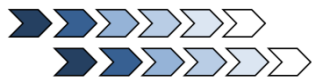
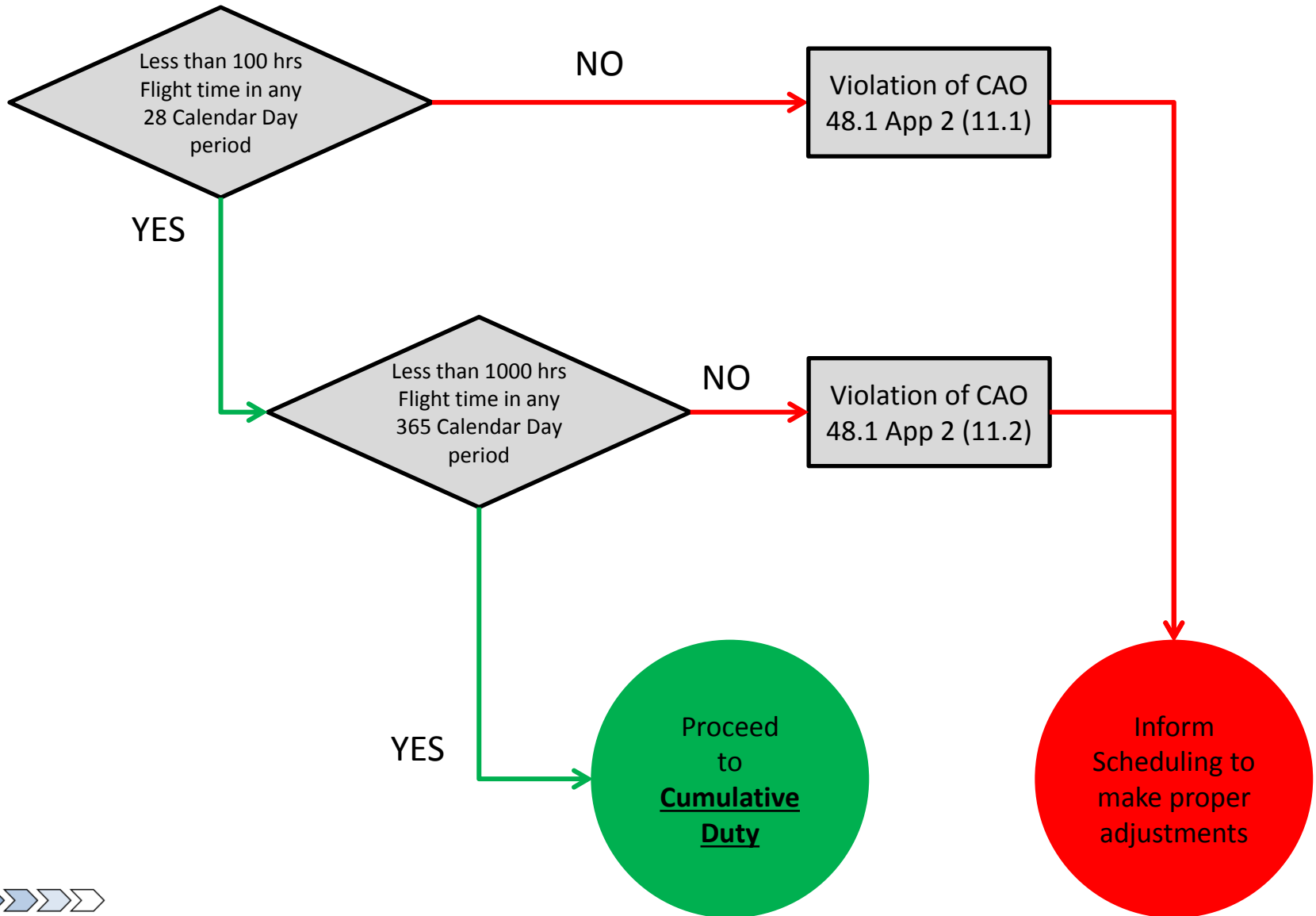


Crew member Aid for Scheduled Limitations Under CAO 48.1 (Complex Operations)

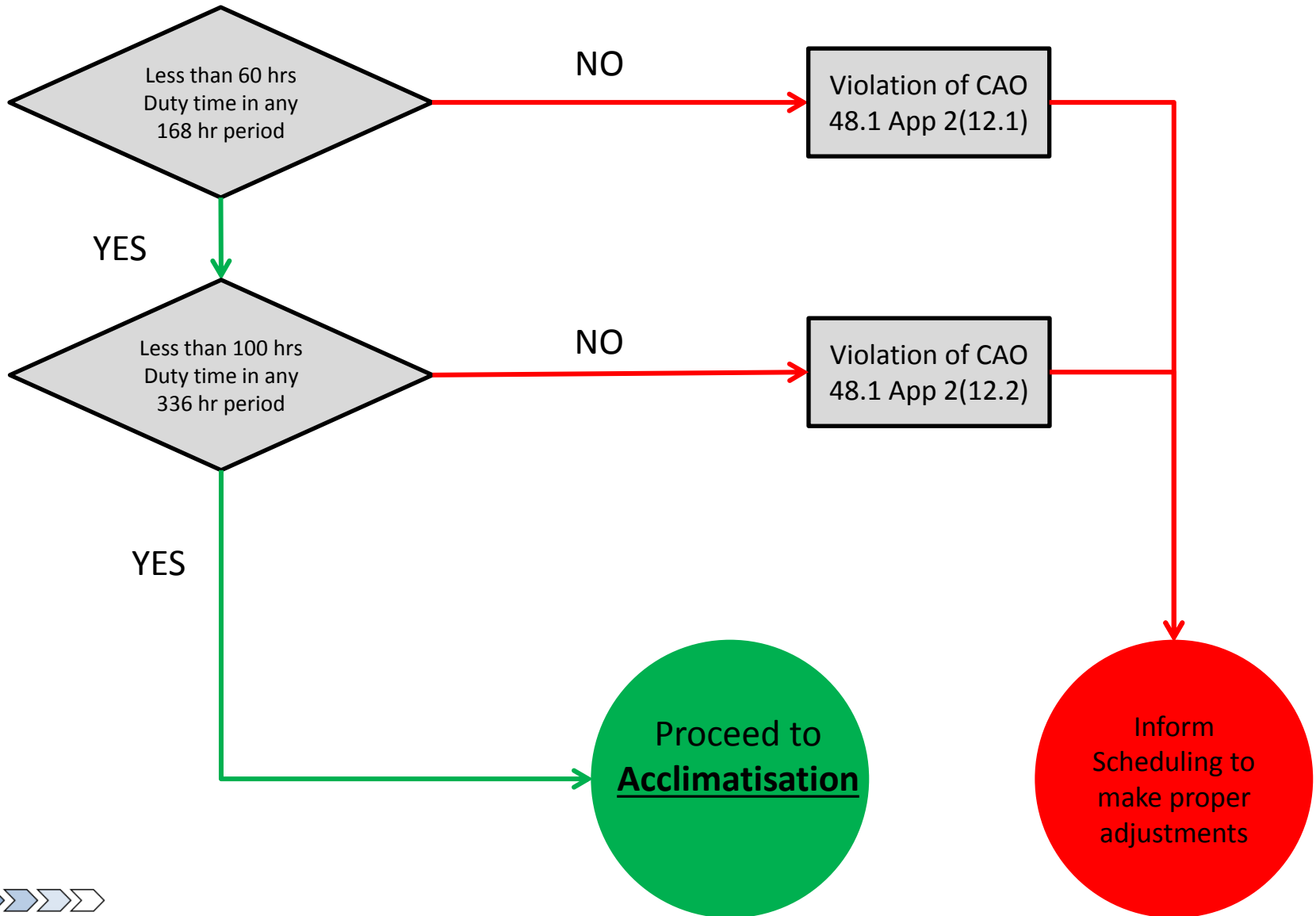
v 1.1



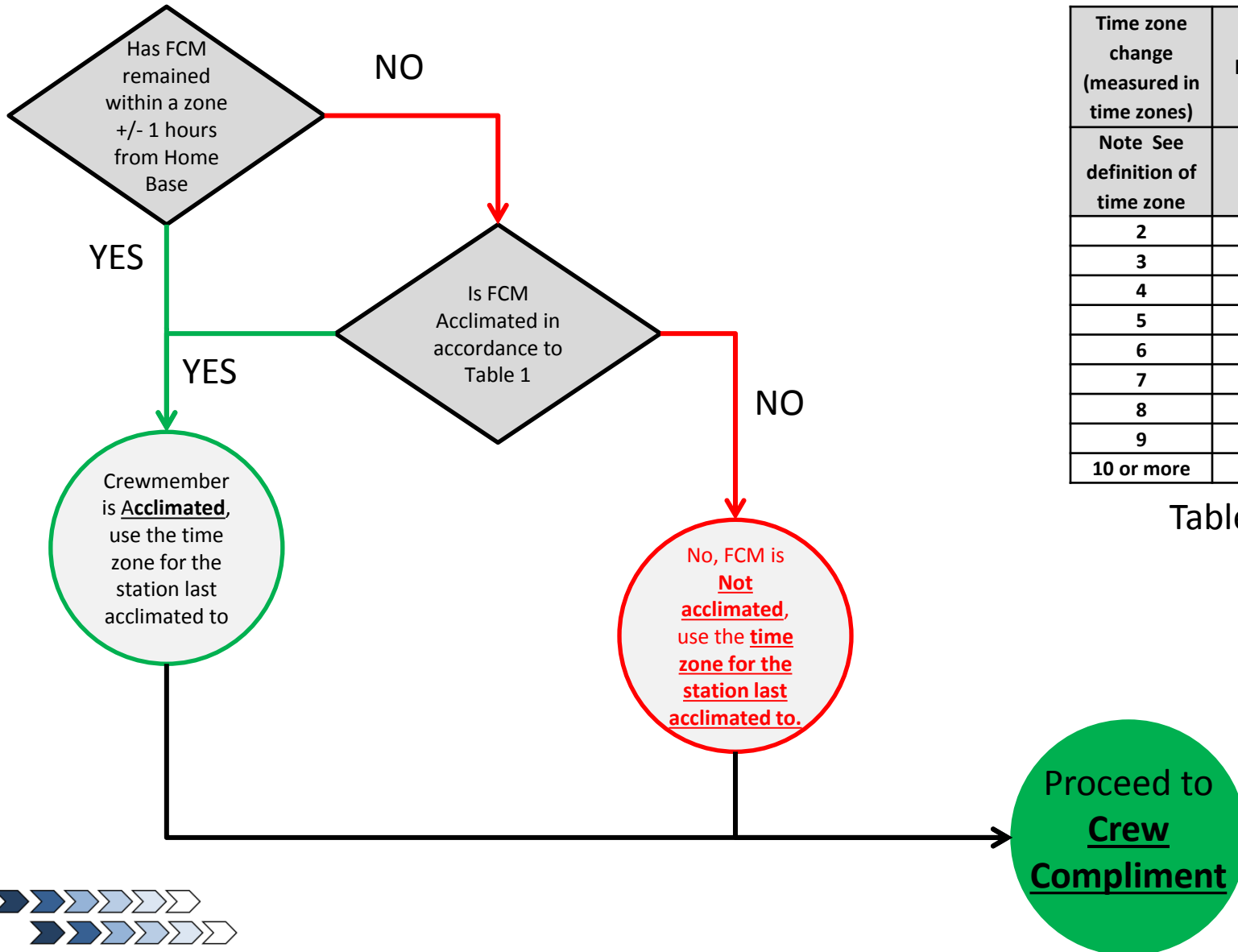
Cumulative FTL Limitations



Cumulative Duty Limitations



Acclimatisation

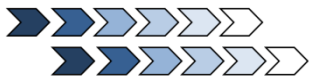
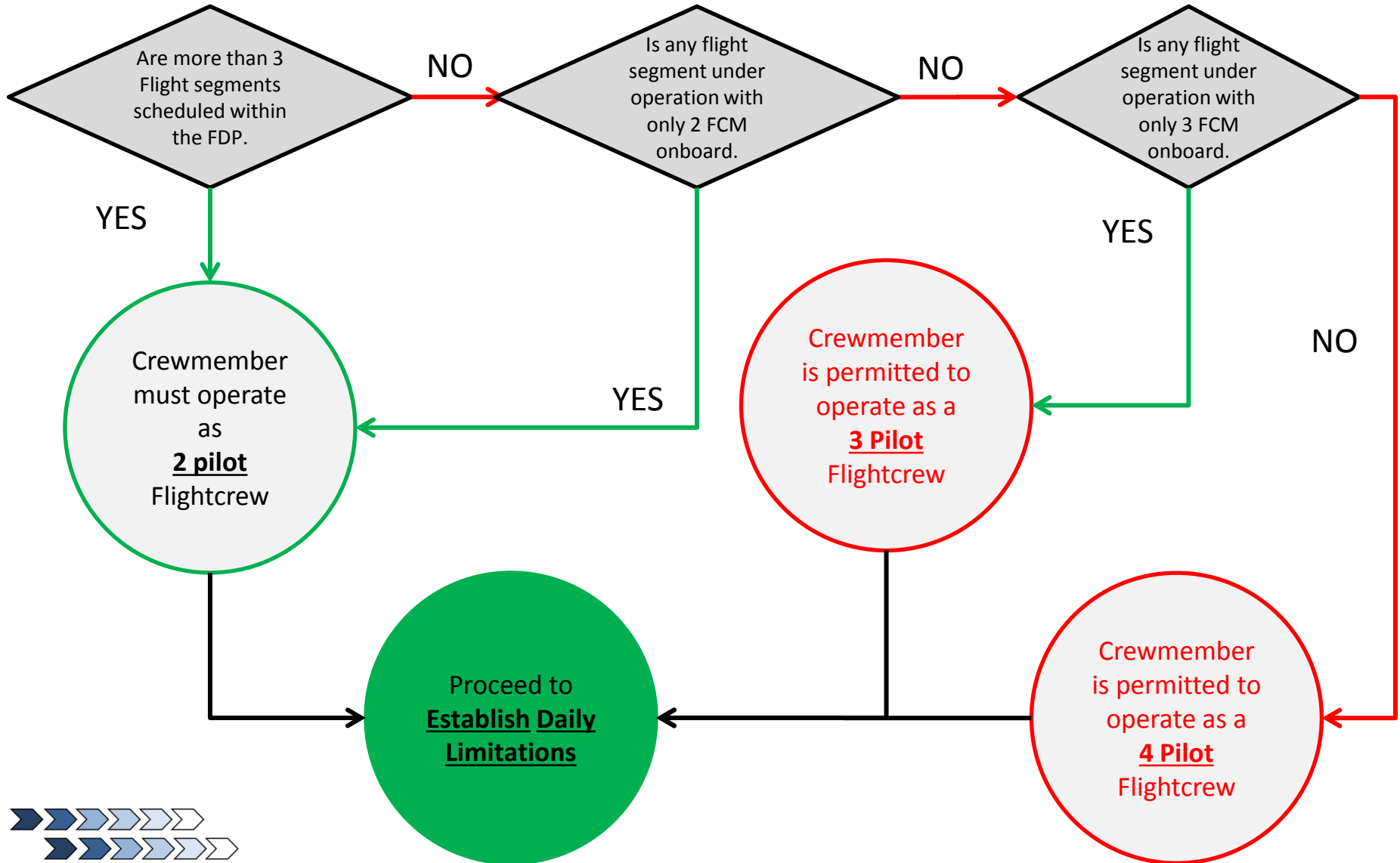


Time zone change (measured in time zones)	Adaptation period to become acclimated to new location (hours)	
	West	East
2	24	30
3	36	45
4	48	60
5	48	60
6	48	60
7	72	90
8	72	90
9	72	90
10 or more	96	120

Table 1



Crew Compliment



Establish Daily FDP and Flight Time Limitations:

Acclimatised time at start of FDP	Maximum FDP												Maximum Flight time in FDP											
	2 Pilots						3 Pilots			4 Pilots			2 Pilots						3 Pilots			4 Pilots		
	According to sectors to be flown						According to In-flight rest facility						According to sectors to be flown						According to In-flight rest facility					
	1-2	3	4	5	6	7+	Class 1	Class 2	Class 3	Class 1	Class 2	Class 3	1-2	3	4	5	6	7+	Class 1	Class 2	Class 3	Class 1	Class 2	Class 3
0000 – 0459	10:00	9:00	9:00	8:00	8:00	8:00	14:00	12:30	11:00	15:00	13:30	11:30	8:00	8:00	8:00	7:00	7:00	7:00	12:00	10:30	9:00	13:00	11:30	9:30
0500 – 0559	11:00	10:00	10:00	9:00	9:00	9:00	14:00	12:30	11:00	15:00	13:30	11:30	9:00	8:00	8:00	8:00	8:00	8:00	12:00	10:30	9:00	13:00	11:30	9:30
0600 – 0659	12:00	11:00	11:00	10:00	10:00	9:00	15:30	14:30	13:30	17:30	16:00	14:00	9:00	9:00	9:00	8:00	8:00	8:00	13:30	12:30	11:30	15:30	14:00	12:00
0700 – 0759	13:00	12:00	12:00	11:00	11:00	10:00	15:30	14:30	13:30	17:30	16:00	14:00	9:30	9:00	9:00	9:00	9:00	8:00	13:30	12:30	11:30	15:30	14:00	12:00
0800 – 1059	14:00	13:00	13:00	12:00	11:00	11:00	16:00	15:30	15:00	18:00	17:00	15:30	10:00	9:30	9:30	9:00	9:00	9:00	14:00	13:30	13:00	16:00	15:00	13:30
1100 – 1359	13:00	12:00	12:00	11:00	11:00	10:00	15:30	15:00	13:30	17:30	16:00	14:00	9:30	9:00	9:00	9:00	9:00	8:00	13:30	13:00	11:30	15:30	14:00	12:00
1400 – 1459	12:00	11:00	11:00	10:00	10:00	9:00	15:00	13:30	12:00	16:30	15:00	13:00	9:00	9:00	9:00	8:00	8:00	8:00	13:00	11:30	10:00	14:30	13:00	11:00
1500 – 1559	11:00	10:00	10:00	10:00	9:00	9:00	15:00	13:30	12:00	16:30	15:00	13:00	9:00	8:00	8:00	8:00	8:00	8:00	13:00	11:30	10:00	14:30	13:00	11:00
1600 – 2359	10:00	9:00	9:00	9:00	8:00	8:00	14:00	12:30	11:00	15:00	13:30	11:30	9:00	8:00	8:00	8:00	7:00	7:00	12:00	10:30	9:00	13:00	11:30	9:30

Duration of off-duty period immediately before the FDP	Maximum FDP												Maximum Flight time in FDP											
	2 Pilots						3 Pilots			4 Pilots			2 Pilots						3 Pilots			4 Pilots		
	According to sectors to be flown						According to In-flight rest facility						According to sectors to be flown						According to In-flight rest facility					
	1-2	3	4	5	6	7+	Class 1	Class 2	Class 3	Class 1	Class 2	Class 3	1-2	3	4	5	6	7+	Class 1	Class 2	Class 3	Class 1	Class 2	Class 3
Less than 30 hours	11:00	10:00	10:00	9:00	9:00	9:00	14:00	12:30	11:00	15:00	13:30	11:30	9:00	8:00	8:00	8:00	8:00	8:00	12:00	10:30	9:00	13:00	11:30	9:30
30 hours or more	12:00	11:00	11:00	10:00	10:00	9:00	15:00	13:30	12:00	16:30	15:00	13:00	9:00	9:00	9:00	8:00	8:00	8:00	13:00	11:30	10:00	14:30	13:00	11:00

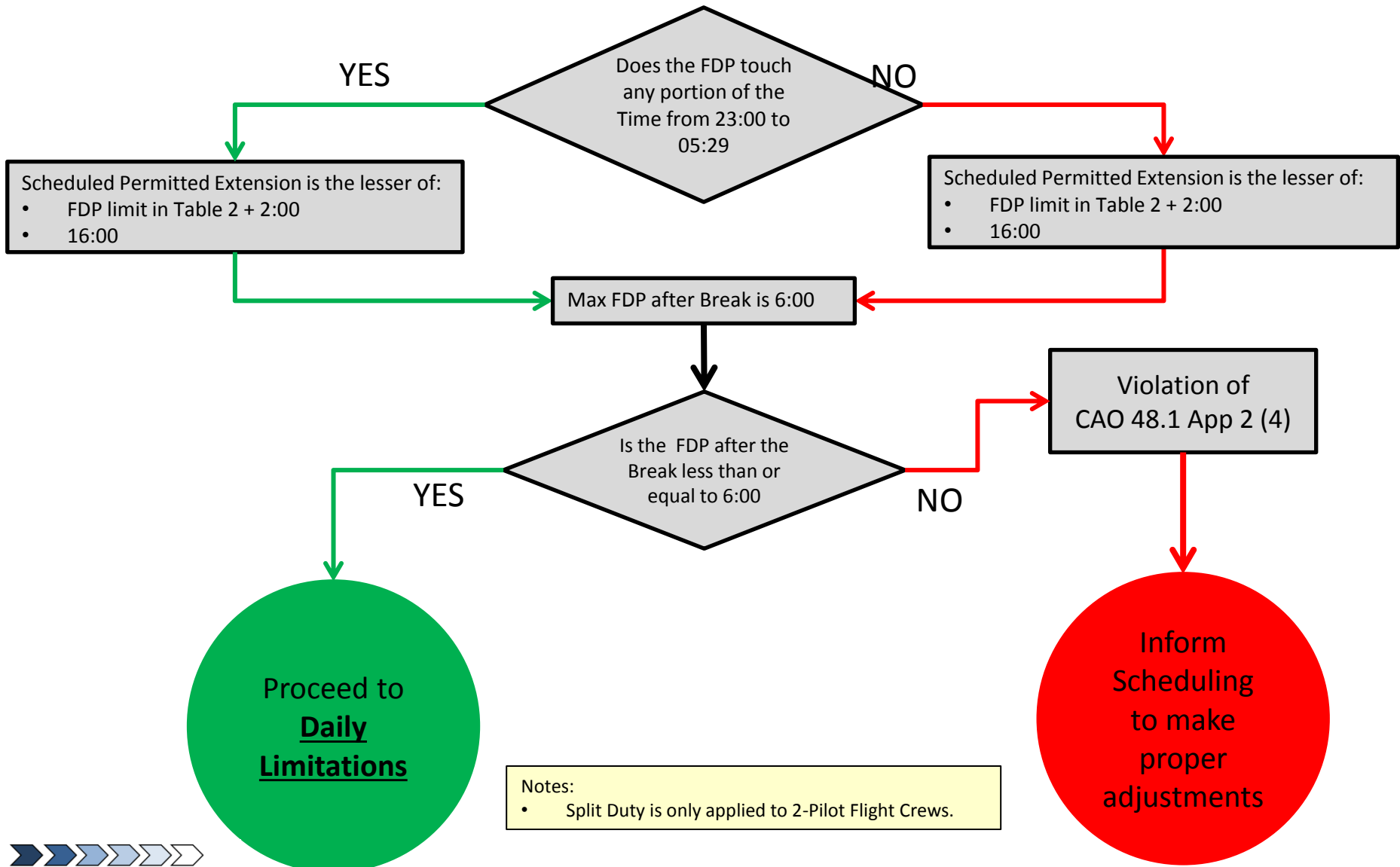
Table 2

Use FDP Start Time, Number of Pilots, Number of Scheduled Sectors and Class of In-Flight Rest Facility .

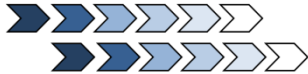
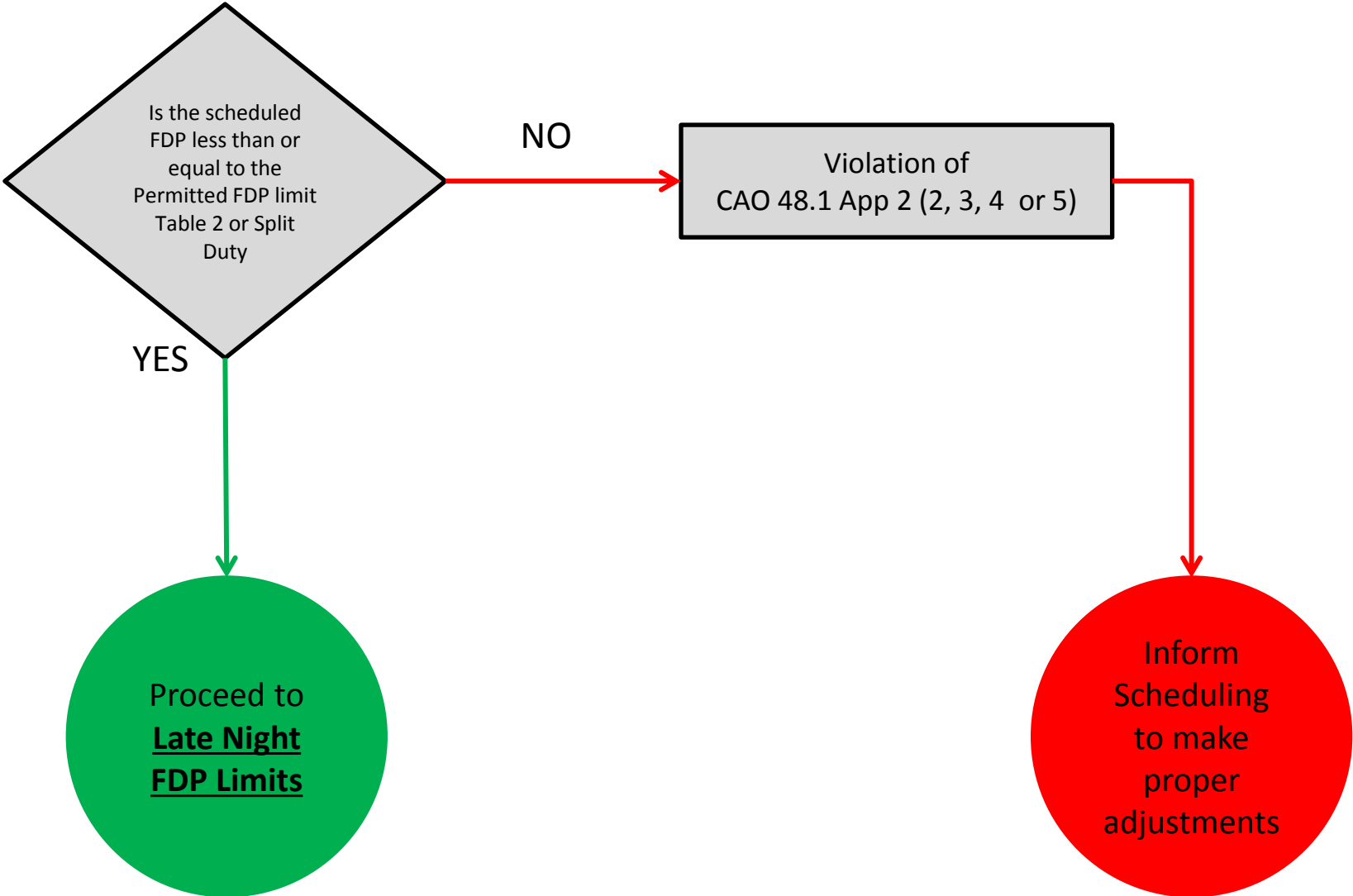
(The bottom two rows are to be used for a FCM in an Unknown State of Acclimatisation)



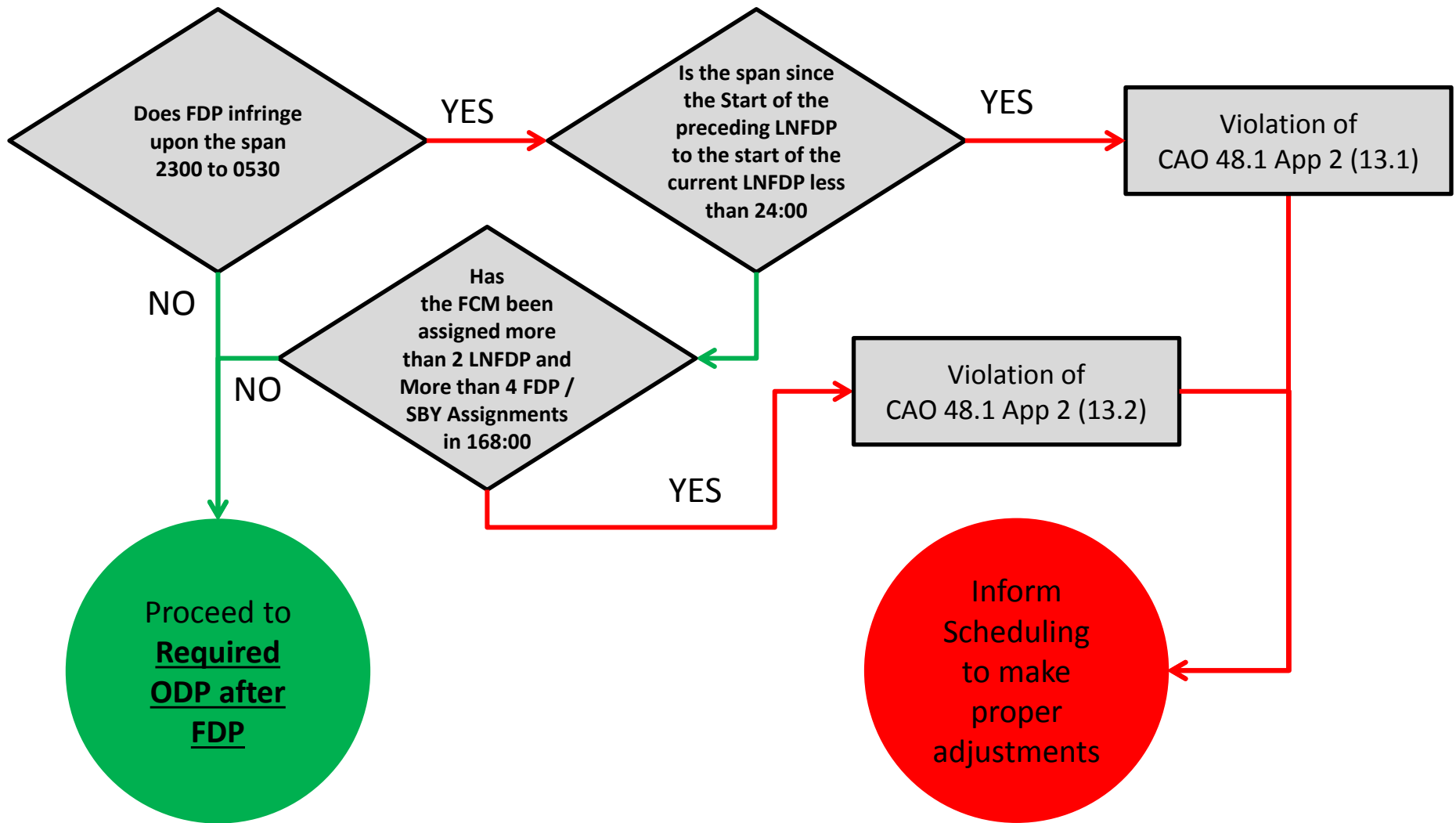
Split Duty:



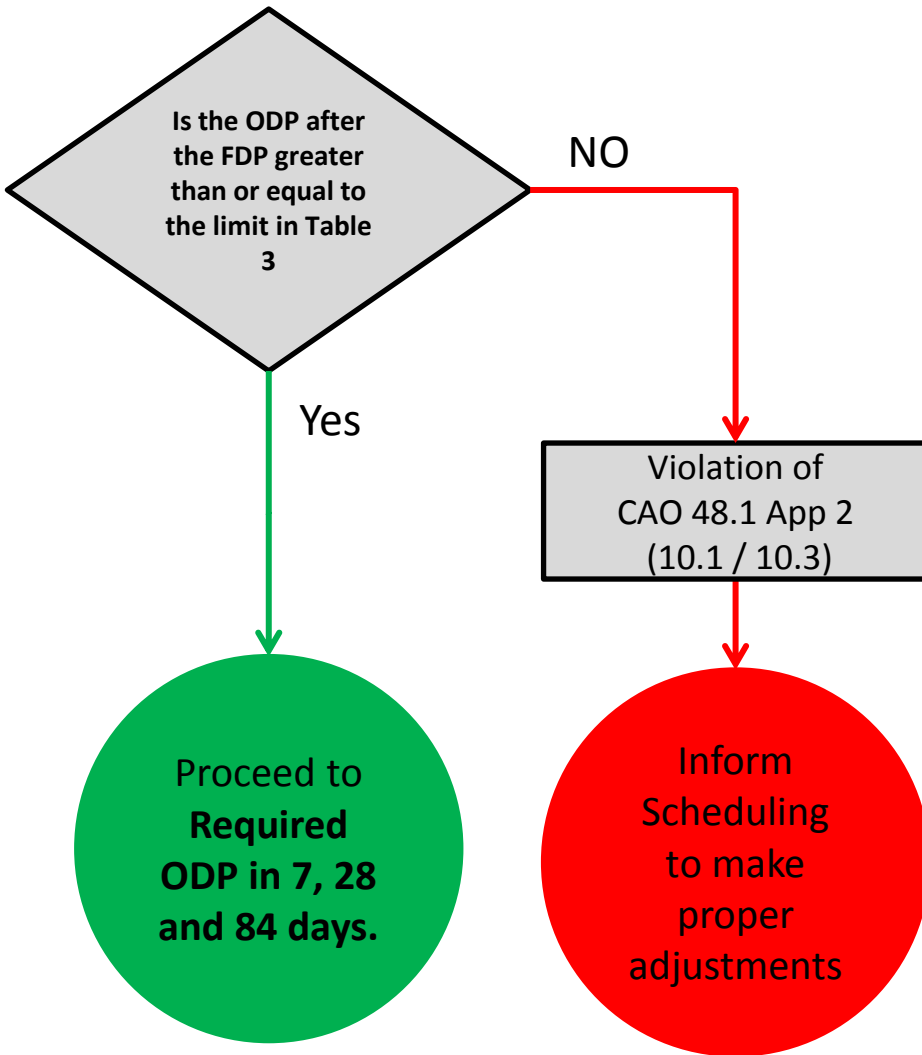
Daily FDP Limitations



Late Night FDP (LNFDP) Limits



Required ODP after FDP (at Base)



Displacement Time =
TZ offset at Start of OFP – TZ offset at Start of the FDP.

Displacement Adjustment:

- By default Displacement Adjustment is **0:00**
- If the Displacement Time Is greater than **2:00** then
 - Displacement Adjustment = Displacement Time - **2:00**
- If the Displacement Time Is less than **-3:00** then
 - Displacement Adjustment = **-3:00** - Displacement Time

FDP Adjustment :

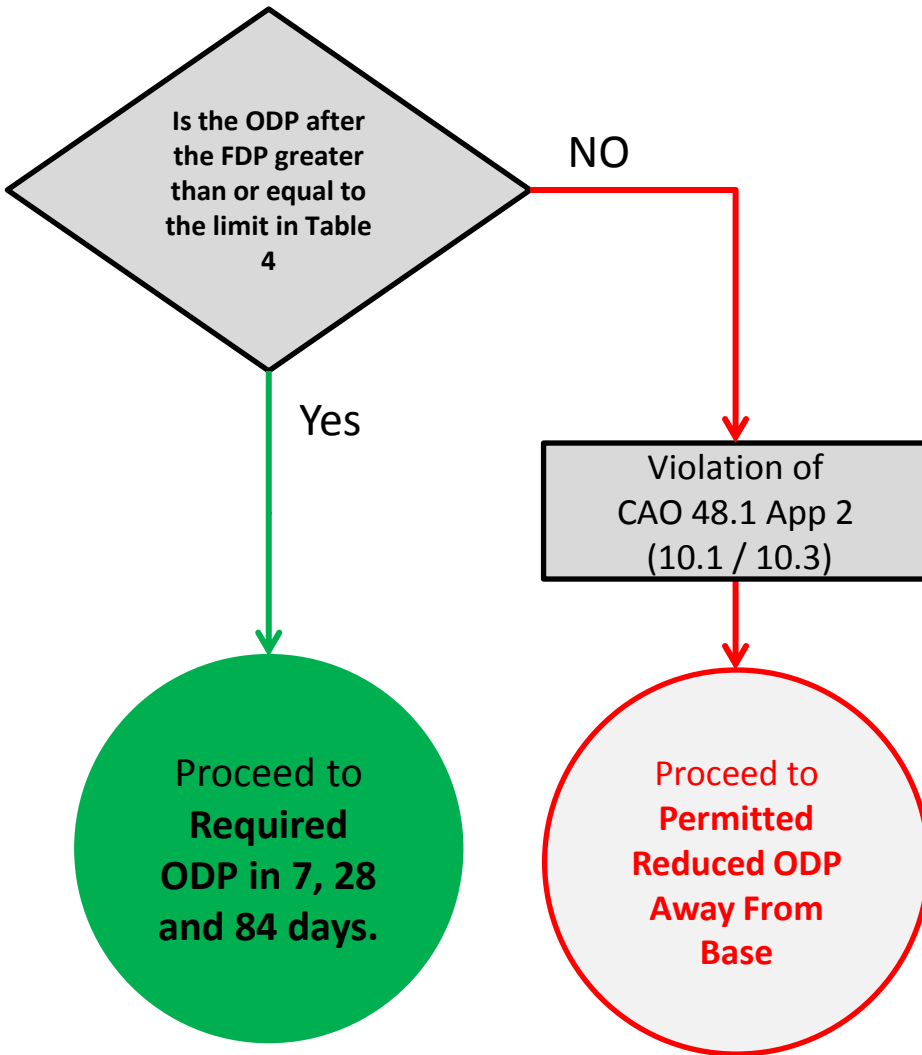
- By default FDP Adjustment is **0:00**
- If the FDP Time Is greater than **12:00** then
 - FDP Adjustment = $1.5 * (FDP\ Time - 12:00)$

Table 3

ODP At Base	
Primary Condition	Required ODP
FDP Time > 12:00 and FCM is Acclimated	12:00 Plus Displacement Adjustment Plus FDP Adjustment
FDP Time > 12:00 and FCM is in an Unknown State Acclimatisation	14:00 Plus Displacement Adjustment Plus FDP Adjustment
<= 12:00	12:00 Plus Displacement Adjustment



Required ODP after FDP (Away from Base)



Displacement Time =
TZ offset at Start of OFP – TZ offset at Start of the FDP.

Displacement Adjustment:

- By default Displacement Adjustment is **0:00**
- If the Displacement Time Is greater than **2:00** then
 - Displacement Adjustment = Displacement Time - **2:00**
- If the Displacement Time Is less than **-3:00** then
 - Displacement Adjustment = **-3:00** - Displacement Time

FDP Adjustment :

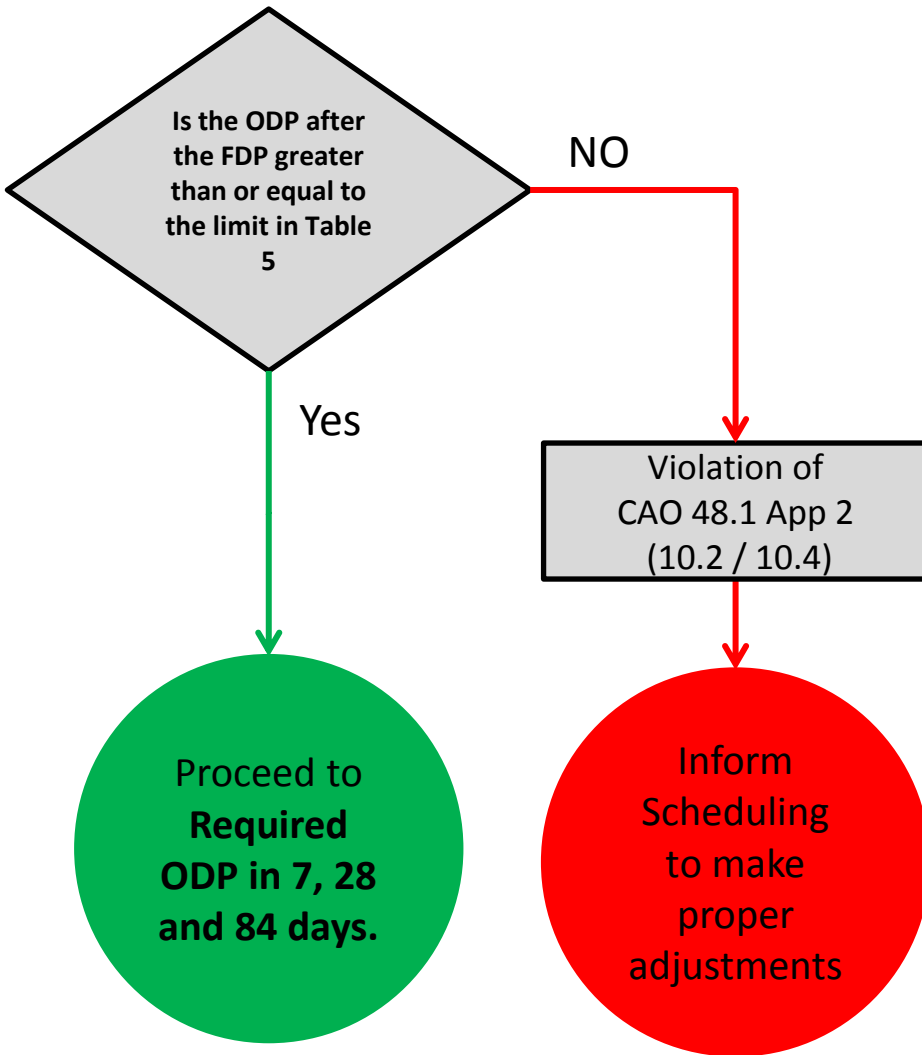
- By default FDP Adjustment is **0:00**
- If the FDP Time Is greater than **12:00** then
 - FDP Adjustment = $1.5 * (\text{FDP Time} - 12:00)$

Table 4

ODP Away From Base	
Primary Condition	Required ODP
FDP Time > 12:00 and FCM is Acclimated	12:00 Plus Displacement Adjustment Plus FDP Adjustment
FDP Time > 12:00 and FCM is in an Unknown State of Acclimatisation	14:00 Plus Displacement Adjustment Plus FDP Adjustment
<= 12:00	10:00 Plus Displacement Adjustment



Permitted Reduced ODP Away From Base

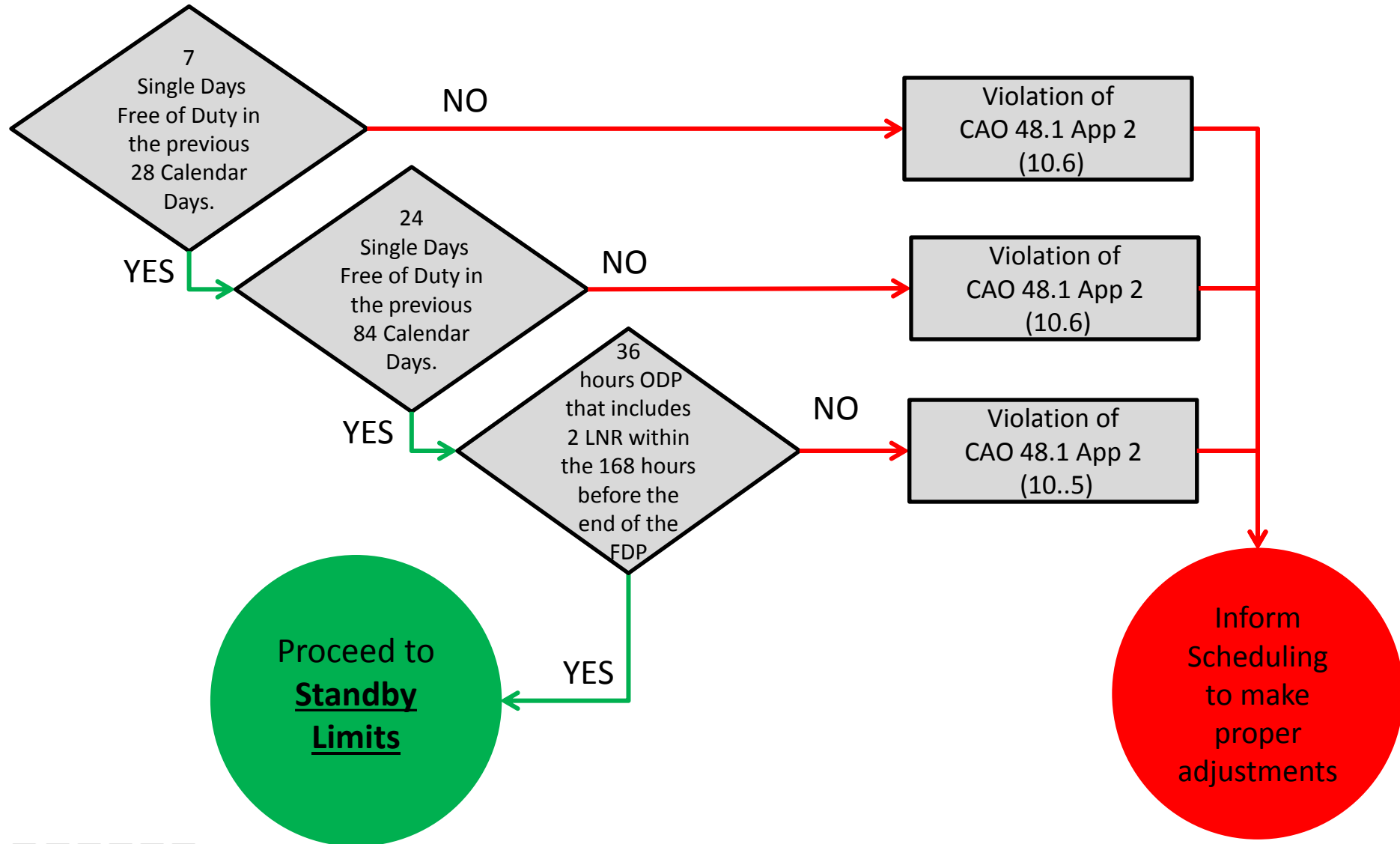


Reduced ODP Away from Base		
<u>Primary Condition</u>	<u>Secondary Conditions</u>	<u>Permitted Reduced ODP</u>
<u>FDP Time</u> <u><= 10:00</u>	<u>FCM is Acclimated at start of ODP</u>	<u>9:00</u>
	<u>ODP will provide a LNR</u>	
	<u>The next ODP is >= 12:00 with a LNR</u>	
<u>Required ODP</u> <u>> 14:00</u>	<u>FDP is not extended past the FDP limit</u>	<u>14:00</u>
	<u>The FCM will begin the next FDP in an acclimated state</u>	
	<u>The ODP following the next FDP is at least 36:00 with 2 LNR</u>	

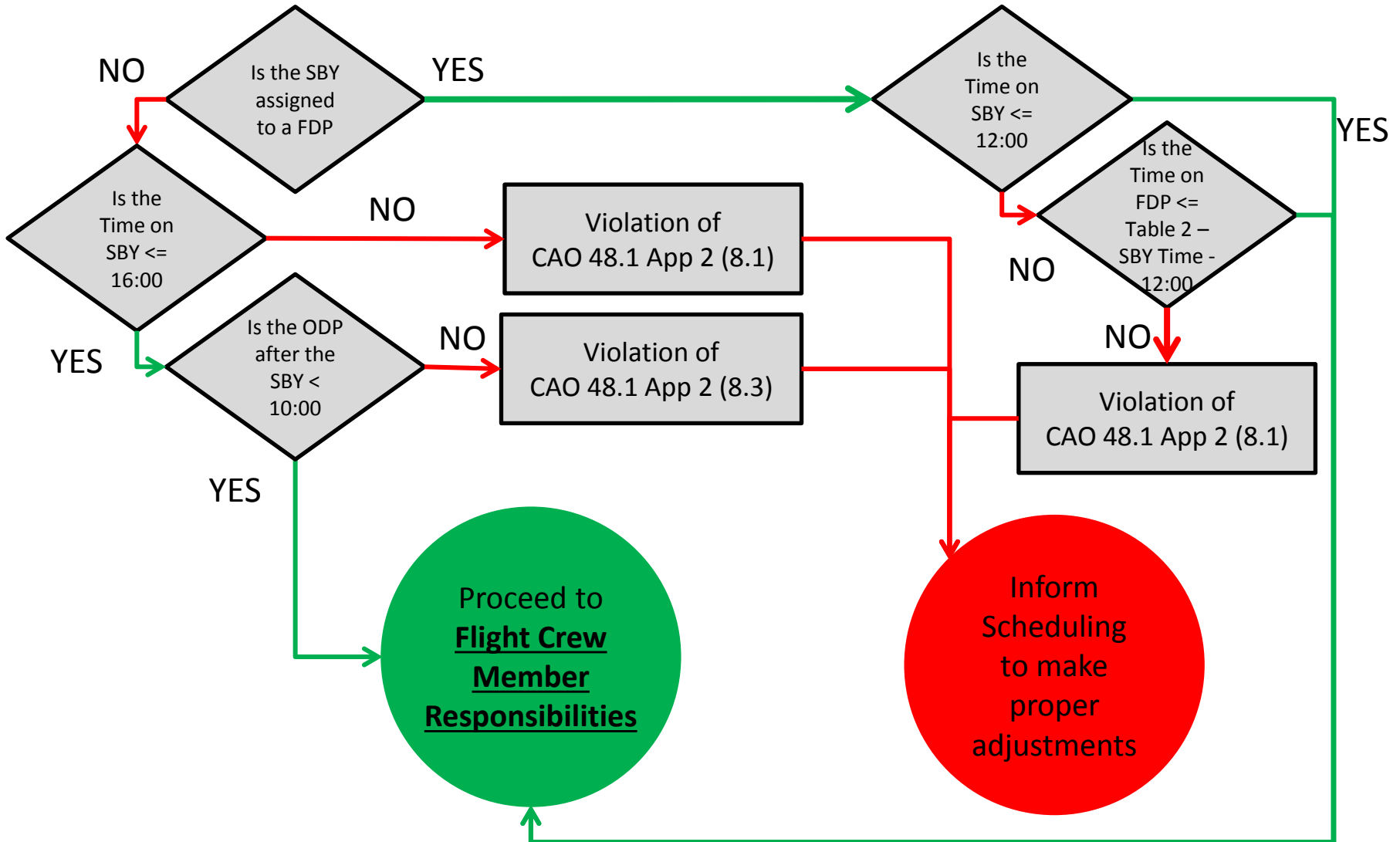
Table 5



Required ODP in 7, 28 and 84 days.



Standby (SBY) Limits



Flight Crew Member Responsibilities

