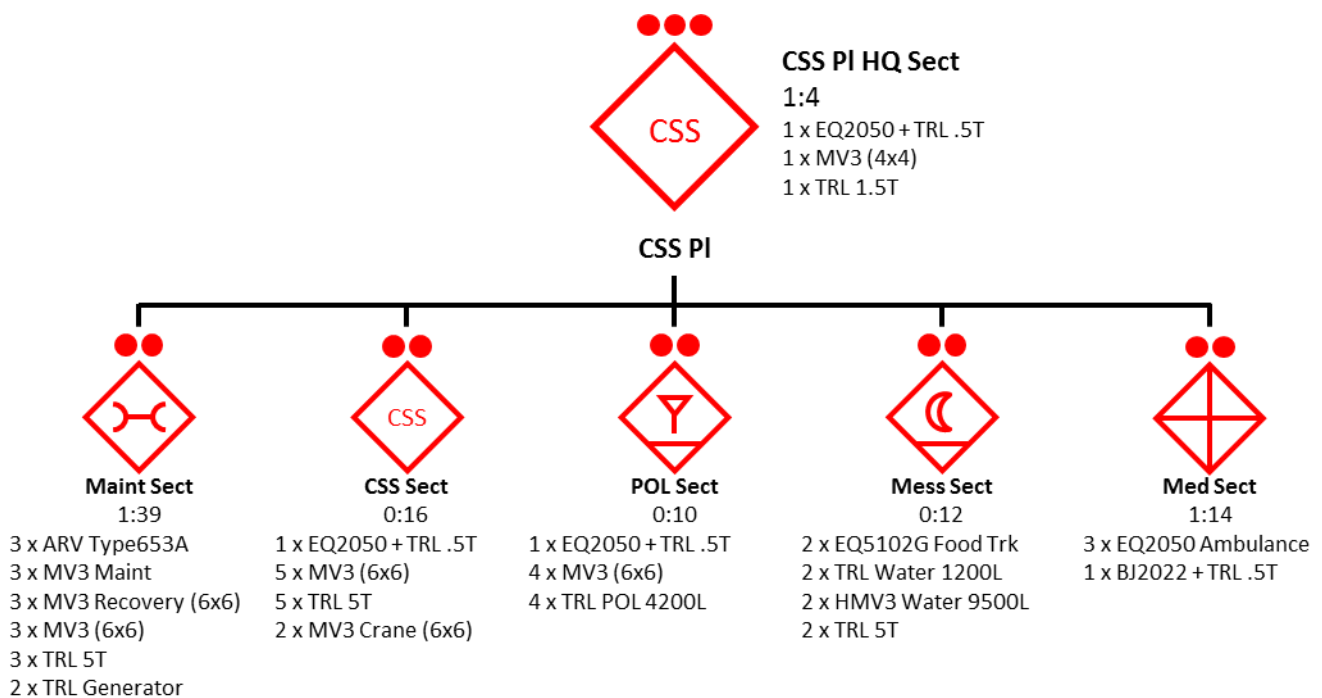


BDET CE Detachments are dedicated combat engineer platoons allocated by the BTG to each MVR BDET to provide habitual mobility support. They are organised and equipped to provide a baseline capability to each BDET to conduct tactical actions, with like mobility platforms (ie IFV FOV). They possess minimal counter-mobility and C3D capabilities, requiring augmentation from the BTG to generate these engineer effects.

Each BDET CE Detachment can constitute a Clearance Element organically with its Engineer Squads, ABVs, CEVs and AVLBs. This can generate sufficient capacity to conduct relatively simple mobility support missions (ie a situational breach against a hasty defensive position), however the BDET will likely be augmented with additional engineer capacity if designated as the BTGs ME and/or to conduct complex engineer support missions.

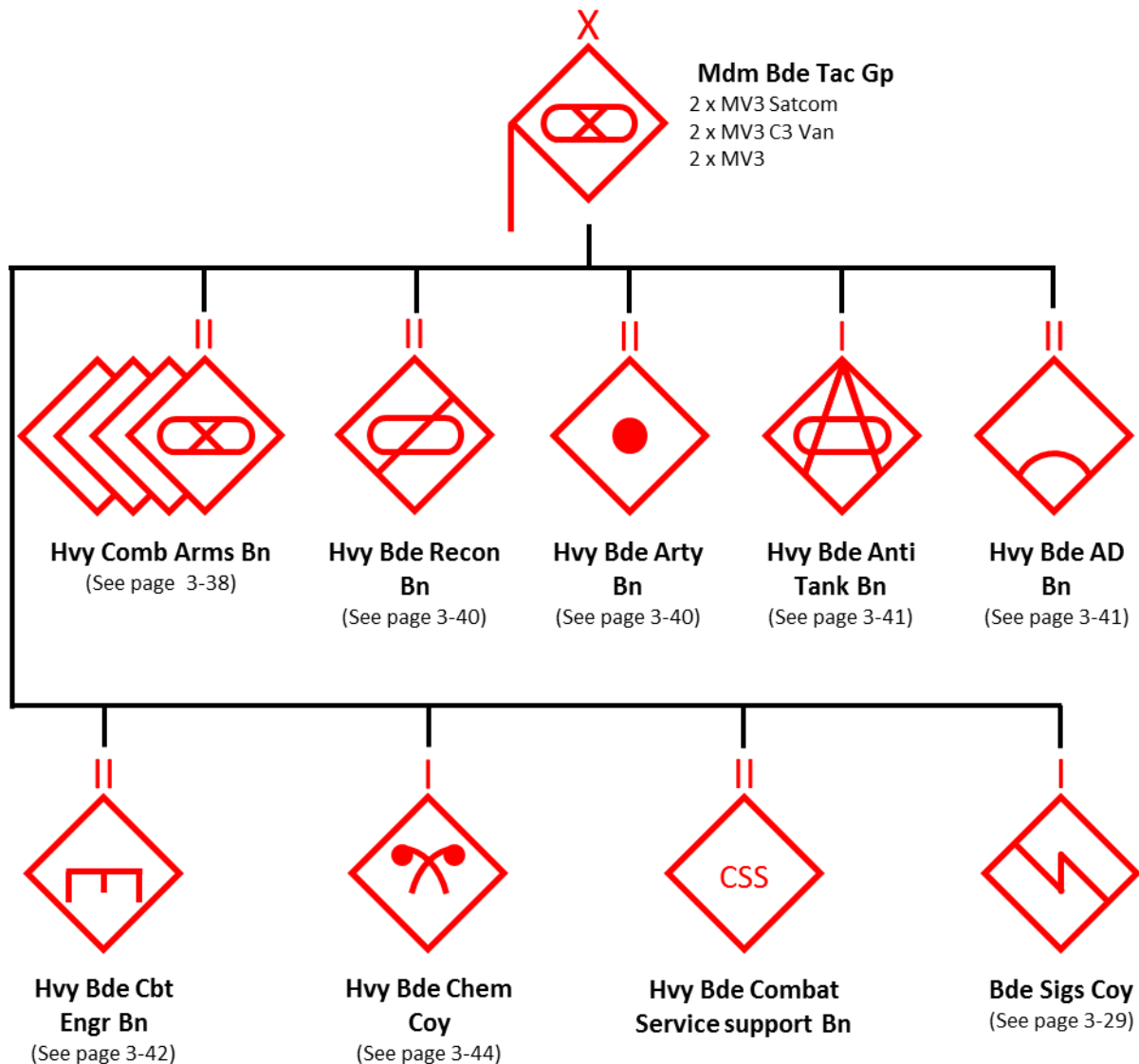
The BTG Engineer Battalion retains technical oversight of the employment of the BDET CE Detachments consequent of the Constituent relationship between the engineer organisations.

## Medium Brigade Engineer Battalion CSS Platoon





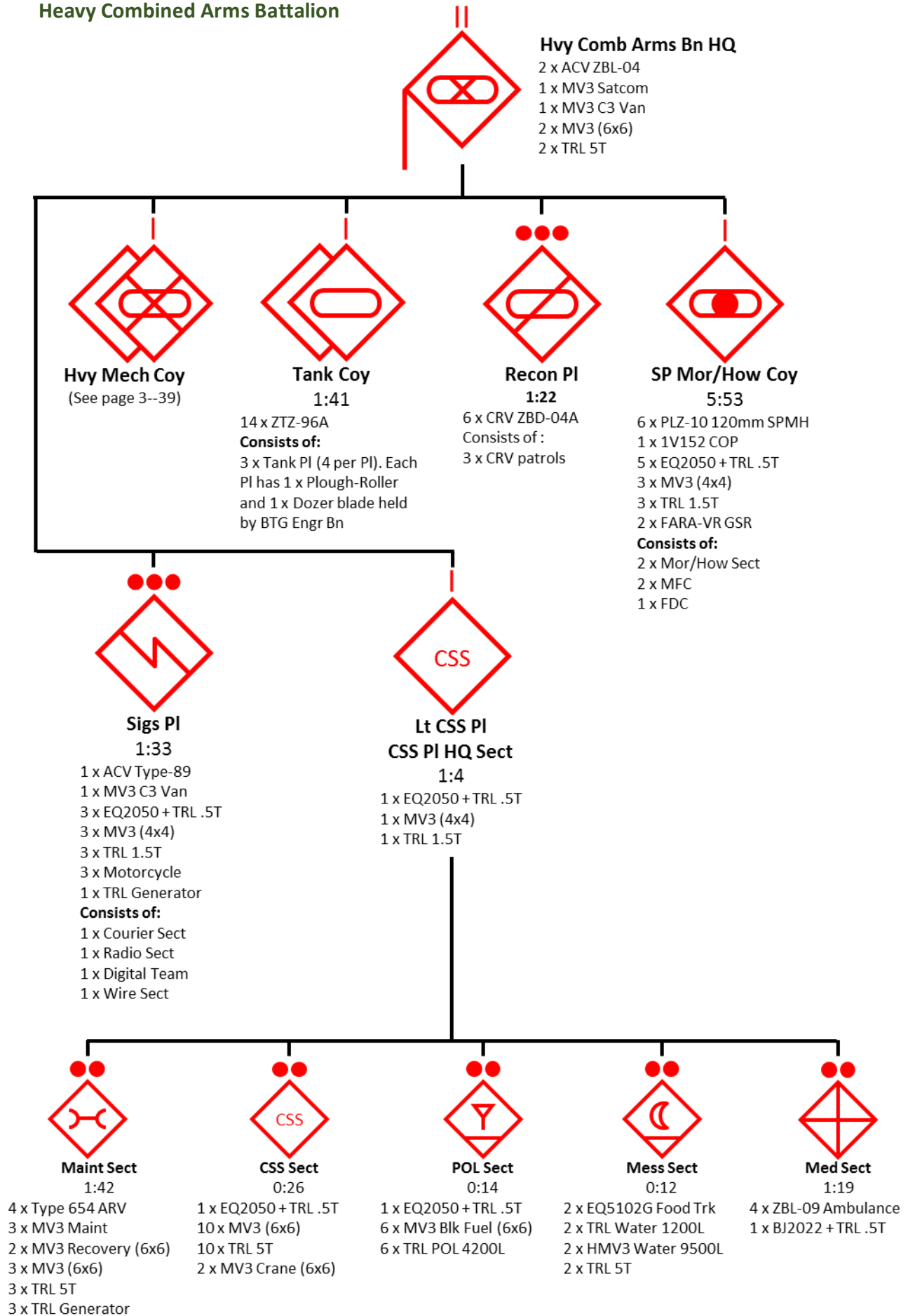
## Heavy Brigade Tactical Group



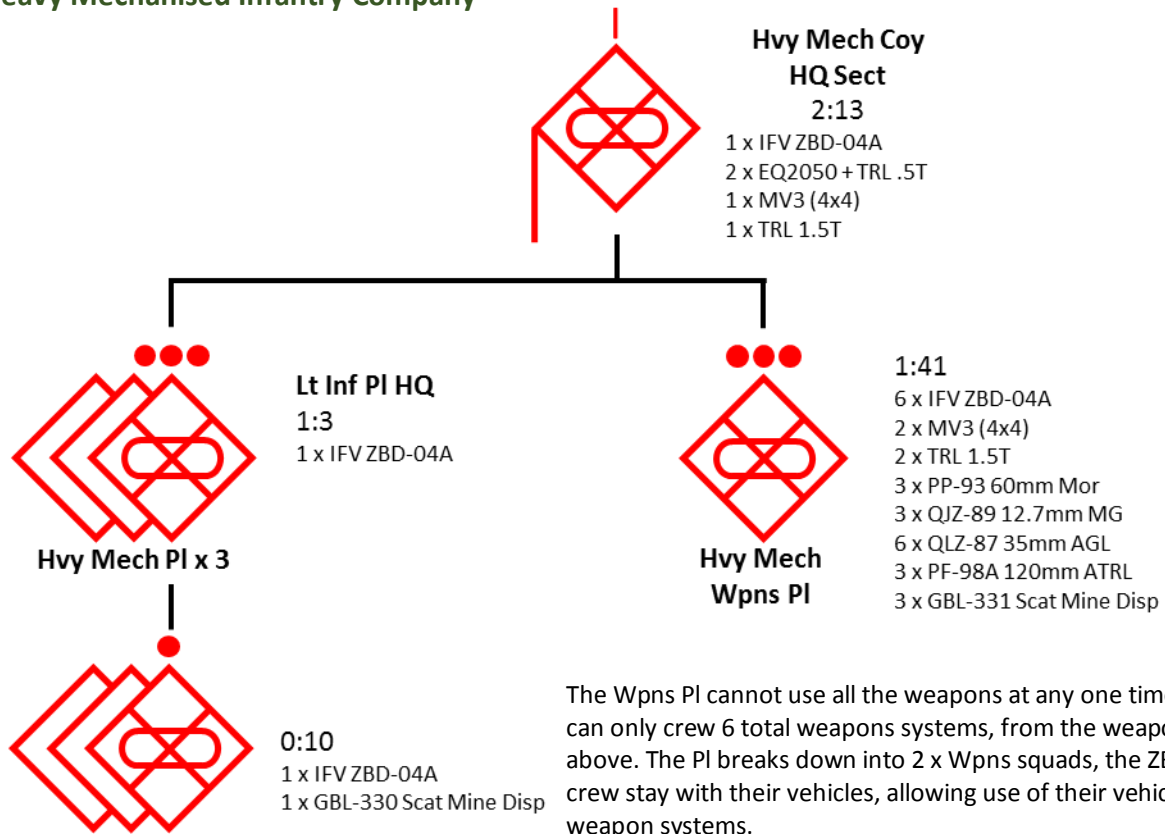
Heavy BTGs are based upon tracked vehicles that are heavily armoured. The Heavy BTG has excellent mobility, however, is not generally transportable by air. The Heavy BTG is based around having comparable mobility with the primary infantry fighting vehicle, ZBD-04A, and tank, ZTZ-96A.

Heavy BTGs are primarily based on armoured vehicles with infantry present in 50% of the manoeuvre forces. Heavy BTGs are powerful organisations, however, due to a reduced infantry presence, can have combat power mitigated in complex terrain. Due to the different types and the complexity of their platforms, Heavy BTGs have larger CSS footprints than Medium BTGs.

## Heavy Combined Arms Battalion



## Heavy Mechanised Infantry Company



Armoured infantry companies generally conduct one tactical task at a time. Armoured infantry companies can operate independently up to 15km forward of their battalion. They may be deployed as an Exploitation or Disruption element, or as a Main Guard in a battalion advance. They will need to be supported by a fires unit if they do this.

When used in offence, Armoured infantry Companies will generally follow tanks.

In defensive operations, Armoured infantry Companies will form the core of the SBP/CBP as the Main Defence Element, allowing the Tank Companies to be the Shielding element or reserve.

Armoured Inf Squad			
	Position	Primary Wpn	Secondary Wpn
FT1	Section Cdr	QBZ-95	TBR-002 VHF Transceiver
	Gunner	QBB-95	Nil
	Rifleman	QBZ-95	FHJ-84 if issued
	Grenadier	QBZ-95	QLG-10 UBGL
FT2	Grenadier/2IC	QBZ-95	QLG-10 UBGL
	Marksman	QBU-88	Nil
	ATGL	PF-89A	QBZ-95
IFV Crew	Crew Cdr	QBZ-95B	Nil
	Gunner	QBZ-95B	Nil
	Driver	QBZ-95B	Nil

UNCLASSIFIED  
3-40

## Heavy Brigade Reconnaissance Battalion

### Marine Recce Coy HQ Sect

2:22

1 x MV3 C3 Van  
2 x EQ2050 + TRL .5T  
2 x MV3 (6x6)  
2 x TRL 5T



**EW Coy**  
4:94

6 x DZ-9001 (MV3) ELINT  
2 x DZ-9300 (EQ2050) ELINT  
2 x CEW-03A ELINT  
2 x JN-1105 (EQ2050) Radio EW  
8 x EQ2050 + TRL .5T  
1 x MV3 (4x4)  
1 x TRL 1.5T  
3 x MV3 (6x6)  
3 x MV3 C3 Van  
3 x TRL 5T



**Armd Recce Coy**  
1:45

1 x EQ2050 + TRL .5T  
10 x CRV ZBD-04A  
1 x MV3 (4x4)  
1 x TRL 1.5T  
**Consists of:**  
5 x CRV Ptls



**LR Sensor PI**  
1:25

5 x EQ2050 + TRL .5T  
2 x HJ-62C GSR  
**Consists of:**  
2 x GSR SQD



**CSS PI**  
(as per Lt Inf Bn)



**Lt UAV Coy**  
4:25

1 x EQ2050 + TRL .5T  
8 x CH-802 UAV  
8 x EQ2050 + TRL .5T  
2 x MV3 C3 Van  
2 x MV3 (4x4)  
2 x TRL 1.5T  
**Consists of:**  
2 x Lt UAV PI

## Heavy Brigade Artillery Battalion

### Light Arty Bn HQ PL

3:12

1 x 1V15 COP  
1 x ACV Type-89  
1 x MV3 (6x6)  
1 x 1V16 FDC  
5 x EQ2050 + TRL .5T  
1 x TRL 5T



**SP Arty Bty x 3**  
5:100

6 x PLZ-07A 122mm SPH  
1 x 1V14 COP  
1 x 1V13 FDC  
9 x EQ2050 + TRL .5T  
4 x MV3 (4x4)  
3 x TRL 1.5T  
3 x MV3 Maint  
7 x MV3 (6x6)  
1 x TRL 5T  
1 x TRL Generator  
**Consists of:**  
1 x Bty HQ Sect (COP)  
1 x FDC PI  
2 x SP Arty PL  
1 x Maint Sect



**MRL Bty**  
5:100

6 x PHZ-89 122mm MRL  
1 x 1V14 COP  
1 x 1V13 FDC  
6 x BB2629 RKT Resup  
9 x EQ2050 + TRL .5T  
4 x MV3 (4x4)  
3 x TRL 1.5T  
3 x MV3 Maint  
1 x MV3 (6x6)  
1 x TRL 5T  
1 x TRL Generator  
**Consists of:**  
1 x Bty HQ Sect (COP)  
1 x FDC PI  
2 x MRL PL  
1 x Maint Sect



**Sigs PI**  
1:33

1 x ACV Type-89  
1 x MV3 C3 Van  
3 x EQ2050 + TRL .5T  
3 x MV3 (4x4)  
3 x TRL 1.5T  
3 x Motorcycle  
1 x TRL Generator  
**Consists of:**  
1 x Courier Sect  
1 x Radio Sect  
1 x Digital Team  
1 x Wire Sect



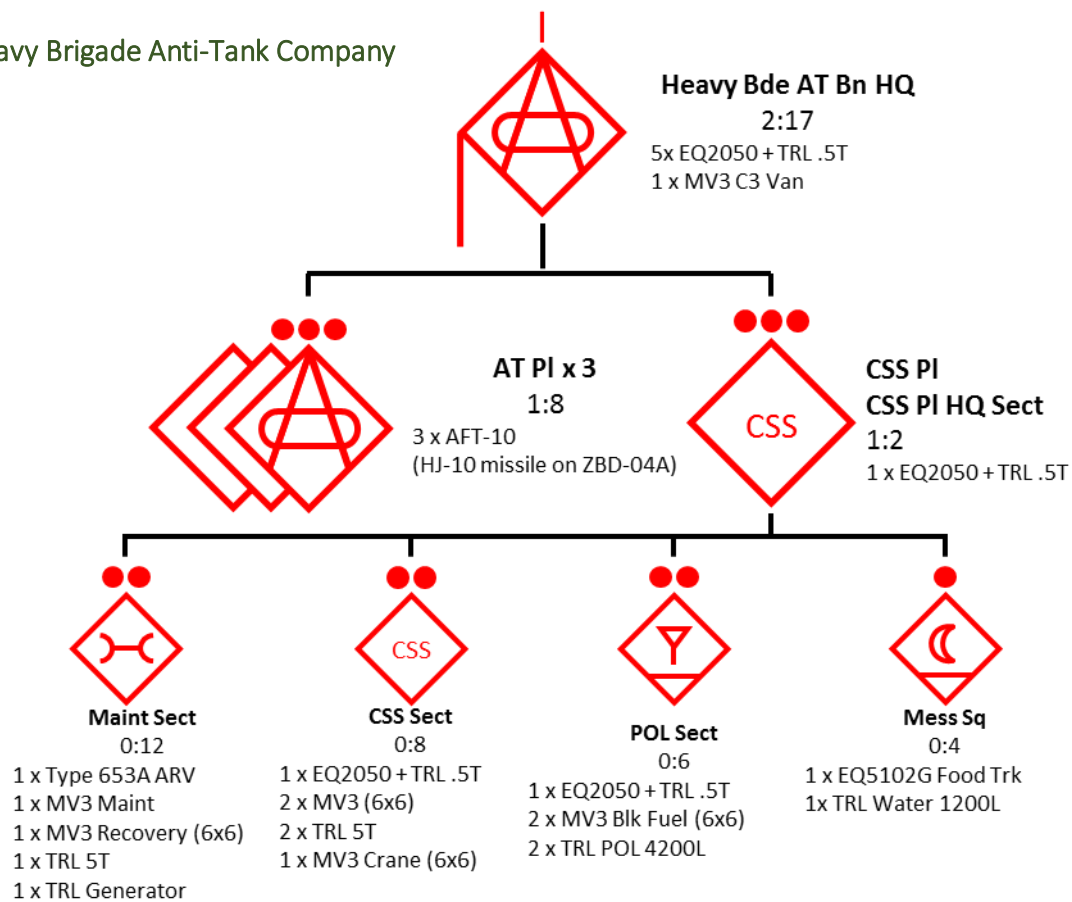
**CSS Coy**  
7:149

7 x EQ2050 + TRL .5T  
2 x MV3 (4x4)  
1 x TRL 1.5T  
14 x MV3 (6x6)  
15 x TRL 5T  
12 x MV3 Blk Fuel (6x6)  
12 x TRL POL 4200L  
3 x MV3 Maint  
3 x MV3 Recovery (6x6)  
3 x Type 653A ARV  
2 x TRL Generator  
2 x EQ5102G Food Trk  
2 x HNV3 Water 9500L  
2 x TRL Water 1200L  
1 x MV3 Crane (6x6)  
3 x EQ2050 Ambulance  
1 x BJ2022 + TRL .5T  
**Consists of:**  
1 x CS PI  
1 x Ammo PI  
1 x POL PI

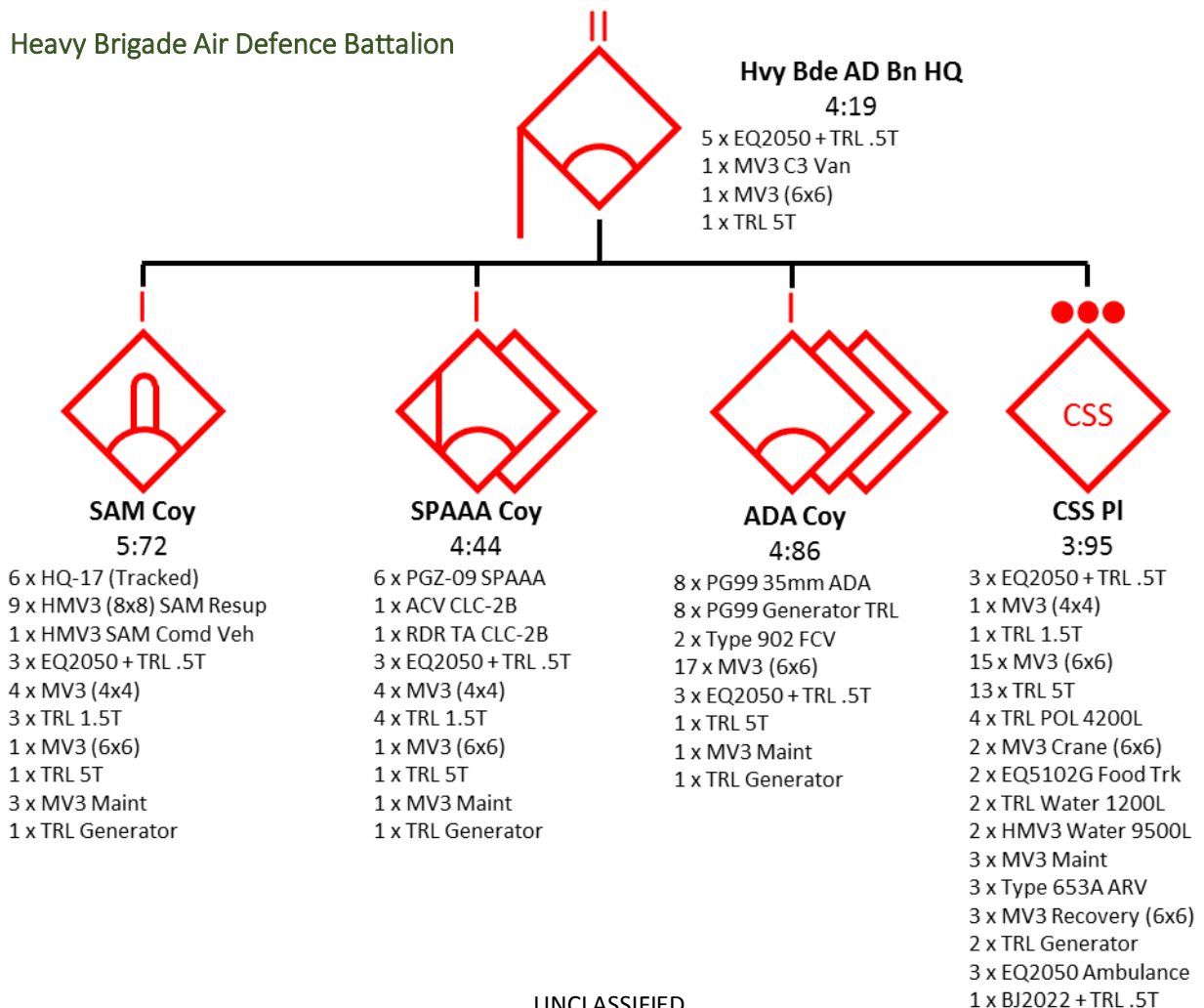
UNCLASSIFIED

UNCLASSIFIED  
3-41

## Heavy Brigade Anti-Tank Company



## Heavy Brigade Air Defence Battalion



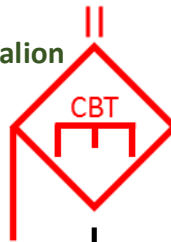
UNCLASSIFIED

UNCLASSIFIED  
3-42

## Heavy Brigade Combat Engineer Battalion

### Hvy Bde Engr Coy HQ Sect

2:15



2 x ACV ZBD-04A  
1 x MV3 (4x4)  
1 x TRL 1.5T  
1 x MV3 (6x6)  
1 x TRL 5T



### Mdm Bde Cbt Engr Coy (See Page ? - ?)



### Bridge Const Coy 4:143

1 x IFV ZBD-04A  
6 x EQ2050 + TRL .5T  
13 x MV3 (6x6)  
13 x TRL 5T  
3 MV3 (4x4)  
3 x TRL 1.5T  
2 x HZ-24 VLB  
2 x HZ-51M VLB  
10 x GQL-111 (2 sets) MHMB  
6 x GDG-130 Backhoe loader  
4 x GJT-211 TRKD Bulldozer  
2 x MV3 Crane  
2 x QY25J 25T Crane  
6 x HOWO 30T (6x4) Dump Truck  
4 x Loader Skid steer WHL  
2 x Zodiac  
**Consists of:**  
2 x Bridge Const Pl  
1 x VLB Pl



### Pontoon Bridge coy 4:78

2 x IFV ZBD-04A  
3 x EQ2050 + TRL .5T  
1 x Type 79A Ribbon Bridge  
Complete (21 Vehs each).  
8 x GZM-003 SP Tracked Ferry  
GLM-120A Roadway layer  
GCZ-110 AEV/ARV  
1 x MV3 (4x4)  
1 x TRL 1.5T  
3 x MV3 (6x6)  
3 x TRL 5T  
**Consists of:**  
1 x Pontoon Bridge Pl  
1 x Ferry Pl  
1 x Mobility Spt Pl



### Engr Spt Coy 4:196

7 x EQ2050 + TRL .5T  
20 x MV3 (6x6)  
22 x TRL 5T  
5 x MV3 (4x4)  
5 x TRL 1.5T  
5 x GDG-130 Backhoe loader  
6 x GJT-211 TRKD Bulldozer  
4 x GJW-320 Trencher  
3 x MV3 Crane  
2 x QY25J 25T Crane  
2 x MV3 Water Purifier  
8 x Dump Truck  
3 x 4x4 Forklift  
2 x MV3 Sawmill  
2 x Cement Mixer Truck  
3 x GLG-856 Front End Loader  
5 x TRL Water 1200L  
4 x TRL Generator  
6 x Loader Skid steer WHL  
1 x MV3 Maint Van  
**Consists of:**  
1 x Eng Spt Pl  
1 x Const pl



### Mine Warfare Coy 5:176

1 x IFV ZBD-04A  
7 x EQ2050 + TRL .5T  
4 x GSL-130 ABV  
7 x MV3 (4x4)  
7 x TRL 1.5T  
9 x GBL-130 AMD  
3 x GBL 131 WMD  
32 x MV3 (6x6)  
32 x TRL 5T  
**Consists of:**  
2 x Minelaying Pl  
1 x Mine Breach Pl



### Transport Pl 1:45

2 x EQ2050 + TRL .5T  
8 x MV3 (6x6)  
8 x TRL 5T  
2 x MV3 (4x4)  
2 x TRL 1.5T  
4 x MV3 Blk Fuel (6x6)  
4 x TRL POL 4200L  
14 x MV3 Crane  
6 x ZTZ Plough/roller  
6 x ZTZ Dozer Blade  
(ZTZ attachments 1 each per  
tank Pl transported and  
attached by MV3 Crane)



### Sigs Pl 1:33

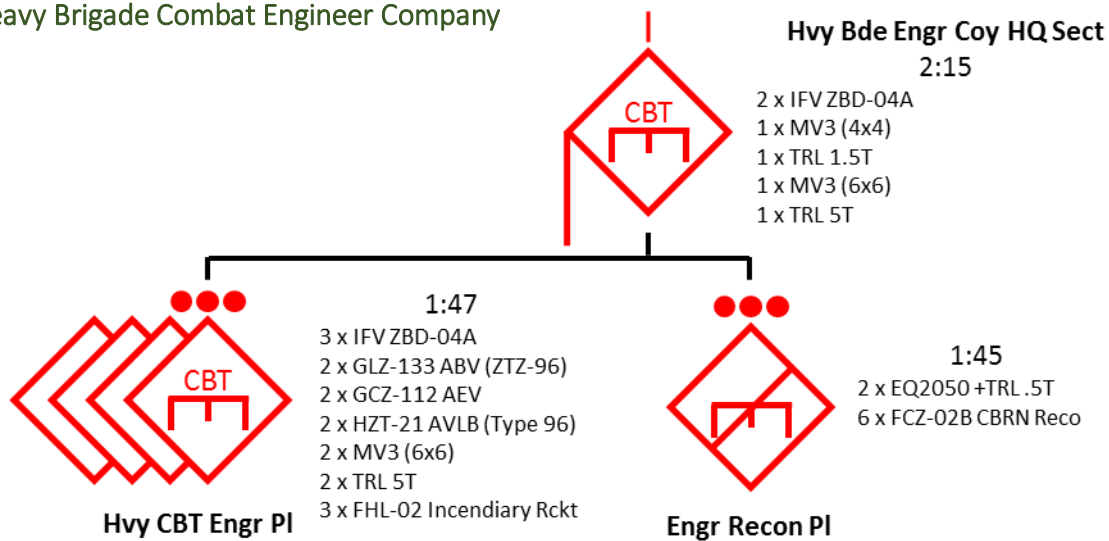
1 x ACV Type-89  
1 x MV3 C3 Van  
3 x EQ2050 + TRL .5T  
3 x MV3 (4x4)  
3 x TRL 1.5T  
3 x Motorcycle  
1 x TRL Generator  
**Consists of:**  
1 x Courier Sect  
1 x Radio Sect  
1 x Digital Team  
1 x Wire Sect



### CSS Pl (See page ?-?)

UNCLASSIFIED

## Heavy Brigade Combat Engineer Company

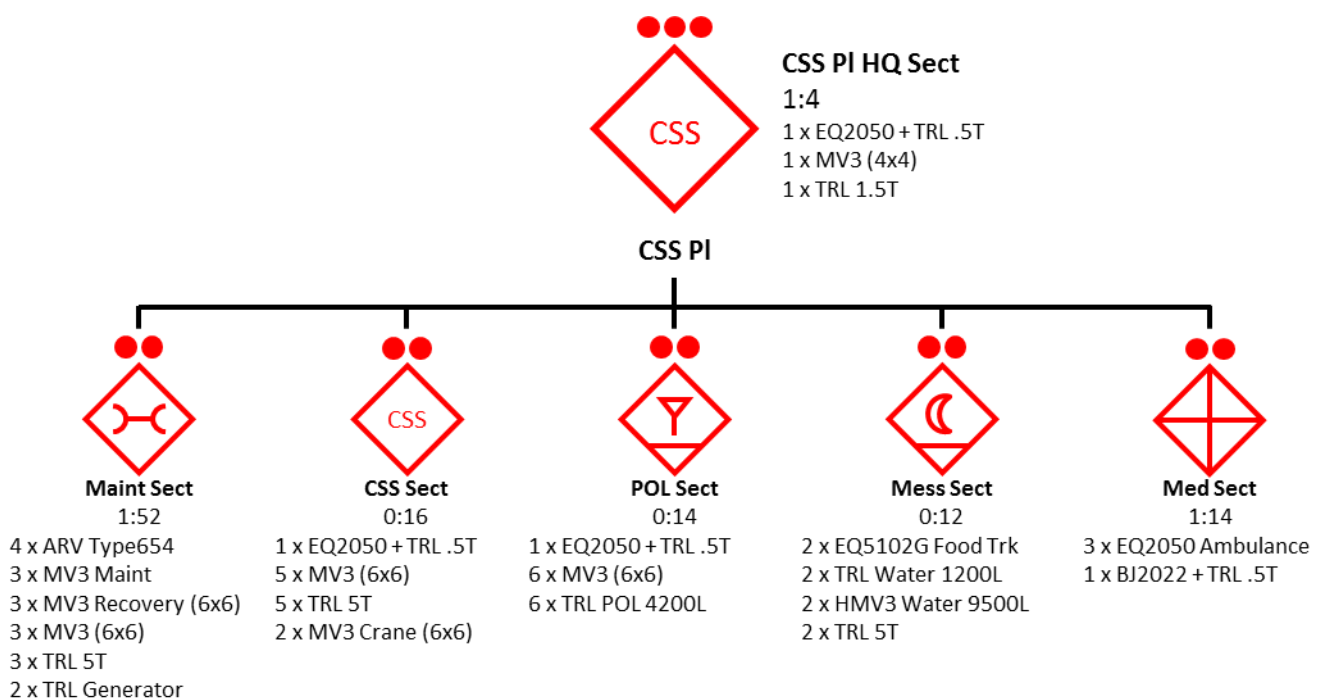


BDET CE Detachments are dedicated combat engineer platoons allocated by the BTG to each MVR BDET to provide habitual mobility support. They are organised and equipped to provide a baseline capability to each BDET to conduct tactical actions, with like mobility platforms (ie IFV FOV). They possess minimal counter-mobility and C3D capabilities, requiring augmentation from the BTG to generate these engineer effects.

Each BDET CE Detachment can constitute a Clearance Element organically with its Engineer Squads, ABVs, CEVs and AVLBs. This can generate sufficient capacity to conduct relatively simple mobility support missions (iea situational breach against a hasty defensive position), however the BDET will likely be augmented with additional engineer capacity if designated as the BTGs ME and/or to conduct complex engineer support missions.

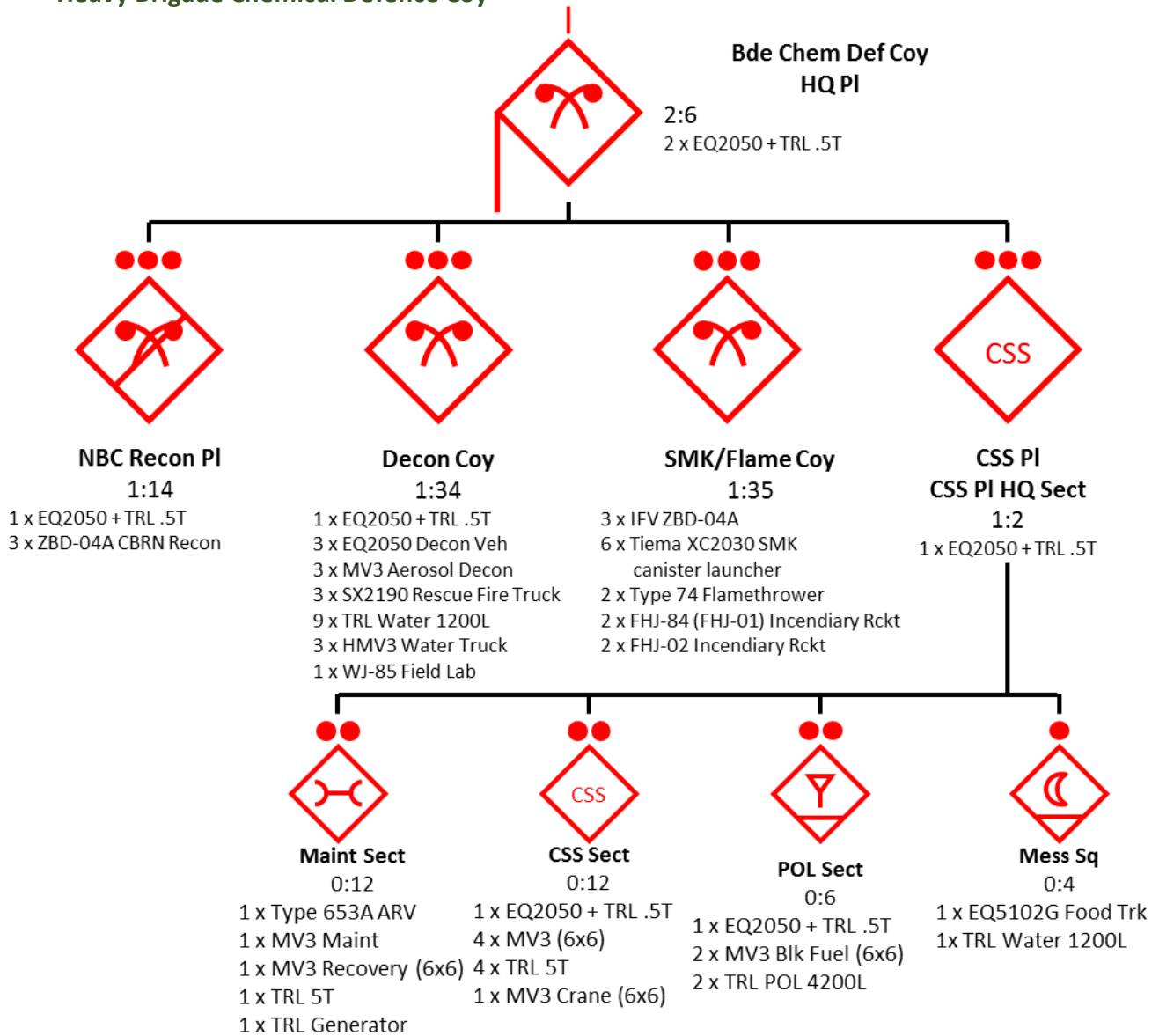
The BTG Engineer Battalion retains technical oversight of the employment of the BDET CE Detachments consequent of the Constituent relationship between the engineer organisations.

## Heavy Brigade Combat Engineer Battalion CSS Platoon





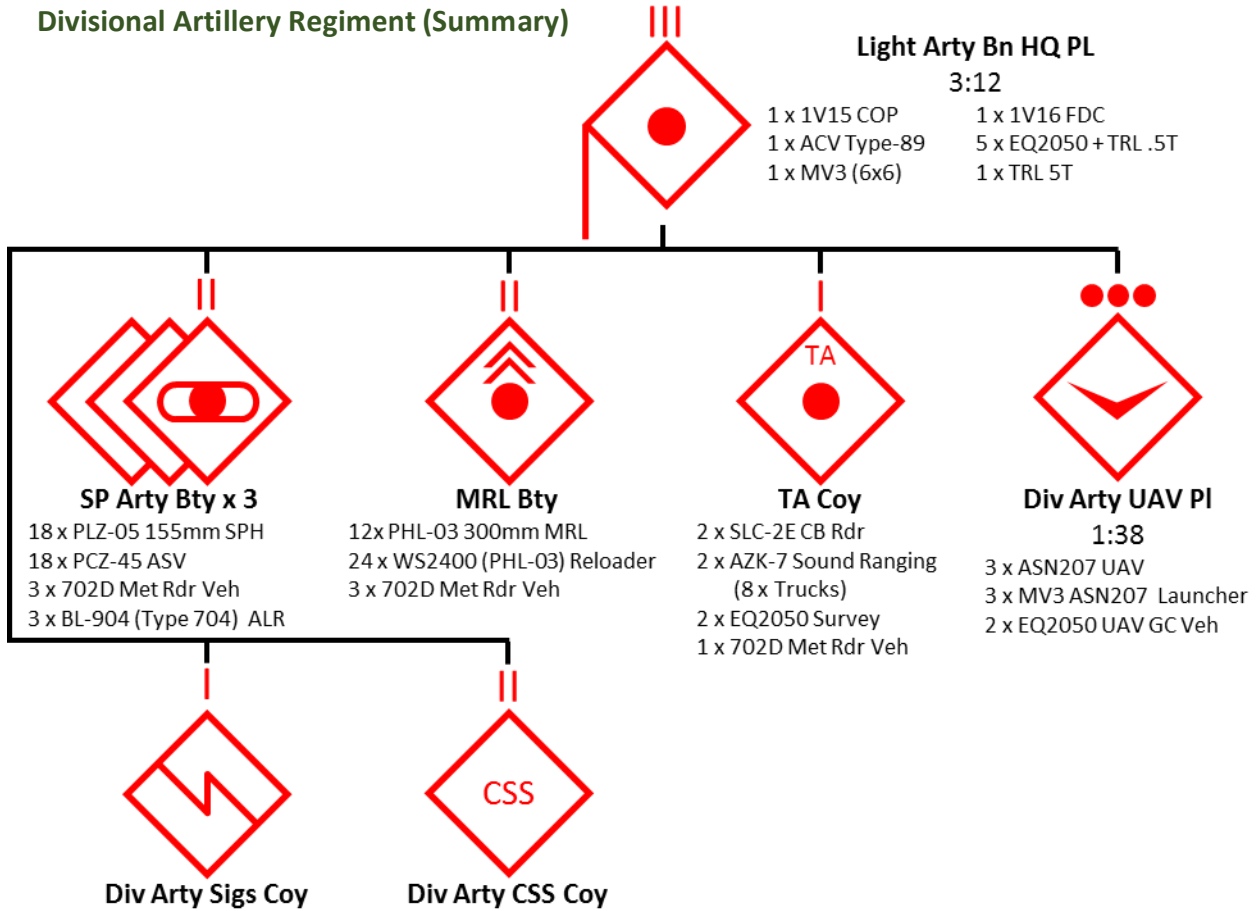
## Heavy Brigade Chemical Defence Coy



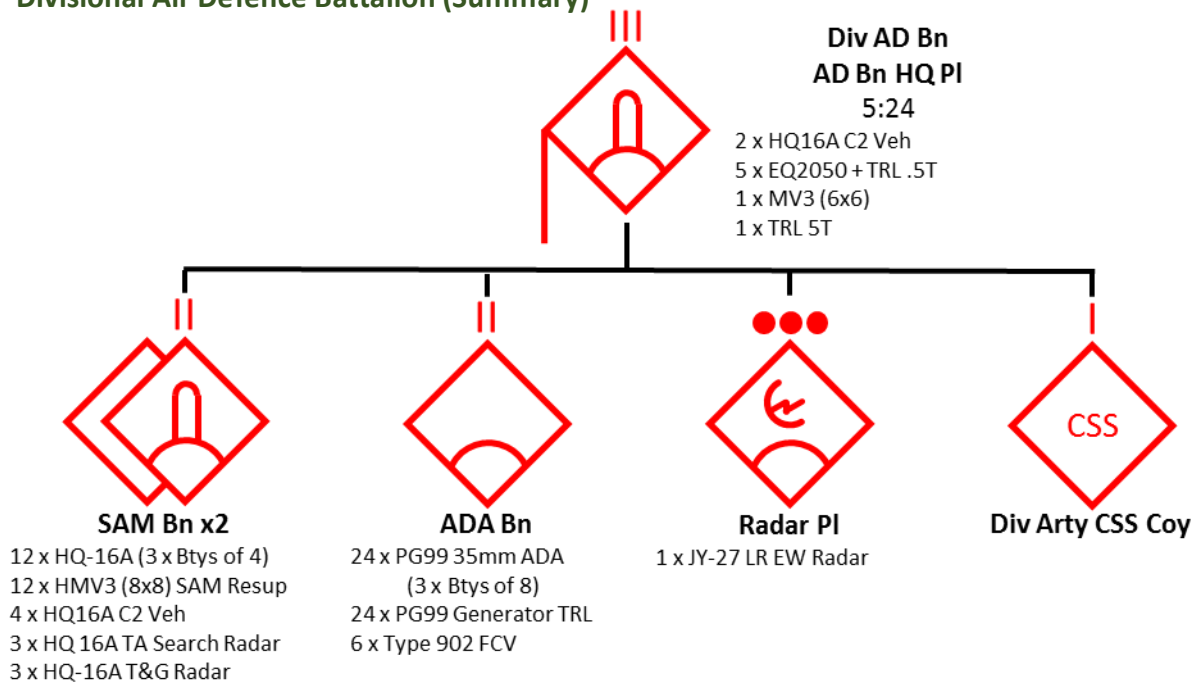


UNCLASSIFIED  
3-45

### Divisional Artillery Regiment (Summary)

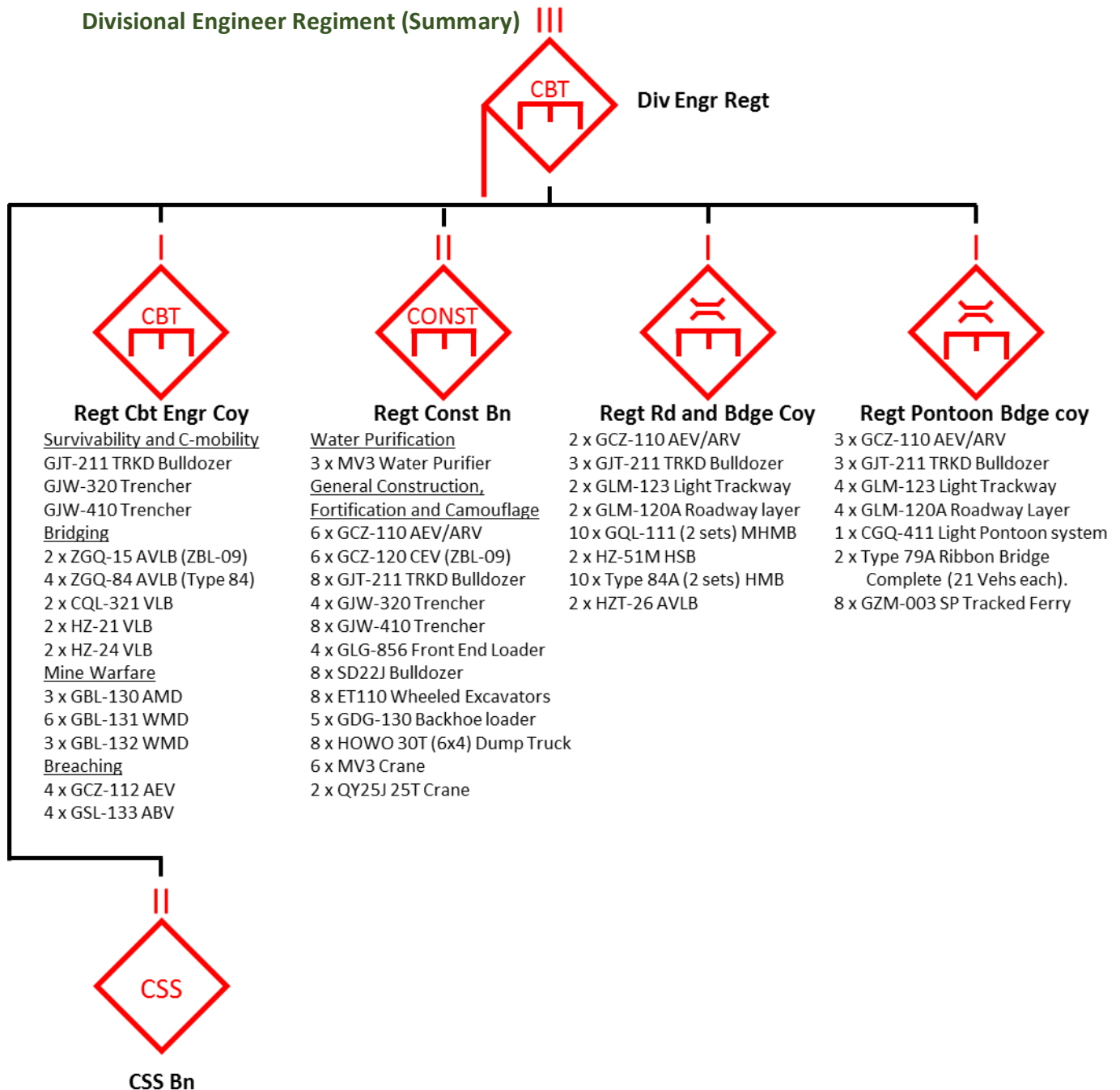


### Divisional Air Defence Battalion (Summary)



UNCLASSIFIED

## Divisional Engineer Regiment (Summary) III



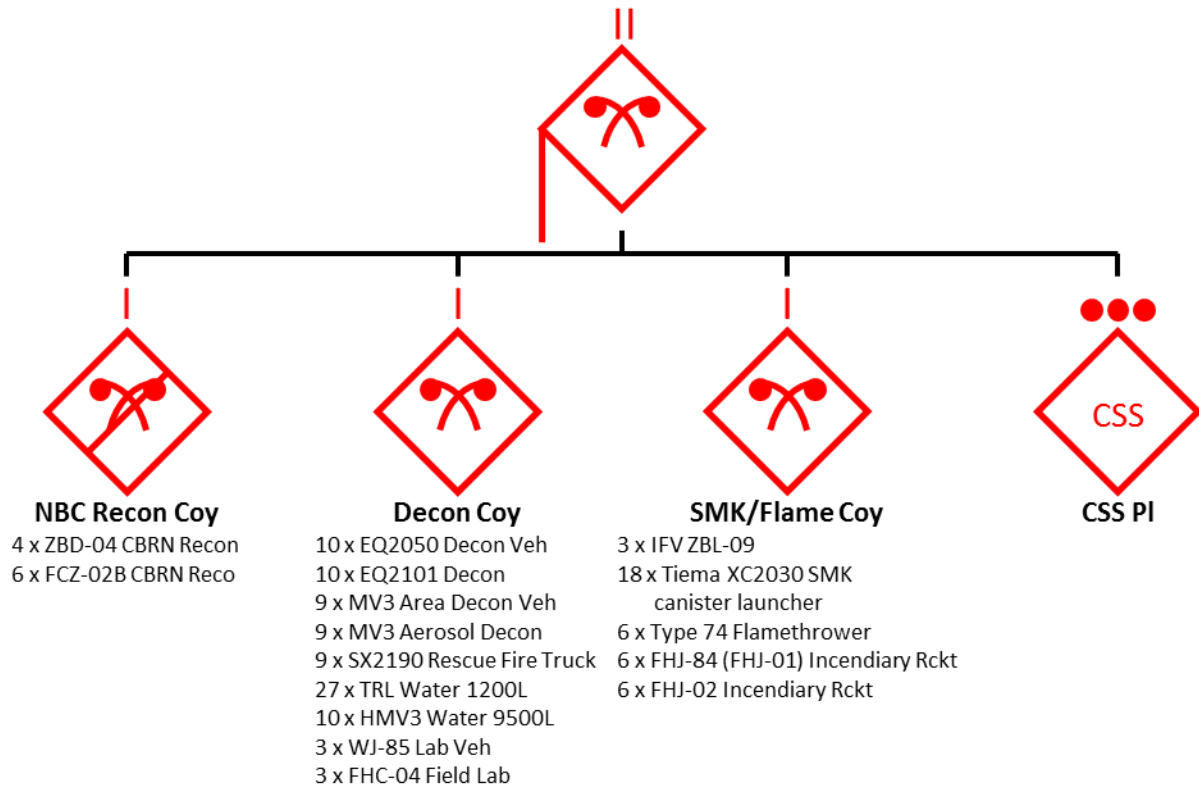
The Engineer and Chemical Defence Regiment provides general engineering, protection and obscurity functions across the DTGAOR. This can be directly to DTGCS and CSS formations, or through the reinforcement of BTG engineering capacity with additional assets. It can generate discreet MSDs or ODs ISO DTG reserve units and DTG echelon movement and manoeuvre.

The Combat Engineer Company is equipment centric, providing additional capacity to reinforce BTG engineer support missions. It may generate discreet MSDs and ODs ISO DTG reserves.

The Construction Battalion conducts water purification and C3D missions to sustain the DTG and harden its service support formations. Its digging equipment may reinforce BTG engineers, and/or augment DTG ODs. The Road and Bridge Company contains additional mechanised bridging equipment and semi-permanent girder bridges to sustain DTG GLoCs. It may constitute an MSD ISO DTG movement.

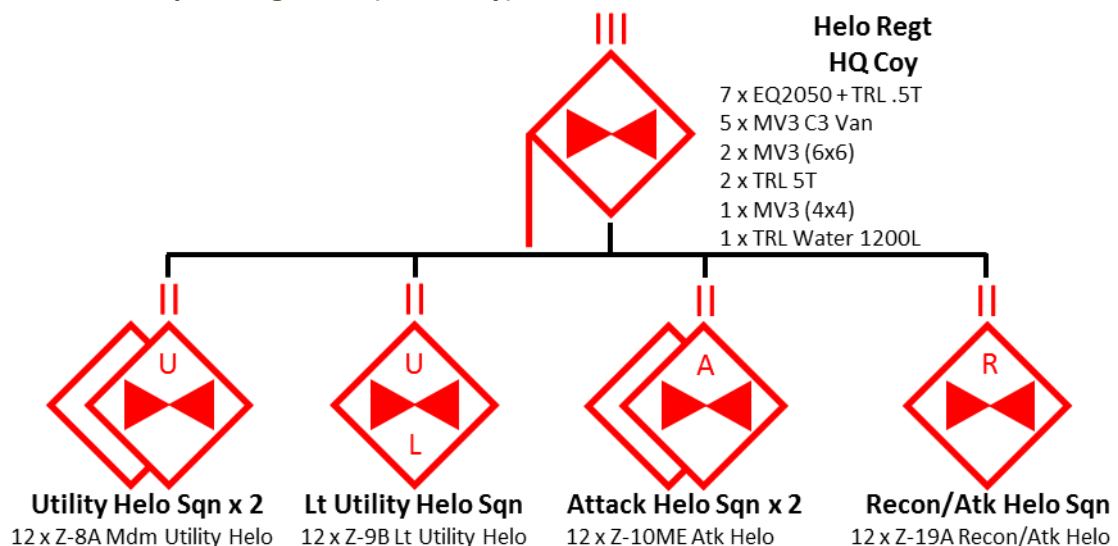
The Pontoon Bridge Company contains additional pontoon bridging and self-propelled ferries to increase wet gap crossing capacity. It likely reinforces BTG engineer support missions, or augments DTG MSDs.

### Divisional Chemical Defence Battalion (Summary)













Smoke and Chemical Defence Battalion includes a technical sampling and analysis capability. Its smoke generators likely reinforce BTG engineers, while its chemical defence capability is retained ISO the DTGMB.

### Divisional Helicopter Regiment (summary)













## Chapter 4 Equipment Characteristics

The OPFOR are equipped with an extensive range of equipment and weapon systems, the majority of which are of Chinese origin.









Designation	Type	Wpn/Cal	Range	Symbol	Located	Remarks	Image
Small Arms and Direct Fire Weapons							
<b>QSZ-92</b>	Semi-Automatic Pistol	5.8 x 21mm (Pistol)	25m EFF 50m MAX		- Only pistol used throughout OPFOR	- Can be fitted with a QUS181 Suppressor detachable - Uses 20 rnd box magazines	
<b>QBZ-95</b>	Assault Rifle	5.8mm	400m EFF 600m MAX		- Standard rifle used throughout OPFOR	- Suppressor is detachable - Uses 30 rnd box magazines - 930 m/s muzzle velocity	
<b>QBZ-95B</b>	Carbine Assault Rifle	5.8mm	300m EFF 500m MAX		- Primary assault rifle for Mech Inf Squad crew and Lt Inf Coy drivers	- Uses 30 rnd box magazines - 790 m/s muzzle velocity	
<b>QBU-88</b>	Marksman Rifle	5.8mm	600m EFF 800m MAX		- Primary marksman rifle for OPFOR	- Uses 10 rnd box magazines - Telescopic sights - Flash suppressor fitted to reduce muzzle signature	
<b>QBU-10</b>	Anti-Material Rifle	12.7mm	1000m EFF person 1500m EFF Veh 2000m MAX		- Weapons Pl, Marine Mech Bn	- Semi-automatic rate of fire - Uses 5 rnd box magazines - YMA09 scope with integrated ballistic computer & laser range finder - QMH-151A daylight/thermal scope	

UNCLASSIFIED  
4-49







Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>QBB-95</b> <b>(QJB-95)</b> LMG	Light Machine Gun	5.8mm	600m EFF 800m MAX		- Used throughout OPFOR as a squad automatic weapon	- Uses 75 rnd drum magazines - Can use 30 rnd box magazines from QBZ-95 series weapons.	
<b>TYPE 80</b> GPMG	General Purpose Machine Gun	7.62mm	1000m EFF 1500m MAX		- Used as a coaxial weapon system for vehicles throughout OPFOR.	- Rate of fire: 700/800 rpm - Belt-fed from 100, 200 or 250 rd boxes - Open sights - Optical/Night vision scope can be outfitted	
<b>QJZ-89</b> HMG	Heavy Machine Gun	12.7mm	1500m EFF 2000m MAX		- Lt Inf Wpns Pl Lt Inf Coy - Mdm Mech Wpns Pl, Med Mech Inf Coy - Heavy Mech Wpns Pl - Roof mounted AAMG/self-defence weapon for some OPFOR vehicles.	- 450-600 rds/min - Total length is 2119mm Iron, Optical & Night vision sights - Belt-fed with 50 rnd container box - Armour Piercing Discarding Sabot (APDS) ammo - Anti-Aircraft capability	
<b>Type 74</b>	Flame thrower	4L Gas Cylinder 14.5mm flame gun calibre	45m MAX		- SMK/Flame Coy, MEF Div Chem Def Bn - SMK/Flame Pl, Bde Chem Def Coy	- Has 2 canisters, one shot per canister - Must be used in the prone position - Expulsion time: 2-3 seconds per cylinder. - Reloading time 2-3 mins	
<b>QLG-10A</b>	Grenade Launcher	35 mm	400m EFF		- Used as Squad UBGL throughout OPFOR	- Under barrel grenade launcher - Designed for QBZ-95 assault rifles - Single shot system - Iron sight provided with seven adjustable range marks - YMAL-10-35 red dot sight can be attached providing range-finding function.	

UNCLASSIFIED

UNCLASSIFIED  
4-50








Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>FHJ-84</b> <b>FHJ-01</b>	Incendiary Rocket Launcher	62mm Incendiary RKT	200m EFF 500m MAX		- Used throughout OPFOR	- Incendiary and smoke (WP) rnds available. - Twin shot, reusable launch tube - FHJ-01 is a second generation FHJ-84 with improved day sight and new type of incendiary projectile. - Optical 1x day sight	
<b>FHJ-02</b>	Incendiary Rocket Launcher	62mm Incendiary RKT	800m MAX		- Used throughout OPFOR SMK/Flame units	- Assigned to the Chemical defence fire breathing squad - Incendiary and smoke (WP) rnds available.- Fires seven rockets in 3.5 seconds - 3 crew	
<b>QLZ-04</b> AGL	Automatic Grenade Launcher	35mm	1750m MAX		- AT Pl, Medium Mech Inf Bn - Weapons Pl, Bde Marine Mech Bn	- 30 rd belt - Cartridge: HE-Frag, HE-DP - 350 – 400 rpm - Can be vehicle mounted or crew served. - Developed as an alternative to the QLZ-87 - Can penetrate up to 80mm of RHA	
<b>QLZ-87</b> AGL	Automatic Grenade Launcher	35mm	600m EFF (Mechanical sight) 1750m MAX (Tripod/optical sight)		- Wpns Pl for Lt Inf, Medium and Heavy Mech Inf	- 6 or 15 rnd drum magazine - 480 rpm - Iron sights, 3 x magnification optics - Optic mounting rail for night vision or thermal sights. - HE-FRAG, HE-DP - Can penetrate 80mm of RHA	

UNCLASSIFIED

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
Anti-Tank Systems							
<b>PF-89</b> ATRL	Anti-Tank Rocket Launcher	80mm RKT	250m EFF 400m MAX		- Disposable ATRL across OPFOR.	- No night combat ability - Portable, disposable, unguided - Optical sights 1x/2.5x (day sight) - Primary use by Infantry squads to defeat light armour and bunkers - HEAT Ammunition - Can penetrate 628mm of RHA - Five variants of the PF-89.	
<b>PF-98A</b> ATRL	Anti-Tank Rocket Launcher	120mm RKT	HEAT: 800m EFF 2000m MAX  HEI: 2000m MAX (FCS) 800m EFF (mechanical Sight)		- Lt Inf Wpns Pl, Lt Inf Coy - AT Pl, Lt Inf Bn - Med and Hvy Mech Wpns Pl ATRL - Wpns Pl, Bde Marine Mech Bn.	- Lighter version of the PF-98 - Improved night optic - Fire control system (FCS) provides ballistic calculations. Rocket is unguided. - HEAT rnd can penetrate 800mm RHAe - HEI rnd can penetrate 400mm RHAe, contains 120 steel balls designed to kill personnel up to 25m from point of impact. - 2-Per crew	
<b>HJ-73D</b>	Anti-Tank Guided Missile	125mm ATGM	HEAT: 500M MIN 3000m MAX		- Found throughout the MEF Division on the ZBD-05 series of vehicles	- 2 carried on each ZBD-05 - SACLOS Wire Guided, using vehicle gunners sight, including night vision equipment - Tandem HEAT warhead, able to penetrate 280mm RHAe set at 68 degrees and protected by ERA, or up to 800mm RHAe on a flat strike. - Much improved version of the soviet AT-3 Sagger, still used due to functionality, ease of installation and low price.	




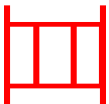

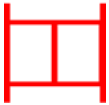

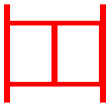

UNCLASSIFIED  
4-52

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>HJ-8</b> ATGM (Red Arrow 8)	Anti-Tank Guided Missile	120mm ATGM	8E Tandem Shaped HEAT: 100m MIN 2000m EFF (Night) 4000m MAX		- AT Pl, Med Mech Inf Bn	<ul style="list-style-type: none"> <li>- Day and Night Optics</li> <li>- Night Optics reduce effective range to 2000m</li> <li>- SACLOS Wire Guided</li> <li>- Tripod Mounted</li> <li>- Disposable Launch Tube</li> <li>- Crew of 4</li> <li>- Alternate Model: HJ-8L is a lighter version.</li> <li>- Tandem HEAT warhead, able to penetrate 900mm RHAe</li> </ul>	
<b>AFT-9</b> (WZ550 chassis)  <b>HJ-9</b> ATGM (Red Arrow 9)	Wheeled Tank Destroyer	4 x HJ-9 ATGM	100m MIN  2.5 – 4km EFF (Night)  5.5km MAX		Lt & Mdm Bde AT Coy, AT Pl	<ul style="list-style-type: none"> <li>- Light Enhanced Night vision system and Thermal camera</li> <li>- At night target detection range 4km, identification 2.5 – 3 km.</li> <li>- Max Speed: 95 km/h</li> <li>- Range: 800km</li> <li>- Tandem HEAT warhead, able to penetrate 1200mm RHAe</li> <li>- 4 missiles in launcher, 8 reloads in vehicle, 12 missiles total.</li> <li>- 4x4 version of the ZSL92</li> </ul>	
<b>AFT-10</b> (ZBD-04 chassis)  <b>HJ-10</b> ATGM (Red Arrow 10)	Anti-Tank Missile Launcher	8 x HJ-10 ATGM	2km MIN 8 km EFF 10km MAX		Hvy Bde AT Coy, AT Pl.	<ul style="list-style-type: none"> <li>- Mast mounted FCS</li> <li>- Amphibious</li> <li>- Water Speed: ~6km/h</li> <li>- Night detection Range 6km, identification range 5km.</li> <li>- Minimum Fire Range of 2 km</li> <li>- Electro-optical Guidance System</li> <li>- Range of Vehicle: 400 km</li> <li>- Max Speed: 65 km/h</li> <li>- Carries eight missiles.</li> <li>- Tandem HEAT warhead, able to penetrate 1400mm RHAe</li> </ul>	
<b>9K116-1 Bastion</b>	Anti-Tank Missile	100mm	4000m EFF/MAX	As per Vehicle	- Able to be fired from the 100mm gun on the ZBD-04 series of vehicles	<ul style="list-style-type: none"> <li>- Laser beam riding missile fired through 100mm gun.</li> <li>- HEAT warhead, able to penetrate 750mm RHAe</li> </ul>	

UNCLASSIFIED









UNCLASSIFIED  
4-53

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>GP-2</b> (GP-105)	Anti-Tank Missile	105mm	5000m EFF/MAX	As per Vehicle	Able to be fired from any 105mm rifled anti-tank gun (ZTS-63A and ZTD-05)	<ul style="list-style-type: none"> <li>- Laser beam riding missile fired through 105mm gun.</li> <li>- HEAT warhead, able to penetrate 650mm RHAe</li> <li>- Designed to give amphibious tanks/gun systems the ability to hit targets whilst crossing water.</li> </ul>	
<b>Command and Armoured Vehicles</b>							
<b>ZTZ-96A</b> (Type 96)	Main Battle Tank	ZPT-98 125mm Smoothbore Gun QJZ-89 12.7mm HMG Type 80 7.62mm Coax	HE: 4000m EFF HEAT: 3000m EFF APFSDS: 3000m EFF 1500m EFF Air Def 2000m EFF Gnd Spt 1000m EFF 1500m MAX		- Primary tank used throughout OPFOR	<ul style="list-style-type: none"> <li>- Speed: Up to 65 km/h on road and 45 km/h off road</li> <li>- Operational range 400km</li> <li>- Prepared fording at 5.0m and without preparation at 1.4m</li> <li>- Steel, spaced composite and ERA armour</li> </ul>	
<b>ZTS-63A</b> (Type-63A)	Amphibious Light Tank	ZPL-98 105mm QJZ-89 12.7mm HMG Type 80 7.62mm Coax	APFSDS-T, HEAT-T, HE-T: 2000m EFF 12km MAX (Indirect) GP-2: 5000m MAX (Anti-Tank System) 1500m EFF Air Def 2000m EFF Gnd Spt 1000m EFF 1500m MAX		- MEF Bde Marine Tank Bn, Marine Lt Tank Coy.	<ul style="list-style-type: none"> <li>- Equipped with GPS, and computerised fire control</li> <li>- Speed: Up to 75kph on land, 28kph in water.</li> <li>- Operation range: 400km on land, 120km in water</li> <li>- Carries 38 rounds of any type but usually no more than 4 x GP2 missiles</li> </ul>	
<b>ZTD-05</b> (ZLT-05, VN-16)	Amphibious Light Tank	ZPL-98A 105mm QJZ-89 12.7mm HMG Type 80 7.62mm Coax	APFSDS-T, HEAT-T, HE-T: 2000m EFF 12km MAX (Indirect) GP-2: 5000m MAX (Anti-Tank System) 1500m EFF Air Def 2000m EFF Gnd Spt 1000m EFF 1500m MAX		- Mar Bde AT Bn, Amphib AT Coy	<ul style="list-style-type: none"> <li>- Amphibious up to Sea State 4</li> <li>- Speed: Up to 65 km/h on road, Average 40 km/h off road.</li> <li>- Swim speed: 25km/h</li> <li>- Operational range: 500 km</li> <li>- Uses ZBD-05 hull, designed to provide organic fire support to ZBD-05 formations.</li> <li>- Carries 36 rounds of any type but usually no more than 4 x GP2 missiles</li> </ul>	









UNCLASSIFIED

UNCLASSIFIED  
4-54

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>ZBD-04A</b> IFV	Infantry Fighting Vehicle	100mm Rifled Gun/missile launcher	PFHE BTE1: 3000m EFF (point tgt) 7000m MAX		- Primary IFV used throughout the Heavy Brigade in the standard Division	<ul style="list-style-type: none"> <li>- Crew 3, 7 Passengers.</li> <li>- Fire control system includes a digital ballistic computer, and laser range-finder.</li> <li>- Speed: Up to 75 km/h on road, 6 km/h on water.</li> <li>- Millimetre-wave fire control radar mounted above gun to support target acquisition.</li> <li>- Operational range: 500 km</li> <li>- 7 different variants including CRV, Armoured Recovery Veh and AT Missile Carrier</li> <li>- 30 rnds 100mm, 500 rnds 30mm and 2000 rnds 7.62mm carried.</li> </ul>	
			HE BTE1: 3000m EFF (point tgt) 4000m MAX				
			SK116-1 missile: 4000m MAX (Anti-Tank System)				
		2A72 30mm Auto cannon Coax	HEI & AP (twin feed) 2800m EFF 4000m MAX				
<b>ZBD-05</b> IFV	Infantry Fighting Vehicle	Type 80 7.62mm Coax	1000m EFF 1500m MAX		- Found throughout the MEF Division	<ul style="list-style-type: none"> <li>- Crew 3, 8 Passengers.</li> <li>- Fully amphibious</li> <li>- Fire control system includes a digital ballistic computer, and laser range-finder.</li> <li>- Speed: Up to 65 km/h on road, 40 km/h off road, and 25 km/h on water.</li> <li>- Can climb a 60% gradient.</li> <li>- Has SATNAV, fire suppression system, NBC protection and day/night thermal vision.</li> <li>- Operational range: 500 km</li> </ul>	
		2A72 30mm Auto cannon	HEI & AP (twin feed) 2800m EFF 4000m MAX				
		HJ-73 AT Missile	3000m MAX (Anti-Tank System)				
<b>ZBD-05</b> CRV	Combat Recon Vehicle	QJZ-89 12.7mm HMG	1500m EFF Air Def 2000m EFF Gnd Spt		- Found throughout OPFOR Recon units and EW Coy, MEF Div IW Bn	<ul style="list-style-type: none"> <li>- Fully Amphibious</li> <li>- Telescopic electro-optical and infrared system with laser range finder and X-band radar.</li> <li>- Can be fitted with UAV catapult</li> <li>- Speed: Up to 65 km/h on road, 25 km/h on water.</li> <li>- Has SATNAV, fire suppression system, NBC protection and day/night thermal vision.</li> <li>- Operational range: 500 km</li> </ul>	

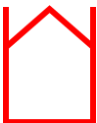





UNCLASSIFIED

UNCLASSIFIED  
4-55







Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>ZBD-05</b> ARL	Armoured Recovery Vehicle	QJZ-89 12.7mm HMG	1500m EFF Air Def 2000m EFF Gnd Spt		- Marine Bde Maint Pl, MEF Marine Mech Inf Bde	- Crew 3, 7 Passengers. - Max Speed: 65 km/h on Land - Max Speed (Water): 25 km/h - Crane located on upper left side of Chassis that is capable of lifting a ZBD-05 IFV Turret. - Capable of welding, IFV recovery, and other general battlefield repairs.	
<b>TYPE-89</b> ACV	Armoured Command Vehicle	QJZ-89 12.7mm HMG	1500m EFF Air Def 2000m EFF Gnd Spt		- Used throughout OPFOR	- Fully amphibious - Fitted with higher roofline and longer chassis with six double road wheels either side. - Speed: Up to 66 km/h on road, 6 km/h swim - Operational range: 500 km	
<b>HJ-62C</b> GSR	Ground Surveillance Radar Vehicle	Type 54 (DShKM copy) AAMG 12.7mm	1500m EFF Air Def 2000m EFF Gnd Spt		- MEF Div Marine Bde Recon Coy - Lt, Mdm, Hvy Bde Recon Bn	- Fully amphibious - Max effective range: 600 km - Speed: Up to 65 km/h on road, Up to 35 km/h off road, up to 6 km/h swim - Battlefield Surveillance Radar Detection range: 25 km vehicles, 10 km Personnel	
<b>CS/VN3B</b>	Armoured Recon Vehicle	QJZ-89 12.7mm HMG	1500m EFF Air Def 2000m EFF Gnd Spt		BDET, Mortar Pl Infantry Coy HQ Recon Bn	- Upgraded version of the CS/VN3 with increased armour and a remotely-operated main weapon system - Crew of 5 - Max range 600 km - Road speed up to 110 km/h - Protection against small arms fire, shell fragments and some mines	
		Type 80 7.62mm Coax	1000m EFF 1500m MAX				

UNCLASSIFIED

UNCLASSIFIED  
4-56









Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>ZBL-09</b> IFV	Wheeled Infantry Fighting Vehicle	2A72 30mm Auto cannon	HEI & AP (twin feed) 2800m EFF 4000m MAX		- Primary OPFOR IFV in Mdm Bde	<ul style="list-style-type: none"> <li>- 3 crew, 7 troops</li> <li>- Range 800 km</li> <li>- Max speed 100 km/h road, 8 km/h swim</li> <li>- Average cross-country speed 50 km/h</li> <li>- Chassis used for a large number of variants</li> </ul>	
		HJ-73 AT Missile	3000m MAX (Anti-Tank System)				
		Type 80 7.62mm Coax	1000m EFF 1500m MAX				
<b>ZBL-09</b> CRV	Armoured Recon Vehicle	2A72 30mm Auto cannon	HEI & AP (twin feed) 2800m EFF 4000m MAX		- Armrd Recce Coy, Medium Bde Recce Bn	<ul style="list-style-type: none"> <li>- 3 crew, 7 troops</li> <li>- Range 800 km</li> <li>- Max speed 100 km/h road, 8 km/h swim</li> <li>- Average cross-country speed 50 km/h</li> <li>- Has launch rail for ASN-15 drone (1 hour endurance, remote control range 10 km, max speed 90 km/h)</li> <li>- Thermal optic maximum detection range 8000m</li> <li>- Battlefield radar detection range 200m-12000m</li> <li>- Armour protection against strikes up to 12.7mm at 100m</li> <li>- Alternative version has electro-optical sensors in place of the turret</li> </ul>	
		HJ-73 AT Missile	3000m MAX (Anti-Tank System)				
		Type 80 7.62mm Coax	1000m EFF 1500m MAX				
<b>ZBL-09</b> (ZZH-09) ACV	Armoured Command Vehicle	Type 80 7.62mm GPMG	1000m EFF 1500m MAX		- HQ elements: Mdm Mech Inf Bn HQ, Marine Engr Coy HQ, Heavy Combined Arms Bn HQ	<ul style="list-style-type: none"> <li>- 3 crew, 7 troops</li> <li>- Range 800 km</li> <li>- Max speed 100 km/h road, 8 km/h swim</li> <li>- Average cross-country speed 50 km/h</li> <li>- Armour protection against strikes up to 12.7mm at 100m</li> <li>- No turret</li> <li>- Distinctive box over the top of the troop compartment</li> </ul>	

UNCLASSIFIED

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
ZTL-11	Wheeled Assault Gun	ZPL-98A 105mm	APFSDS-T, HEAT-T, HE-T: 2000m EFF 12km MAX (Indirect) GP-2: 5000m MAX (Anti-Tank System)		- AT Coy, Med Mech Inf Bn	- Provides direct fire support for Infantry units and can engage any light veh and stationary targets i.e. bunkers. - Speed: Up to 65 km/h on road, 30 km/h on water. - Can climb a 60% gradient. - Operational range: 500 km - Fully amphibious	
		QJY-88 5.8mm Coax	800m - 1000m				
		QJZ-89 12.7mm HMG (Roof)	1500m EFF Air Def 2000m EFF Gnd Spt				
Mortars							
PP-87 MORTAR	Mortar	82mm Missile	120m – 5.6 km		- Light BTG –Mortar Pl	- Max fire rate: 20 rpm - AKA: Type 87 Mortar - Weight: 31 kg	
PP-93 MORTAR	Lightweight Mortar	60mm	Maximum Range 5564m		- Mdm Mech Wpns Pl, Med Mech Inf Coy - Hvy Mech Wpns Pl, Hvy Mech Inf Coy - Lt Inf Wpns Pl, Lt Inf Coy	- Weight 22.4 kg - Muzzle Velocity: 329 m/s - High / Low Firing range: 45° - 85° - Maximum rate of fire: 20 RPM - Killing Radius of HME shell: 17.8m - Mortar has an extended barrel to increase its range. (length of barrel is 1,350mm) - AKA: Type-93 60mm Mortar Nicknamed the “Long range Mortar.”	











UNCLASSIFIED  
4-58

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>PLL-05</b> SPM	Self-Propelled Mortar	120mm	68m - 9.5 km		- SP Arty Coy, Bde Marine Mech Bn - SP Mor/How Coy, Med Mech Inf Bn	- Secondary armament: QJZ-89 with max range of 1600m - Operational range: 720 km - Capable of 360° traverse - Maximum speed: 80 km/h - 8-10rpm - Fully amphibious - 4 per crew - Ammo load: 30 rounds	
<b>PLZ-10</b> SPM	Self-Propelled Mortar	120mm	1.2 km – 9.5 km		- SP Mor/How Coy, Heavy Combined Arms Bn	- Secondary armament: QJC-88 - Operational range: 500 km - Speed: 65 km/h on land, 5 km/h at sea - Ammo load: 40 rounds - Has a mine resistant hull	
<b>Artillery</b>							
<b>PCL-09</b> SPH	Truck mounted Self-Propelled Howitzer	122mm	22 km (Effective)  27 km (Maximum – RAP)		- SP Arty Bn, Lt Bde Arty Bn	- Operational range: 600 km - Speed: 85 km/h - Rate of fire: 12 rounds/30 seconds - Mounted on Shaanxi Sx2150 6x6 truck - 5 per crew - Emplacement/ displacement time:1.5- 2.5 mins	
<b>PLZ-07A</b> SPH	Self-Propelled Howitzer	122mm	18 km (Maximum)  27 km (Maximum – RAP)		- Hvy Bde Arty Bn, SP Arty Bty	- 5 per crew. - Carries up to 8 troops. - Amphibious. - Up to 65 km/h on land, 40 km/h cross - Operational range: 500 km - Mounts a PL-96 122mm Howitzer - Secondary armament: QJC-89 HMG	









UNCLASSIFIED

UNCLASSIFIED  
4-59

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>PLZ-89</b>	Self-Propelled Howitzer	122 mm	18 km (Standard) 21 km (RAP)		- Marine Bde Arty Bn, Sp Arty Bty	<ul style="list-style-type: none"> <li>- Chassis is the Type 77 APC</li> <li>- Amphibious</li> <li>- Crew of five</li> <li>- First Line is 40 rnds</li> <li>- Max range: 500 km</li> <li>- Max Speed: 60 km/h</li> <li>- Max rate of fire: 6 – 8 rpm</li> <li>- AKA: Type 89 SPH</li> </ul>	
		QJZ-89 12.7mm HMG (Roof)	1500m EFF Air Def 2000m EFF Gnd Spt				
<b>PHL-03</b> SP-MRL	Self-Propelled Multiple Rocket Launcher	BRC-4 300mm Rockets x12	70 - 130 km		- MRL Bty, Div Arty Regt	<ul style="list-style-type: none"> <li>- Truck-mounted</li> <li>- Main role: Engage strategic targets such as concentrations of troops, airfields, command centres, air defence batteries and support facilities.</li> <li>- Has a computerised fire control system incorporating GPS</li> <li>- Operational range; 650 km</li> <li>- Speed: 60 km/h</li> </ul>	
<b>PHZ-89</b>	Self-Propelled Rocket Launcher	122mm Grad Artillery Rocket	27 km		- MRL Bty, Hvy Bde Arty Bn	<ul style="list-style-type: none"> <li>- Launcher holds 40 rockets that can be ripple fired in 20 seconds. Reloaded in 2 minutes</li> <li>- Secondary armament: QJC-88</li> <li>- Speed: 50 km/h on road, 30 km/h on cross-country.</li> <li>- Signature equipment of armoured divisions</li> <li>- Operational range: 650 km</li> </ul>	
<b>PLZ-05</b>	Self-Propelled Howitzer	PLL-01 155mm Howitzer	20 km (Laser-homing) 39 km (ERFB-BB) 50 km (EFBB-BB-BA) 100 km (WS-35)		- SP Arty Bty of the Divisional Arty Regt	<ul style="list-style-type: none"> <li>- Secondary armament: QJC-88</li> <li>- Operational range: 550 km</li> <li>- Speed: 56 km/h</li> <li>- 2S19 enables 8rpm</li> <li>- 4 per crew</li> </ul>	

UNCLASSIFIED









UNCLASSIFIED  
4-60

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>1V14 COP</b>	Artillery Command & Recon Vehicle	PKT 7.62mm GPMG	1500m: Direct Fire Range 1000m: Max effective		<ul style="list-style-type: none"> <li>- Lt / Med / Hvy Bde Arty Bn, SP Arty and MRL Bty.</li> <li>- MEF Div MRL Bn, MRL Bty</li> <li>- Div Arty Regt, MRL Bty</li> <li>- Marine Bde Arty Bn, Sp Arty and MRL Bty</li> </ul>	<ul style="list-style-type: none"> <li>- 60 km/h max road speed</li> <li>- 4.5 km/h swim</li> <li>- 15mm Hull Armor, NBC protection</li> <li>- Laser rangefinder 1D8, combined obs instrument 1PN44, stereoscopic rangefinder DS-1</li> </ul>	
<b>1V13 FDC</b>	Artillery Command & Recon Vehicle	DShK 12.7mm HMG	1500m EFF Air Def 2000m EFF Gnd Spt		<ul style="list-style-type: none"> <li>- Lt / Med / Hvy Bde Arty Bn, SP Arty and MRL Bty.</li> <li>- MEF Div MRL Bn, MRL Bty</li> <li>- Div Arty Regt, MRL Bty</li> <li>- Marine Bde Arty Bn, Sp Arty and MRL Bty</li> <li>- MEF Div MRL Bn</li> </ul>	<ul style="list-style-type: none"> <li>- 62 km/h max road speed</li> <li>- 26 km/h off road speed</li> <li>- 6 km/h max swim speed</li> <li>- Operational range 500 km</li> <li>- Roof mounted periscopic aiming circle</li> <li>- NBC protection</li> </ul>	
<b>PHL-90B MRL</b>	Multiple Rocket Launcher	122mm	10km MIN 32km MAX  BRE7 GPS/INS guided missile range 20-40km		<ul style="list-style-type: none"> <li>- MEF Div MRL Bn</li> </ul>	<ul style="list-style-type: none"> <li>- Crew of 5</li> <li>- Mercedes-Benz 6x6 truck chassis</li> <li>- 85 km/h max road speed</li> <li>- 80 km/h max off road</li> <li>- Rockets fired singly or in salvo with 0.5 second between rounds</li> <li>- 40 rockets loaded in less than 3 mins</li> <li>- Fire Dragon 40/BR7 GPS/INS missiles available but likely only 1 x salvo per first line (due to cost)</li> </ul>	
<b>AZK-7</b>	Sound Ranging	Nil	Localization Range: - Mortars: 5-8 km - Artillery Guns: 12-16 km - Ground burst of shells fired by 122mm and larger: 12 km		<ul style="list-style-type: none"> <li>- MEF Div MRL Bn, TA PI</li> <li>- Div Arty Regt, TA PI</li> </ul>	<ul style="list-style-type: none"> <li>- Ural-43203 Chassis</li> <li>- Cruising Range of 1000 km</li> <li>- 85 km/h max road speed</li> <li>- 50 km/h max cross speed</li> <li>- Forging depth of 1.75m</li> <li>- Equipment is installed in four Ural trucks</li> <li>- Time to locate a target: no more than 15 seconds</li> </ul>	

UNCLASSIFIED









UNCLASSIFIED  
4-61

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>1V15 COP</b>	Artillery Command & Recon Vehicle	PKT 7.62mm GPMG	1000m: Max effective range		<ul style="list-style-type: none"> <li>- Div Arty Regt Hq</li> <li>- Marine Bde Arty Bn Hq</li> <li>- MEF Div MRL Bn Hq</li> <li>- Lt / Med / Hvy Bde Arty Bn H</li> </ul>	<ul style="list-style-type: none"> <li>- 60 km/h max road speed</li> <li>- 4.5 km/h max swim speed</li> <li>- 1D15 laser rangefinder, DSP-30 rangefinder, 1PN44 day/night sight, PAB-2AM aiming circle, DS-1 stereoscopic rangefinder</li> <li>- NBC protection</li> </ul>	
<b>1V152 COP</b>	Unified Command Vehicle or Artillery Command & Recon Vehicle	Nil (Turret removed for additional communication equipment)	Nil		<ul style="list-style-type: none"> <li>- Med Mech Inf Bn, SP Mor / How Coy</li> <li>- Hvy Combined Arms Bn, SP Mor / How Coy</li> <li>- Bde Marine Mech Bn, SP Arty Coy</li> </ul>	<ul style="list-style-type: none"> <li>- Chassis is the Russian BTR-80</li> <li>- Improved optics installed on roof</li> <li>- Additional communications equipment installed on roof</li> </ul>	
<b>1V16 FDC</b>	Artillery Command & Recon Vehicle	DShK 1.27mm HMG	1500m EFF Air Def 2000m EFF Gnd Spt		<ul style="list-style-type: none"> <li>- Div Arty Regt Hq</li> <li>- Marine Bde Arty Bn Hq</li> <li>- MEF Div MRL Bn Hq</li> <li>- Lt / Med / Hvy Bde Arty Bn Hq</li> </ul>	<ul style="list-style-type: none"> <li>- 60 km/h max road speed</li> <li>- 26 km/h max off road speed</li> <li>- 4.5 km/h max swim speed</li> <li>- NBC protection</li> </ul>	
<b>PH-63 MRL</b>	Multiple Rocket Launcher	107mm	8500m: HE max range 7885m: Incendiary max range		<ul style="list-style-type: none"> <li>- Lt Bde Arty Bn, MRL Brt</li> </ul>	<ul style="list-style-type: none"> <li>- Prime mover 4x4 or 6x6 truck</li> <li>- Reload time: 3 mins</li> <li>- 12 tubes</li> <li>- AKA: Type 63</li> </ul>	







UNCLASSIFIED

UNCLASSIFIED  
4-62







Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
PLL-09  SPH	Self-propelled howitzer	Type 96 SPH 122mm	18-27 km: HE effective range 18 km: HE Hollow Base Projectile effective range 22 km: HE Base Bleed (BB) 27 km: HE BB Rocket Assist		- Med Bde Arty Bn, SP Arty Bty	- 62 km/h max road speed - 50 km/h average cross speed - 6-8 km/h max swim speed - Armor penetration up to 85mm - 40 rds total of any 122mm combination projectiles - Auto Fire Suppression systems	
		Type 54 (DShKM copy) AAMG 12.7mm	1500m EFF Air Def  2000m EFF Gnd Spt				
Air Defence Systems							
FN-6 MANPAD	Man-Portable Air Defence System	72mm	5.5 km		- Used by Air Aslt Coy of the Div Avn Bn, and Para Bn of the Abn Inf Bde.	- Designed to engage low flying targets - Maximum altitude: 3.8 km - Speed: 600m/s - Guidance system: Infrared homing - Can be equipped with NVE and IFF systems	
HQ-7	Self-Propelled Short Range and Point Air Defence	R440 CROTALE Missile	500m – 10 km		- Light BTG –Air Defence Bn - Med BTG –Air Defence Bn	- Missile Speed: 750m/s - Maximum altitude: 15m – 5.5 km - Detection range: 18.5 km - AKA: FM-80	

UNCLASSIFIED

UNCLASSIFIED  
4-63

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>PGZ-09</b> SPAAA	Self-Propelled Anti-Aircraft Gun	2x GDF-002, PG 99 35mm	4000m: Max Range		- Marine Bde AD Bn, SPAAA Coy	- Chassis is PLZ-05 SP artillery - 55 km/h max road speed - Cruising range 450 km - Can fire four types of lethal and versatile ammunitions, HEI, HEI-T, SAPHEI-T and TP-T cartridges - AKA: Type-07, or PGZ-07	
<b>PGZ-95</b> SPAAA	Self- Propelled Anti-Aircraft Machine Gun	2A14 25mm Cannon	2.5 km (Maximum) 2 km (Ceiling)		- Med BTG –Air Defence Bn	- Targeting: Radar, or optical. 11 km detection - Speed: 53 km/h on road - Operational range of 450 km. - AKA: Type-95, QW-2	
		QW-2 SAM	6 km (Maximum) 12 km (Ceiling)				
<b>CLC-2</b> ACV	Armoured command vehicle	QJC-88 12.7 mm HMG	1500m EFF Air Def 2000m EFF Gnd Spt		- Marine Bde AD Bn, SPAAA Coy - Med Bde AD Bn, AT Bn - SPAAA Coy of the Heavy Bde AT Bn	Command vehicle for the PGZ-95. - Maximum detection range 45 km, max altitude 4.5 km - Can support up to eight PGZ-95 AD Vehicles. - Radio communications range 15 km - Crew of 5	







UNCLASSIFIED  
4-64

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
HQ-17	Short Range Air Defence Missile	9M330 Missile 235mm diameter	12km: Operational range  6000m: Flight ceiling		- Heavy BTG –Air Defence Bn	- 3 man crew - IR Homing - Fires HE-Frag - Operational range: 600 km - Speed: 65 km/h - Maximum altitude: 10 km - 8 missiles - Designed to protect mechanised units.	
HQ-17A	Short-Range Air Defence Missile	9M330 Missile 235mm diameter	12km: Operational range  6000m: Flight ceiling		- Marine Brigade Air Defence Bn	- 3 man crew - IR Homing - Fires HE-Frag - Operational range: 800 km - Speed: 80 km/h - Maximum altitude: 10 km - 8 missiles	
HGR-106 EW RADAR	Target Indicating Radar	Nil	Nil		- Marine Brigade Air Defence Bn, Radar Coy.	- Medium and low altitude target designation radar - 210 km range, 12 km altitude - Main targets include cruise missiles, UAVs, fixed-wing aircraft and helicopters - Mounted on SX2190 6x6 truck AKA: LLQ03C	









UNCLASSIFIED









UNCLASSIFIED  
4-65

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>HQ-16A</b> SAM	Surface to Air Missile	GAMBIT Missiles x6	40 km		- AD Brigade has 1 x EW Rdr, ea Battalion has 1 x TE Rdr, 4 x TEL	- Detection range of air targets: 140 km, identification of targets up to altitude of 20 km. - Speed: 80 km/h - Operational range: 800 km - Can engage 4 targets at once - Separate TA & TE Radars - Altitude: 300m-65 km AKA: HQ-16	
<b>HQ-16A</b> <b>T&amp;G</b> RADAR	Track and Guidance Radar	L-Band PESA	85 km: Max range		- MEF Div AD Bn, SAM Coy	- Provides target acquisition, tracking and ID of target types - Controls missile launch and illuminates target after missile is fired - L-Band - Fire control and guidance can be provided for up to 8 missiles - Can detect up to 6 targets and track four simultaneously	
<b>HQ-16A TA</b> SEARCH RADAR	Search Radar	IBIS 150 S-Band radar	150 km: Max Range 20 km: Max altitude		- MEF Div AD Bn, SAM Coy	- Solid-state S-band three-dimensional mast-mounted passive phased-array radar - Performs ID-friend-or-foe (IFF), threat analysis and flight path processing tasks Provides target engagement data to the T&G radar	

UNCLASSIFIED  
4-66

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>PG-99</b> AAG	Anti-Aircraft Gun	Twin Cannon 35mm	Range: 3200m		- Lt Bde AD Bn, ADA Coy - Med Bde AD Bn, ADA Coy	- 6 second reaction time to a target - 90 sec emplacement/displacement time - Towed by any military truck: 80 km/h towing road speed, 30 km/h cross country - Computer controlled electro-optical director for 3D target tracking in conjunction with the laser ranger finder	
<b>PG-99</b> GENERATOR TRAILER	Generator Trailer Vehicle	NIL			- Lt Bde AD Bn, ADA Coy - Med Bde AD Bn, ADA Coy	- Generator for PG-99 - AAG does not have a power source, a generator is required for each gun	
<b>TYPE-902</b> FCV	Fire control system and search/tracking radar	Radar range	Detection Ranges: X Band: - Aircraft: 22 km - Missile: 9 km C-Band: - Aircraft: 32 km - Missile: 13 km K-Band: - Aircraft: 15 km - Missile: 6 km		- Lt Bde AD Bn, ADA Coy - Med Bde AD Bn, ADA Coy	- Used with the Type 90 35mm AA twin-gun - Two tracking systems: Target searching radar and an electro-optical passive tracking director - 2 man crew - Used with the Type 90 or PL-9C Missiles - Emplacement: 8 minutes - Displacement: 5 minutes -AKA: AF-902	
<b>HQ-7 T&amp;G</b> RADAR	Track and Guidance Radar	Radar range	18.4 km		- Med Bde AD Bn	- Doppler Search Radar E/F Band - Based on the same 4x4 chassis - Tracking range is 17 km - Can detect up to 30 targets and track up to 12 targets simultaneously	





UNCLASSIFIED  
4-67

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
Engineer Equipment							
<b>Type GJB-320</b>	Trench Digger	Nil	Nil		<ul style="list-style-type: none"> <li>- Med BTG –Eng and Chem Def Bn</li> <li>- Heavy BTG –Eng and Chem Def Bn</li> <li>- DTG –Eng and Chem Def Regt</li> </ul>	<ul style="list-style-type: none"> <li>- 3 man crew</li> <li>- Speed: 52 km/h</li> <li>- Capabilities: Dozer blade; digging machine to dig AT ditches, vehicle positions and fighting positions</li> <li>Digging rate: <ul style="list-style-type: none"> <li>- Trench construction: 150 (hard soil) to 350m³/h (soft soil)</li> <li>- Ditch construction: 3.2-4m wide, 3.5m deep</li> </ul> </li> <li>- AKA: Ditcher M1987</li> </ul>	
<b>GJT-211</b>	Armoured Tracked Bulldozer	Type 54 HMG 12.7mm	1500m EFF Air Def 2000m EFF Gnd Spt		<ul style="list-style-type: none"> <li>- Hvy BTG – Eng / Chem Def Bn</li> <li>- Med BTG –Eng / Chem Def Bn</li> <li>- DTG –Eng and Chem Def Bn</li> </ul>	<ul style="list-style-type: none"> <li>- 3 man crew + 1 Passenger</li> <li>- Speed: 47 km/h</li> <li>- Max Range: 350 – 400 km</li> <li>- Angular dozer blade</li> <li>- Trench/Ford: 2.6m/1.3m</li> <li>- Earthmoving capacity: 232-262 m³/h</li> <li>-Chassis is from the Type 83 152mm SPH</li> </ul>	
<b>ZGQ-84 Bridge</b>	Armoured Vehicle Launched Bridge	QJT-88 7.62mm GPMG	800m - 1000m sight adjustments		<ul style="list-style-type: none"> <li>- DTG –Eng and Chem Defence Bn</li> </ul>	<ul style="list-style-type: none"> <li>- 3 man crew.</li> <li>- Speed: 50 km/h.</li> <li>- Ford: 1.1m</li> <li>- Horizontal bridge system</li> <li>- Bridge dimensions: 18m</li> <li>- Load limit: GVM 40,000kgs</li> <li>- Emplacement: 8-10mins</li> <li>- Recovery time: 3-4mins</li> <li>- AKA: Type 84 AVLB</li> </ul>	

UNCLASSIFIED









UNCLASSIFIED  
4-68

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>ZGQ-15</b> AVLB	AVLB	Nil	Nil		<ul style="list-style-type: none"> <li>- Bridging Pl, Marine Bde Engr Coy</li> <li>- Mdm Cbt Engr Pl, Med Bde Cbt Engr Coy</li> <li>- Regt Cbt Engr Coy, Div Engr Regt</li> </ul>	<ul style="list-style-type: none"> <li>- Type 09 chassis</li> <li>- Speed: up to 85 km/h road, 6 km/h swim</li> <li>- Emplacement time 4 min</li> <li>- Displacement time 6 min</li> <li>- Bridge 18.2 m long, 3.3 wide (16.2 m gap)</li> <li>- Load limit 25 tonnes (tracked); 10 tonnes (wheeled axle)</li> <li>- Able to carry soldiers as an APC</li> <li>- AKA: Type 09 AVLB</li> </ul>	
<b>HZ-21</b> Bridge	Fast Mechanised Bridge	Nil	Nil		<ul style="list-style-type: none"> <li>- Hvy BTG –BDET CE Detachment</li> </ul>	<ul style="list-style-type: none"> <li>- 8x8 cross country chassis</li> <li>- Bridge dimensions: 21m (19m gap) or 24m</li> <li>- Load limit: MLC 50</li> <li>- Emplacement time: 6 min</li> <li>- Recovery time: 8 min</li> <li>- AKA: HZ-24 (21 or 24 refers to the size of the bridge in meters.)</li> </ul>	





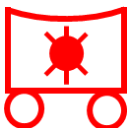

UNCLASSIFIED

UNCLASSIFIED  
4-69

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>HZ-51M</b> HSB	Fast Heavy Support Bridge	Nil	Nil		- Div Engr Regt, Rd and Bridge Coy - Hvy Bde Engr Bn, Bridge Const Coy	Crew 3 to 4 (excluding Drivers) One bridge System has seven to eight vehicles: - 1 x Launch Vehicle - 6 x Transportation Vehicle - (Optional) 1 x Support Vehicle - Bridge is assembled and pushed over the gap using the Launch vehicle as a fulcrum and a second vehicle as a counter weight. - Emplacement time: 75 min - Displacement time: 75 min - Max length of bridge: 51 m - Maximum Weight: 60,000 kg - AKA: HZQL51	
<b>CQL-321</b> LCB	Light Companying Bridge	Nil	Nil		- Div engr Regt, Cbt Engr Coy - Med Bde Engr Bn, Bridge Const Coy.	- A Three Part Bridge designed to give Mechanised units an organic mobility capability. - Span Length: 20.5 m Bridge Weight Limit: - 22,000 Kg (Tracked) - 10,000 Kg (Wheeled) Emplacement and Recovery time ~10 Min Crew of Three	
<b>GCZ-112</b> CEV	Armoured Engineer Vehicle	Nil	Nil		- Heavy BTG –BDET CE Detachments - DTG –Engineer and Chemical Defence Regt	- 3 man crew - 45 km/h max road speed - Trench & Ford: 2.7m/1.4m Capabilities: - Bulldozer blade: straight, vee or angle configuration at 393 m <sup>3</sup> /h - 25t multi-purpose 3.5 m telescopic: crane arm, clamp, buckets, drill; 50t winch - NBC protection	







UNCLASSIFIED

UNCLASSIFIED  
4-70

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>GCZ-110</b> CEV	Armoured Engineer & Recovery Vehicle	Nil	Nil		<ul style="list-style-type: none"> <li>- HvyBTG –Eng and Chem Defence Bn</li> <li>- DTG –Eng and Chem Defence Regt</li> </ul>	<ul style="list-style-type: none"> <li>- 3 man crew</li> <li>- T-79 chassis with T-96 suspension</li> <li>- Speed: 45 km/h</li> <li>- Trench &amp; Road: 2.7m/1.4m</li> <li>Capabilities: <ul style="list-style-type: none"> <li>- NBC protected</li> <li>- Bulldozer blade: straight, vee or angular configuration</li> <li>- 16 tonne 3.5 m telescopic crane/jib, 50 t winch</li> <li>- Earthmoving capacity: 250-396 m³/h</li> </ul> </li> </ul>	
<b>GCZ-120</b> CEV	Wheeled Combat Engineer Vehicle	12.7mm HMG	1500m EFF Air Def 2000m EFF Gnd Spt		<ul style="list-style-type: none"> <li>- Med Bde Engr Bn, Mine Warfare Coy</li> <li>- Div Engr Regt, Reft Const Bn.</li> <li>- Lt Bde Engr Coy, Mine Warfare Pl</li> </ul>	<ul style="list-style-type: none"> <li>- Crew: 4 with 10 passengers</li> <li>- Speed: 100 km/h</li> <li>- Operational range: 800 km</li> <li>Capabilities: <ul style="list-style-type: none"> <li>- NBC protection</li> <li>- 'V' shaped bulldozer blade</li> <li>- Multi-purpose telescopic excavator</li> <li>- Type 09/ZBL-09 Chassis</li> </ul> </li> </ul>	
<b>GBL-131</b> WMD	Wheeled Mine Dispenser	Nil	Nil		<ul style="list-style-type: none"> <li>- Light BTG –OSB</li> <li>- Med BTG –Eng and Chem Def Bn</li> <li>- HvyBTG –Eng and Chem Def Bn</li> <li>- DTG –Eng and Chem Def Regt</li> </ul>	<ul style="list-style-type: none"> <li>- 288 launch tubes</li> <li>- Minefield dispensing speed: 5 km/h. Reload time: 24min</li> <li>- Distance mines launched from vehicle: 20 – 150m</li> <li>- Max length of minefield: 2880m (1 canister/10m)</li> <li>Mine capacity in one load: <ul style="list-style-type: none"> <li>- GBL-240 canisters (Total of 1,440 GLD224 AT mines)</li> <li>GBL-241 canisters (Total of 4,320 GLD125 AP mines)</li> <li>GBL-242 canisters (Total of 12,960 GLD115 AP mines)</li> </ul> </li> </ul>	







UNCLASSIFIED

UNCLASSIFIED  
4-71

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>GBL-132</b> WMD	Wheeled Mine Dispenser	Nil	Nil		- Div Engr Regt, Cbt Engr Coy	- 144 launch tubes - Minefield dispensing speed: 5 km/h. Reload time: 15 min - Distance mines launched from vehicle: 20 – 150m	
<b>GBL-330</b>	Scatterable Mine Dispenser	Nil	Nil		- Lt Inf Coy, Lt Inf Wpns Pl. - Med Mech Inf Coy, Med Mech Inf Sqd - Hvy Mech Inf Sqd, Hvy Mech Sqd	- AKA: Type 1 (GBL-330) - Modular pack dispenser - Loaded with five launch tubes containing 80 x GLD 115s - Minefield dimensions: 25x25m	
<b>GBL-331</b>	Scatterable Mine Dispenser	Nil	Nil		- Lt Inf Coy, Lt Inf Sqd. - Med Mech Inf Coy, Med Mech Wpns Pl - Hvy Mech Inf Sqd, Hvy Mech Wpns Pl	- AKA: Type 2 (GBL-331) - Modular pack dispenser - Contains a single launch tube loaded with 30 GLD-115s. - Minefield dimensions: 80m long, 60m wide	

UNCLASSIFIED







UNCLASSIFIED  
4-72

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>GJW-410</b> Digger	Ditch and Trench Digger	Nil	Nil		<ul style="list-style-type: none"> <li>- Med BTG – Eng / Chem Def Bn</li> <li>- Hvy BTG – Eng / Chem Def Bn</li> <li>- DTG – Eng / Chem Def Regt</li> </ul>	<ul style="list-style-type: none"> <li>- 2 man crew</li> <li>- Operational range of 500 km.</li> <li>- Speed: 60 km/h on road.</li> <li>- Capabilities: Dozer blade; digging machine to dig AT ditches, and trenches</li> <li>Digging rate: <ul style="list-style-type: none"> <li>- Trench construction: 0.6-0.9m wide, 1.2m deep @ rate of 213 m<sup>3</sup>/h</li> <li>- Ditch construction: 3.5m wide, 3m deep @ rate of 141 m<sup>3</sup>/h</li> </ul> </li> </ul>	
<b>GCZ-111</b> AEV	Amphibious Armoured Engineer Vehicle	Nil	Nil		<ul style="list-style-type: none"> <li>- Marine Bde Engr Coy, Mine Warfare Pl and Engr Spt Pl.</li> <li>- MEF Div Cbt Engr Bn, Mine warfare Coy.</li> </ul>	<ul style="list-style-type: none"> <li>- Type 77 (WZ511) chassis</li> <li>- Crew of 2</li> <li>- V-blade dozer blade</li> <li>- 16 ton telescopic excavator</li> <li>- 50 km/h max road speed</li> <li>- 120 km swimming range</li> <li>- 370 km cruising range</li> <li>- 8 km/h max swim speed</li> </ul>	
<b>ZBL-09</b> WAPV	Wheeled Armoured Paving Vehicle	Nil	Nil		<ul style="list-style-type: none"> <li>- Marine Bde Engr Coy, Bridging Pl</li> </ul>	<ul style="list-style-type: none"> <li>- AKA: VN-1</li> <li>- 85 km/h: Max road speed</li> <li>- 6 km/h: Max swim speed</li> <li>- Type 09/ ZBL-09 chassis</li> <li>- Roadway dimensions: 35m long, 4m wide (estimated)</li> <li>- 5 min assembly time (estimated)</li> <li>Armoured version of the GLM-120A</li> </ul>	

UNCLASSIFIED

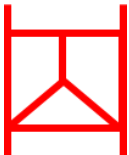







UNCLASSIFIED  
4-73

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>GJW-320</b> TRENCHER	Tracked Trench-Digger	Nil	Nil		<ul style="list-style-type: none"> <li>- Med Bde Engr Bn</li> <li>- Heavy Bde Engr Bn</li> <li>- Divisional Engr Regt</li> <li>- Marine Bde Engr Coy</li> <li>- MEF Div Combat Engineer Battalion</li> <li>- Light Bde Engr Coy</li> </ul>	<ul style="list-style-type: none"> <li>- 400 km operational range</li> <li>- 52 km/h max road speed</li> <li>- Type 83 152mm chassis, 6 roadwheels</li> <li>- Typical trench can be 4.1-4.5m wide at the top and 3.2m wide at the bottom</li> <li>- Up to 350 m<sup>3</sup>/hr of soft soil</li> <li>- Up to 150 m<sup>3</sup>/hr of hard ground</li> <li>- Carries a circular trench-digging machine similar in appearance to MDK-2 series</li> </ul>	
<b>GDG-130</b>	Armoured Backhoe Loader	Nil	Nil		<ul style="list-style-type: none"> <li>- Med Bde Engr Bn</li> <li>- Heavy Bde Engr Bn</li> <li>- Divisional Engr Regt</li> <li>- Marine Bde Engr Coy</li> <li>- MEF Div Combat Engineer Battalion</li> <li>- Light Bde Engr Coy</li> </ul>	<ul style="list-style-type: none"> <li>- 2 crew</li> <li>- 90 km/h max road speed</li> <li>- 600 km operational range</li> <li>- High speed excavator can dig cbt emplacements, trenches, firing positions, fill ditches and clear obstacles.</li> <li>- Can construct point obstacles during ctr mobility operations</li> </ul>	
<b>DUMP TRUCK</b>	HOWO Dump Truck	Nil	Nil		<ul style="list-style-type: none"> <li>- Used throughout all OPFOR Engr units</li> </ul>	<ul style="list-style-type: none"> <li>- Max Road Speed: 90 Km/h</li> <li>- 6x4 Chassis</li> <li>- 30-40T Payload</li> <li>- 20m<sup>3</sup> Capacity</li> </ul>	

UNCLASSIFIED







UNCLASSIFIED  
4-74

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>KMT-7</b>	Tank Mounted Mechanical Mine Clearing	Nil	Nil		- Mar Bde Engr Coy, Tpt Pl	- 2 crew 0 Installation Time: 30-45min - Lane clearing rate: 8-12 km/h - Clears 800mm wide tracks with an intermediate space 2.16m wide - EMT-7 magnetic signature projector can be used with the KTM-7 to initiate magnetic influence fused mines before the tank reaches them	
<b>GSL-132</b> ABV	Amphibious Obstacle Breacher	Nil	Nil		- MEF Div Cbt Engr Bn, Mine Warfare Coy, - Marine Bdr Engr Coy, Mine Warfare Pl	- 65 km/h: Max road speed - 25 km/h: Max swim speed - NBC protection - Track width mine plough, lane marking system - 2 x four pod 107mm obstacle clearance rocket tubes (to breach walls and similar structures)	
<b>GZM-003</b>	Self-Propelled Pontoon Bridge	Nil	Nil		- MEF Div Cbt Engr Bn, Aslt Cross Coy - MEF Div Cbt Engr Bn, Pontoon Bridge Coy - Med Bde Engr Bn, Pontoon Bridge Coy - Hvy Bde Engr Bn, Pontoon Bridge Coy - Div Engr Regt, Regt pontoon bridge coy	- 55 km/h: Max road speed - 10 km/h: Max swim speed - 500 km operational range - Two can be combined to form an approx. 80-ton capable ferry - 6 min prep time, 8 mins to couple two together	

UNCLASSIFIED









UNCLASSIFIED  
4-75







Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>GQL-111</b> MHMB	Scissor-Type Bridging System	Nil	Nil		<ul style="list-style-type: none"> <li>- MEF Div Cbt Engr Bn, Bridge Const Coy</li> <li>- Light Bde Engr Coy, Bridge pl</li> <li>- Med Bde Engr Bn, Bridge Const Pl</li> <li>- Hvy Bde Engr Bn, Bridge Const Coy</li> <li>- Div Engr Regt</li> <li>- Regt Rd and Bridge Coy</li> </ul>	<ul style="list-style-type: none"> <li>- Mercedes-Benz 8x8 XC2300 cross-country truck chassis</li> <li>- 7 pers for one span, 13 pers for a whole set</li> <li>- Each span: 15m long and 3.8m wide. One set total length: 74m</li> <li>- 1 span time: 9-11min</li> <li>- Complete set (spans): 55-65min</li> </ul>	
<b>JAC Military High Speed Forklift</b>	Forklift	Nil	Nil		<ul style="list-style-type: none"> <li>- MEF Div Cbt Engr Bn, Bridge Const Coy and Engr Spt Coy</li> <li>- Med Bde Engr Bn, Engr Spt Coy</li> <li>- Hvy Bde Engr Bn, Engr Spt Coy</li> </ul>	<ul style="list-style-type: none"> <li>- Max speed 80 km/h</li> <li>- Max grade 45%</li> <li>- Fording depth 60cm</li> <li>- Max working height 2.7m</li> </ul>	
<b>CEMENT MIXER</b>	HOWO Concrete Mixer Truck	Nil	Nil		<ul style="list-style-type: none"> <li>- Engr Spt Coy, Med and Heavy Bde Engr Bn</li> <li>- Bridge Const Coy and Engr Spt Coy, MEF Div Cbt Engr Bn</li> </ul>	<ul style="list-style-type: none"> <li>- Generic Concrete Mixer</li> <li>- 6x4 Chassis</li> <li>- 10 cubic meter truck</li> <li>- 40T Payload</li> </ul>	

UNCLASSIFIED







UNCLASSIFIED  
4-76

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>SKID STEER WHEELED LOADER</b>	N/A	Nil	Nil		<ul style="list-style-type: none"> <li>- MEF Div Cbt Engr Bn, Bridge Const Coy and Engr Spt Coy</li> <li>- Med Bde Engr Bn, Bridge Const Coy and Engr Spt Coy</li> <li>- Hvy Bde Engr Bn, Bridge Const Coy and Engr Spt Coy</li> </ul>	<ul style="list-style-type: none"> <li>Max speed 10 km/h</li> <li>Used for general construction duties.</li> <li>- Bucket attachment</li> <li>- Fork attachment</li> <li>- Concrete cutting attachment</li> <li>- Hydraulic sweeping attachments</li> </ul>	
<b>CLG-856</b>	Front End Loader	Nil	Nil		<ul style="list-style-type: none"> <li>- MEF Div Cbt Engr Bn, Engr Spt Coy</li> <li>- Hvy Bde Engr Bn, Engr Spt Coy</li> <li>- Med Bde Engr Bn, Engr Spt Coy</li> <li>- Div Engr Regt, Constr Bn</li> </ul>	<ul style="list-style-type: none"> <li>Max road Speed: 30 km/h</li> <li>- Designed for General construction tasks.</li> <li>- Loading Dump trucks, Road Maintenance / Construction, Quarrying, general movement of construction Materials.</li> </ul>	
<b>QY25J</b>	25 Tonne Mobile Crane	Nil	Nil		<ul style="list-style-type: none"> <li>- MEF Div Cbt engr Bn, Bridge Constr Coy / Engr Spt Coy</li> <li>- Hvy Engr Bn, Bridge Constr Coy / Engr Spt Coy</li> <li>- Med Bde Engr Bn, Bridge Constr Coy / Engr Spt Coy</li> <li>- Div Engr Reg, Constr Bn</li> </ul>	<ul style="list-style-type: none"> <li>- Max Road Speed: 90 km/h</li> <li>- Weight: 32800 Kgs</li> <li>- Max Lifting Height: 34 m</li> <li>- Max Lifting load: 25 ton</li> <li>- Designed for general Construction duties.</li> </ul>	

UNCLASSIFIED  
4-77

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
GQL-321	Ribbon Pontoon Bridge	Nil	Nil		<ul style="list-style-type: none"> <li>- Hvy Bde Engr Bn, Pontoon Bridge Coy</li> <li>- Div Engr Regt, Regt Pontoon Bridge Coy</li> <li>- MEF Div Cbt Engr Bn, Pontoon Bridge Coy</li> </ul>	<ul style="list-style-type: none"> <li>- Chassis: Tiema XC2200</li> <li>- Max speed: 85 km/h</li> <li>- Width folded: 3.2m</li> <li>- Width unfolded: 8m</li> <li>- Floating Bridge: 60000kg Bridge length is 109m, roadway width 6.5m, emplacement time 18 mins</li> <li>- Floating Bridge: 20000kg bridge length is 170m, roadway width 3.2m, emplacement time is 26 mins</li> <li>- Ferry Raft: 110000 kg, length is 39.2m, roadway width is 6.5m, emplacement time is 13 mins</li> <li>- Ferry Raft: 60000kg raft length is 20.2m, roadway width is 6.5m, emplacement time is 10 mins</li> <li>- Ferry Raft: 40000kg raft length is 13.2m, roadway width is 6.5m, emplacement time: 8 mins</li> <li>- AKA: Type 79A Ribbon Bridge</li> </ul>	
							
GZQ-411	Light Ribbon Pontoon Bridge	Nil	Nil		<ul style="list-style-type: none"> <li>- Div Engr Regt, Pontoon Bridge Coy.</li> </ul>	<ul style="list-style-type: none"> <li>- One set of equipment consists of four "First" Boats, four "Stern" boats, Four "Flaps" and Two Transport vehicles and auxiliary equipment.</li> <li>- Length of the bridge is 100m</li> <li>- Carry Capacity is 16 tonne</li> <li>- AKA: Type 63 Light Pontoon Bridge</li> </ul>	
							







UNCLASSIFIED  
4-78

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>GLZ-110</b> ABV	Obstacle Breach and Minesweeper	Explosive Mine Clearance	100m		- Lte Bde Engr Coy, Mine Warfare Pl Med Bde Engr Bn, Mine Warfare Coy - Med Bde Cbt Engr Coy	- MICLIC – 100m long, 4.5m wide - Track width mine plough - Magnetic signal duplicator - Lane marking system - NBC protection - Type 09 chassis - Road speed: 100 km/h - Swim speed: 8 km/h - Crew of 3	
<b>GBL-130</b>	Armoured Mine Dispenser	QJC88 12.7mm HMG	1500m EFF Air Def  2000m EFF Gnd Spt		-Med Bde Engr Bn, Mine Warfare Coy -Hvy Bde Engr Bn, Mine Warfare Coy - Div Engr Regt, Regt Cbt Engr Coy	- AT and AP mine laying / dispersion - 216 launch tubes ( 6 x 36 mine canisters) - Canister diameter: 122mm - Distance mines launched from vehicle: 20-150m - Max length of minefield with one load: 2160m (1 canister every 10m) - Reload time: 18min - 55 km/h: max road speed - 32 km/h: max cross road speed - 5 km/h: minefield dispensing speed	
<b>GLM-120A</b>	Roadway Laying System	Nil	Nil		- Hvy Bde Engr Bn, Pontoon Bridge Coy. - Div Engr Regt, Rd and Bridge Coy / Pontoon Bridge Coy	-Mechanised Roadway Laying system that is typically used to prepare exit points on beaches and river crossing points that would be degraded by heavy vehicles moving through the area. - Emplacement time: ~5 min - Displacement time: ~10 min - Length: 40m - Width: 4m - Maximum weight over road: 60,000 kg (Tracked) 20,000 kg (Wheeled)	

UNCLASSIFIED









UNCLASSIFIED  
4-79

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
Aircraft / Drones							
<b>CH-802</b> UAV	Unmanned Aerial Vehicle	Nil	Nil		- Light BTG –Recon Bn - Med BTG –Recon Bn - Hvy BTG –Recon Bn	- Operational radius: 30 km. - Endurance: 2.5hrs. - Hand-thrown launch - Real time data transmission. - Mainly used for R&S missions - Up to 60 km/h - Service ceiling: 4 km - EO Sensor	
<b>ASN207</b> UAV	Medium-Altitude Long-Endurance UAV	Nil	Nil		- The Division Artillery Regiment	- Range: 600 km - Max Altitude: 5,100m - Endurance: 16 Hrs - Launched by assisted rocket. - Lands via Parachute - Primary use in the ISR Role, but can be adapted for EW/ECM roles (JN-1102) - Sensors include Colour / Infrared Cameras, Laser range finders and Designators. - Launcher: MV3 (6x6) adapted vehicle.	
<b>Z-19A</b>	Recon/Attack Helicopter	All Hard point Mounted, 4 mounts			- MEF Div Helo Regt	- 2 crew. - Equipped with millimetre-wave fire control radar - Turret has FLIR, TV, and Laser Rangefinder - Up to 280 km/h. - Operational range: 700 km - Service ceiling: 6 km - AKA: Harbin Z-19 - All weapons hard point mounted. - 4 weapon hard points available, 2 under each wing	
		UPK-23 Twin 23mm Autocannon pod	2 km				
		12.7mm Gun pod	1.5 km				
		57mm Rocket Pod (18 tube)	2 km Eff / 4 km Max				
		TY-90 AAM	6 km				
		HJ-8 ATGM	4 km				







UNCLASSIFIED

UNCLASSIFIED  
4-80

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>Z-10ME</b>	Medium Attack Helicopter	23mm Autocannon Chin Mount	2.5 km		-DTG Div Helo Regt	<ul style="list-style-type: none"> <li>- 2 crew.</li> <li>- Operational range of 800 km.</li> <li>- Speed: Up to 300 km/h.</li> <li>- Service ceiling: 6000m.</li> <li>- Gunship version has 4 hard points for mounting rocket pods, ATGM's, and bombs.</li> <li>- Can also fire HJ-10 ATGM</li> <li>- ECM/CCM: RWR, laser warning receiver, infrared jammer, MAWS, chaff &amp; flare dispensers</li> <li>- AKA: Mi-8M.</li> </ul>	
		HJ-9 ATGM	100m – 5.5 km				
		HJ-10 ATGM	2-10 km				
		57, 70, or 90 mm Rocket Pods	Varies 2- 3 km effective				
		TY-90 AAM	6 km				
<b>Z-9B</b>	Medium Utility Helicopter	Nil	Nil		<ul style="list-style-type: none"> <li>- MEF Div Helo Regt</li> <li>- DTG Div Helo Regt</li> </ul>	<ul style="list-style-type: none"> <li>- 2 crew.</li> <li>- Troop Capacity: 10 troops, or 4 litters</li> <li>- Endurance: 5 hours</li> <li>- Operational range of 1000 km.</li> <li>- Speed: Up to 305 km/h.</li> </ul>	
<b>Z-8A</b>	Multi-Role Helicopter	Nil	Nil		- DTG Div Helo Regt	<ul style="list-style-type: none"> <li>- 3 crew.</li> <li>- Troop Capacity: 27 troops, or 15 litters</li> <li>- Endurance: 4 hours</li> <li>- Operational range of 1020 km.</li> <li>- Speed: Up to 275 km/h.</li> </ul>	

UNCLASSIFIED









UNCLASSIFIED  
4-81

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>CH-91</b> UAV	ISR and Artillery Correction Drone	Nil	Nil		- MEF Div UAV Coy, Trans Launch Pl	- Endurance: 5 hrs - Radius: 175 km - Maximum altitude: 4480m - Maximum speed: 180 km/h - Deployment time: ~60 Min - Recovery time: ~20 min - AKA: BZK-008	
<b>ASN-15</b> Lt UAV	Tactical ISR Drone	Nil	Nil		-Med Mech Inf Bn, Recon Pl	- Endurance: 1 Hr - Range: 10 km - Max Speed: 93 km/h - Operational Altitude: 500 m - Optical Sensors only	
<b>Chemical Vehicles</b>							
<b>CSK-141</b>	Chemical Defence Vehicle	Roof-mounted 12.7mm MG or 35mm AGL	1500m		- Used throughout OPFOR with Chem and Med elms.	- 2/10 crew - 120 km/h max road speed - Operational range: 500 km - Fording depth with prep: 1.2m, without prep: 0.75m - Equipped with remote turret that can be mounted with MG, ATGM or grenade launchers - Payload capacity: 1200kgs - Towing capacity: 2000kgs	





UNCLASSIFIED



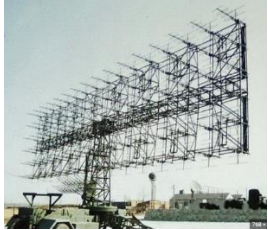




UNCLASSIFIED  
4-82







Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
EQ2102	Water Tanker and Area Decon Vehicle	Nil	Nil		- Used throughout OPFOR with Chem and Med elms.	- used to wash individual weapons and clothing after personnel have been exposed to chemicals. - Mtd on GAZ-66 truck. - 90 km/h: max road speed - Operational range: 550 km	
FCZ-02B	CHEM RECON	Nil	Nil		Found throughout OPFOR in the Chemical Defence and Recon Role.	Holds three crew and seven Passengers. Max Speed: 100 km/h Cross Country Speed: 40 km/h Max range: 800 Km Composite Armour rated to 23mm at the front and 12.7mm on the sides. AKA: Type-14 or ZBL-09	
SX2190	Rescue Fire Truck	Nil	Nil		- MEF Div chemical Defence Bn, Decon Coy. - Bde Chemical Def Coy, Decon Pl - Heavy Bde Chemical Def Coy, Decon Pl	- Max speed: 86 km/h - Max Cargo Weight: 18500 kg - 6x6 special heavy duty truck - licensed version of the Steyr 91	
WJ-85	Field Laboratory Vehicle	Nil	Nil		- Div Chem Def Bn, Decon Coy.	- Described somewhere between "a railway car and a sedan". Separated into 3 sections, with airtight sealed gaskets on the doorways. - Sections: Forward section – occupants, midsection – lab room, rear section – decontamination apparatus	

UNCLASSIFIED

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
RADAR Systems							
SLC-2E CBR	Counter Battery Radar	Radar	Detection Ranges: - Arty: 35 km - Rockets: 50 km		- Used throughout OPFOR Artillery units.	- Mounted on a EQ2102 3.5 ton truck - Accuracy: 35m (for range less than 10 km)  Similar Variations: - BL-904 - Type 704	
702D Met Radar	Meteorological Radar System	Radar	200 km Detection 25 km Altitude		- MEF Dif MRL Bn, TA PI - Div Arty Regt SP ARTY Bty / MRL Bty / TA Coy	- Tracks weather Conditions from balloon-carried radio transmitters. - Sends the data to Artillery Systems for use in Ballistic calculations. - Contributes substantially to First Round Accuracy.  Tracks: - Wind speed / direction, - Temperature, - Humidity and Pressure  - Max Speed: 85 km/h - Max Range: 800 km	





Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>JY-27 Radar</b>	Long Range Early Warning (LR EW) Radar	Horizontally Polarised Radar	4x8 Array : 280 km		- Div AD Bn, Radar Pl	<ul style="list-style-type: none"> <li>- Long range Aircraft Early Warning system.</li> <li>- Designed to detect low-observable air targets (Aircraft using Stealth technology)</li> <li>- Can be mounted on different chassis', including Self Propelled or Trailers.</li> </ul>	
			6x16 Array: 390 km				
<b>FARA-VR GSR</b>	Ground Surveillance Radar	Radar	Detection Ranges: Tank: 8 km Truck: 10 km Soldier: 4 km		<ul style="list-style-type: none"> <li>- Bde Marine Mech Bn, SP Arty Coy</li> <li>- Med Mech Inf Bn, SP Mor / How Coy</li> <li>- Heavy Combined Arms Bn, SP Mor / How Coy</li> </ul>	<ul style="list-style-type: none"> <li>- J band frequency</li> <li>- Continuous operation time – 12h</li> <li>- Emplacement/displacement time: up to 3 min</li> <li>- auto space surveillance in the search sector, detection of moving targets, rough determination of target coordinates, target trajectory storage</li> <li>-Targeting display can be mounted directly on a Machine gun or Grenade launcher.</li> <li>AKA: 1L111M</li> </ul>	

UNCLASSIFIED  
4-85

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>JY-17A</b> GSR	Ground Surveillance Radar	Radar	Detection Ranges: Tank: 25 km Truck: 15 km Helo: 20 km Ship: 30 km		- Marine Bde Recon Coy, HM Recon Pl	- Low Altitude, Medium range Doppler Radar - Operational frequency range: 8-12.5 GHz (X-band) - Target capacity: 10 tracks automatic extraction - Can be Vehicle Mounted. - Target speed: 2 to 100 km/hr	
<b>General Vehicles</b>							
<b>EQ-2050</b>	Light Utility Vehicle	Role Dependant	Note: EQ2050 vehicles assigned to front line units will have a weapons mount allowing a single weapon system to be mounted on the vehicle, usually, Type 80 MG, QJZ-89, QLZ-04/87, or HJ-9 (these weapons can still be dismounted)		- Used throughout OPFOR in varying roles.	- Operational range: 500km/h - Speed, Max 120km/h Variants: EQ5102G FOOD TRUCK EQ2050 Survey EQ2050 ambulance EQ2050 HJ-9 (Anti-Armour) EQ2050 (JN-1105) EW EQ2101 DECON VEH EQ2050 UAV GC VEH EQ2050 LOUD SPEAKER EQ2050 CRV EQ2050 DECON VEH CSK-141 CSK-181	
<b>BJ2022</b>	4x4 Utility Vehicle	Nil	Nil		- Used throughout OPFOR in varying roles.	- 8 pers or 750kg capacity. - Used as a troop and cargo transport, command vehicle or reconnaissance vehicle - Up to 100 km/h.	

UNCLASSIFIED




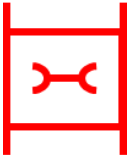

UNCLASSIFIED  
4-86

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
EQ-2102	General Utility Truck	Nil	Nil		- Used throughout OPFOR in varying roles.	- 2 per cab. - 2.4L petrol engine. - Operational range of 770 km. - Up to 100 km/h.	
MV3 HMOV3	3 <sup>rd</sup> Generation Utility Vehicle	Nil	Nil		Found Throughout the OPFOR	Variants: LIGHT (4X4 – 3 Tonne Capacity) MEDIUM (6X6 – 5 Tonne capacity) HEAVY (8X8 – Up to 10 tonne Capacity) C3 VAN MAINTENANCE FUEL TANKER WATER TANKER SAM RESUPPLY SAM COMMAND VEHICLE TRANS-LOADER SEMI-TRAILER RECOVERY AREA DECON AEROSOL DECON RADIO VAN SATCOM UAV LAUNCHER COMPUTER VAN COMMS ELINT AA POWER SUPPLY SAWMILL	

UNCLASSIFIED









UNCLASSIFIED  
4-87

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>MOTORCYCLE</b>	Utility Motorcycle	Nil	Nil		Found throughout OPFOR in the Signal elements. Used as a courier vehicle.	Model: Galati-XL Max speed: 100 km/h Fuel tank size: 7L Max Load capacity: 180Kg	
<b>TRAILER</b>	Generic Equipment Trailer	Nil	Nil		Found Throughout the OPFOR	Variants: - 0.5T, 1.5T, 5T - GENERATOR - KITCHEN, WATER - POL - COMPRESSOR	
<b>TYPE 653A</b>	Armoured recovery vehicle	12.7mm HMG	1500m EFF Air Def 2000m EFF Gnd Spt		- MEF Div Combat engineer Bn, Maint Sect. - Marine Bde Arty Bn, Maint Sect. - Marine Bde AD Bn, Maint Sect. - MEF Div MRL Bn, Maint Sect.	- Built of the Type 69 MBT Chassis. - Crew of 5 - Max Speed: 50 Km/h - Winch pulling force: 70,000 Kg - Crane lift weight: 20,000 Kg - Dozer Blade mounted on Front.	






UNCLASSIFIED

UNCLASSIFIED  
4-88





Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
PCZ-45 ASV	Ammunition Supply Vehicle	12.7mm HMG	1500m EFF Air Def 2000m EFF Gnd Spt		- Div Arty regt, SP ARTY Bty	- Crew of three - Carries 90 155mm Projectiles and associated charges via a conveyer belt at the rate of 6 – 8 rounds per minute.  - The Crane is used to load pallets of ammunition through the roof of the vehicle.  - Weight of Vehicle 33000 kg - Max Speed 55 km/h - Max Range 450 km	
CSK-141	Light Tactical Vehicle	12.7mm HMG  OR	1500m EFF Air Def 2000m EFF Gnd Spt		- Light Bde Tactical Group, Light Infantry Coy.	- Standard Armour Protection up to 7.62x39 - Maximum Speed: 135 Km/h - Fording Depth: 0.75m (up to 1.2m with preparation) - AKA: Mengshi	
		35mm AGL	1750m				
Electronic Warfare / Miscellaneous							
ZODIAC	Tactical Water Transport	Nil	Nil		- Med Bde engineer Bn, Bridge Const Coy - MEF Div Combat Engineer Bn, Aslt Cross Coy and Bridge Const Coy - Marine Beach Recon Bn	- Inflatable Watercraft designed for tactical infiltration and exfiltration into the battlespace. - Powered by a 40 – 65 Hp Engine - Carries one crew member and nine personnel depending on equipment load out.	

UNCLASSIFIED









Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>CEW-03A</b> ELINT	Electronic Countermeasure System	<ul style="list-style-type: none"> <li>- High-end electronic Counter measure system capable of conducting all-round electronic warfare.</li> <li>- System Consists of four units Mounted in two truck and trailer units.</li> <li>- The system aims to destroy the electromagnetic capabilities of targets through excessive power.</li> <li>- The Maximum Equivalent Radiation Power can Exceed 500 Kw.</li> <li>-AKA: LDK-190 or CHL-906</li> </ul>	Unk		<ul style="list-style-type: none"> <li>- Light Bde Recon Bn, Medium EW Coy.</li> <li>- MEF Div information Warfare Bn.</li> </ul>	<b>The ELINT/ESM A Module:</b> -Command and control system that detects and locates EM Signals in the battlespace. After analysis, it tasks the B, C and D Modules.	
						<b>ECM B Module:</b> Responsible for supressing and conducting Interference of the Frequency band 0.5 – 2 GHz	
						<b>ECM C Module:</b> Responsible for supressing and conducting Interference of the Frequency band 2 – 18 GHz	
						<b>ECM D Module:</b> Responsible for supressing and conducting Interference of the Frequency band 18 – 40 GHz	







UNCLASSIFIED  
4-90


Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
JN-1105	Mobile Communication Countermeasure system.	Nil	Nil		<ul style="list-style-type: none"> <li>- Light Bde Recon Bn, Medium EW coy</li> <li>- MEF Div Information Warfare Bn, EW Coy.</li> <li>- Light Bde Recon Bn Ew Pl</li> </ul>	<ul style="list-style-type: none"> <li>-A Mobile Communication Countermeasure system designed to locate and Jam enemy tactical radio communications.</li> <li>-The System is usually mounted in a vehicle, but can be man packed by several personnel to access remote areas.</li> <li>-System covers the communication frequencies of: <ul style="list-style-type: none"> <li>- HF (1.6 – 30 MHz)</li> <li>- VHF (30 – 100 MHz)</li> <li>- UHF (100 – 500 MHz)</li> </ul> </li> </ul>	
DZ9300	Man Packable Radar Recon System	Nil	Nil		-EW Pl of the Light Bde recon Bn.	<ul style="list-style-type: none"> <li>-Portable Radar system designed to detect operation modes and technical data of hostile land based, airborne and shipborne radar systems.</li> <li>-DZ9300A covers the Frequency range of 50 – 250 MHz</li> <li>-DZ9300B covers the frequency range of 250 – 1000 MHz</li> </ul>	

UNCLASSIFIED

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
Communication Systems							
TBR-002	VHF FM Transceiver	Nil	Nil		Found Throughout OPFOR at the section / squad level.	<ul style="list-style-type: none"> <li>-Tactical level communications designed to allow communication from Squad leaders to Platoon or Company HQ.</li> <li>-Frequencies: 45.000 MHz to 54.975 MHz</li> <li>-Channel spacing is about 25 KHz</li> <li>-Output Power 0.1W to 0.8W</li> <li>-Average Communication Distance is 2 Km</li> </ul>	
TBR-120A (BWT-119)	VHF FM Transceiver	Nil	Nil		General use at the COY / BN and REGT / BDE	<ul style="list-style-type: none"> <li>- Designed as a tactical communication system for infantry and artillery.</li> <li>- Frequency range: 30.00 – 79.975 MHz</li> <li>- Transmit Type: FM</li> <li>- Channel Spacing: 25 kHz</li> <li>- Power Output: 6 W on High, 1 W on Low.</li> </ul>	
TBR-142	VHF Radio	Nil	Nil		Specialised Artillery Network	<ul style="list-style-type: none"> <li>- Artillery Communication System consists of the TBR-142(I) VHF Transceiver and TBR-142(IIID) Multifunction telephone. The Transceiver receives firing solutions from the ZXY88-200 Artillery Command and Control system, that is provided with targets from the commander via the TBR-142(II) Commanding Device.</li> <li>- Frequency range: 40.000 to 59.975 MHz</li> <li>- Power Output: 1 W / 0.3 W</li> </ul>	
Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image

UNCLASSIFIED  
4-92

<b>VRS-1</b>	VHF Radio	Nil	Nil		Co-operative communication between Army, Navy and Airforce	<ul style="list-style-type: none"> <li>- Mainly used for co-operative communications between Army, Navy and Airforce.</li> <li>- Widely used as a Vehicle / Ship borne radio system.</li> <li>- Frequency Hopping capable</li> <li>- Frequency Ranges: <ul style="list-style-type: none"> <li>- 30 – 88 MHz</li> <li>- 108 – 174 MHz</li> <li>- 225 – 420 MHz</li> </ul> </li> <li>- Channel spacing: 25 kHz</li> <li>- Preset Channels: 99</li> <li>- Power Output: 15 W</li> </ul>	
<b>PRS-4</b>	VHF Digital Radio	Nil	Nil		Arty / Recon Tactical elms.	<ul style="list-style-type: none"> <li>- DSP based VHF Anti-jamming radio.</li> <li>- Widely used by infantry, artillery and reconnaissance for tactical communication.</li> <li>- Frequency hopping capable</li> <li>- Frequency Range: 30 – 88 MHz</li> <li>- Channel Spacing: 25 kHz</li> <li>- Power Output: 2W / 0.35 W</li> <li>- Modulation mode: FM</li> </ul>	
<b>PRC-146</b>	HF Digital Radio	Nil	Nil		General use at the BDE / REGT and DIV levels.	<ul style="list-style-type: none"> <li>- Digital Signal Processing (DSP) based anti-jamming HF Digital Radio.</li> <li>- Frequency Range: 1.6 – 30 MHz (in 10 Hz Steps)</li> <li>Operating Modes: USB, LSB, AM, CW</li> <li>Memory Channels: 256</li> <li>Receiver Sensitivity: &lt;0.35 <math>\mu</math>V</li> <li>Transmitter Frequency Stability: <math>2 \times 10^{-6}</math>/Day</li> <li>Transmitter Frequency Accuracy: <math>2 \times 10^{-6}</math></li> <li>Output Power: 5, 20 W (Manpack)</li> <li>(Vehicle with PA: 125 W)</li> </ul>	

Designation	Type	Calibre	Range	Symbol	Located	Remarks	Image
<b>BT-1 (ZT-1)</b>	VHF Radio	Nil	Nil		General use at the BDE / REGT and DIV levels.	<ul style="list-style-type: none"> <li>- Man portable Tactical Radio.</li> <li>- Can be paired with a 50 W Amplifier and mounted in vehicles</li> <li>- Frequency Range: 30-88 MHz</li> <li>- Channel Spacing: 50 / 25 kHz</li> <li>- Number of Channels: 1,160 / 2,320</li> <li>- Preset channels 11</li> <li>- Power output: 4 W / 0.2 W (Vehicle with PA: 50 W/4 W)</li> <li>- Modulation Mode: FM</li> <li>- Frequency Stability: <math>2 \times 10^{-6}</math></li> <li>- Sensitivity: <math>\leq -115</math> dBm</li> </ul>	