

# CE 474 – Class 11

September 17, 2015

# TRANSPORTATION ... in the news



## Who'll keep track of all those drones in flight?

By Mark Pomerleau | Aug 31, 2015

<http://gcn.com/articles/2015/08/31/drones-utm.aspx>

## 2 airliners fly within 100 feet of drone above New York

By **Joshua Berlinger** and Aaron Cooper, CNN

🕒 Updated 6:42 PM ET, Mon August 3, 2015 | Video Source: CNN



# For next time...

## Class 11 (9.17)

Discuss: A22

Do: A23 (Field) ←

Homework (due: 9.21)

- Read: STM, pp 6.1-6.2, 6.5-6.15
- Do: A24 CTQ ←
- Read: Chapter 5 overview
- Read: A25
- Do: A25 CTQ ←

Bring results to class on Monday

Bring CTQ answers to class on Monday

Also...

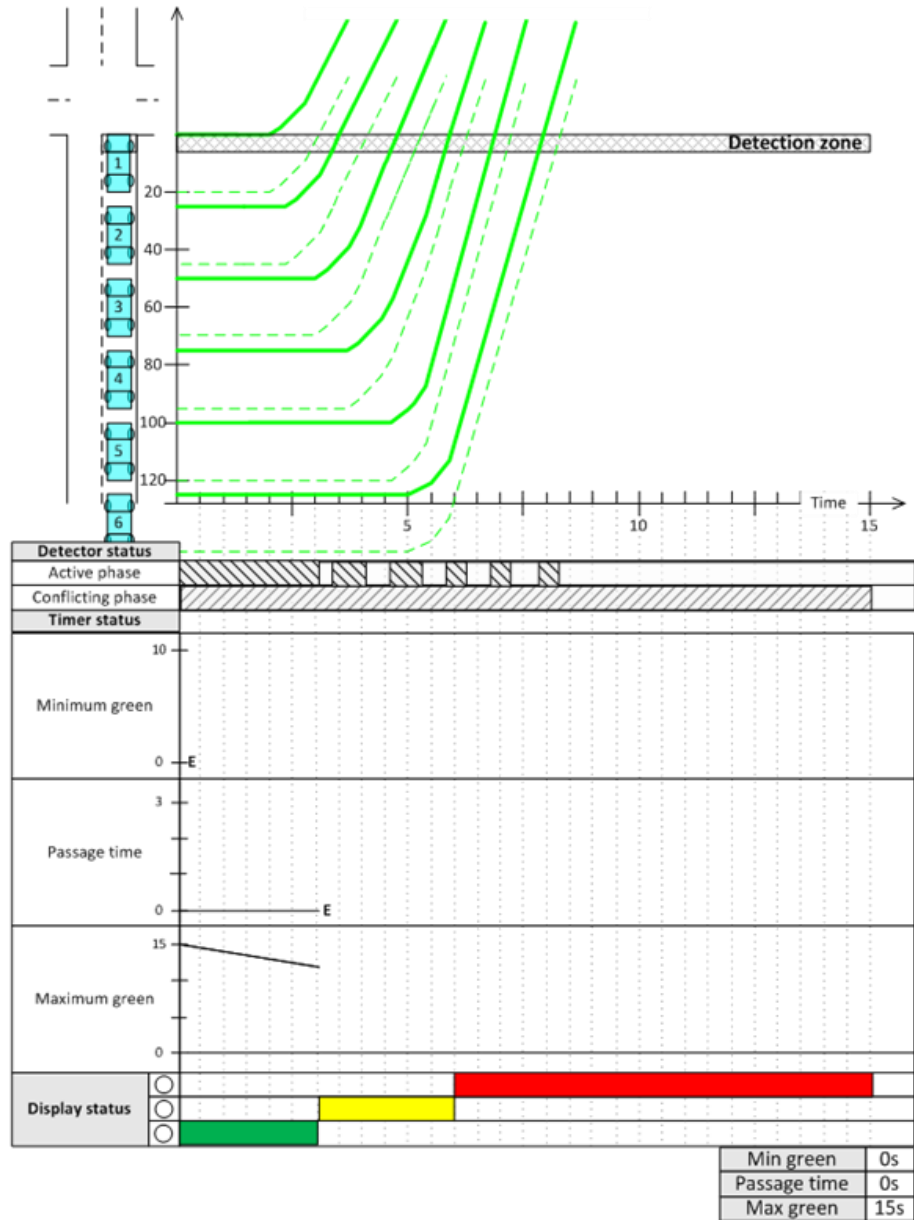
- Be ready to discuss your results from A23 on Monday



Quiz...

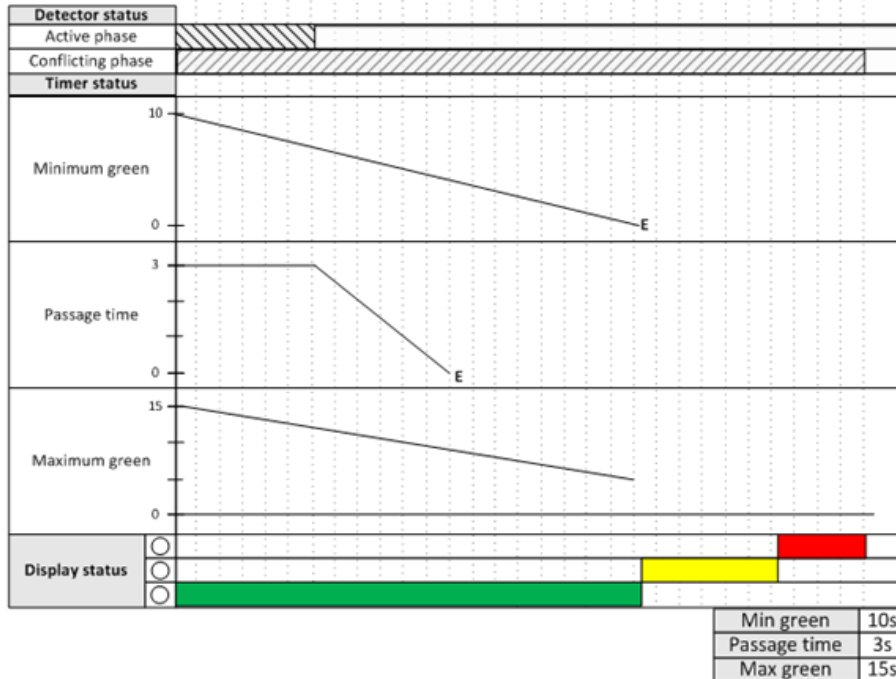
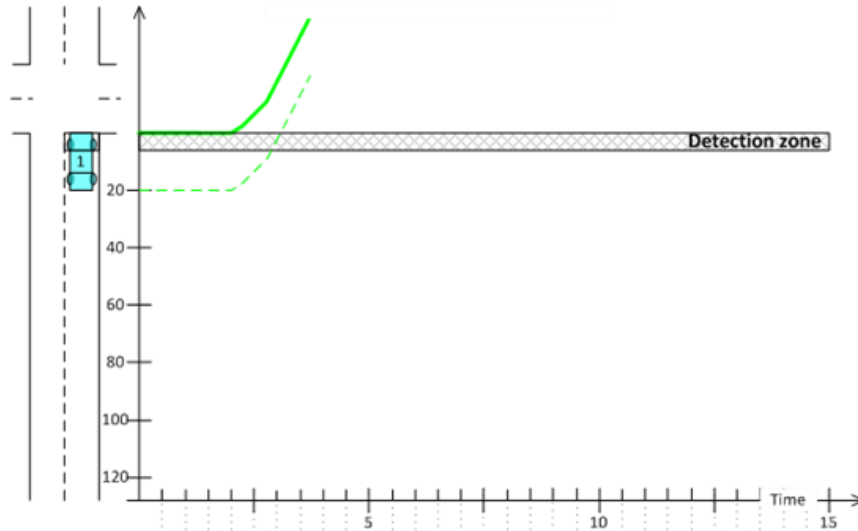


## Quiz: Q1

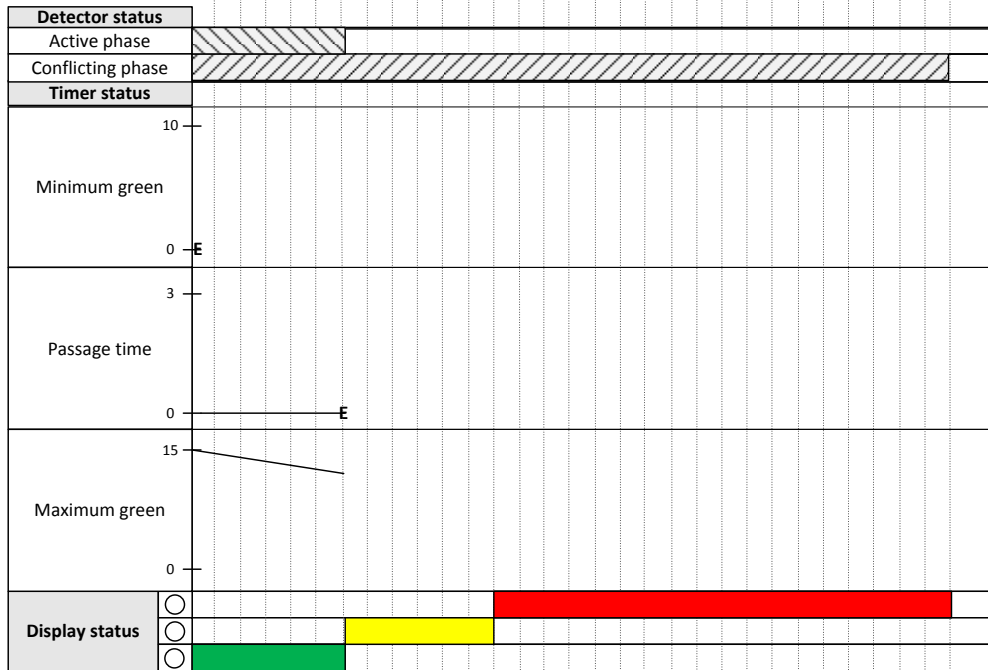
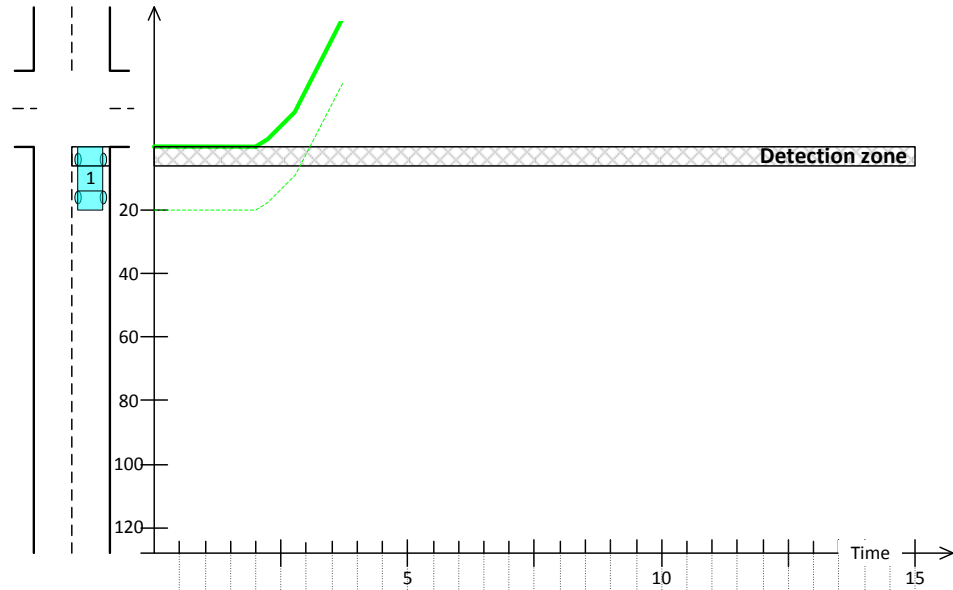




## Quiz: Q2

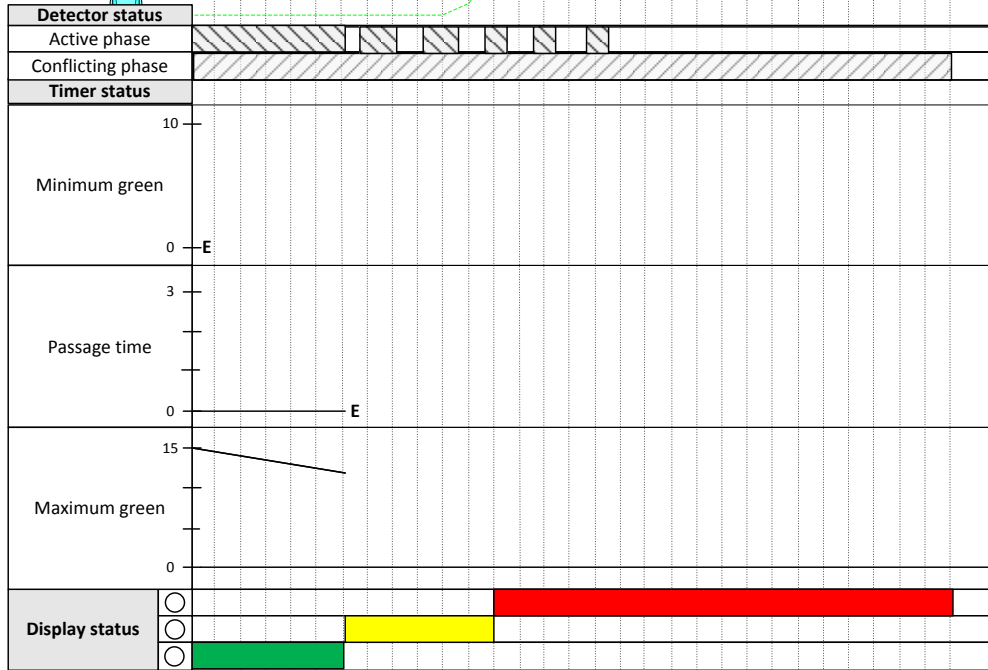
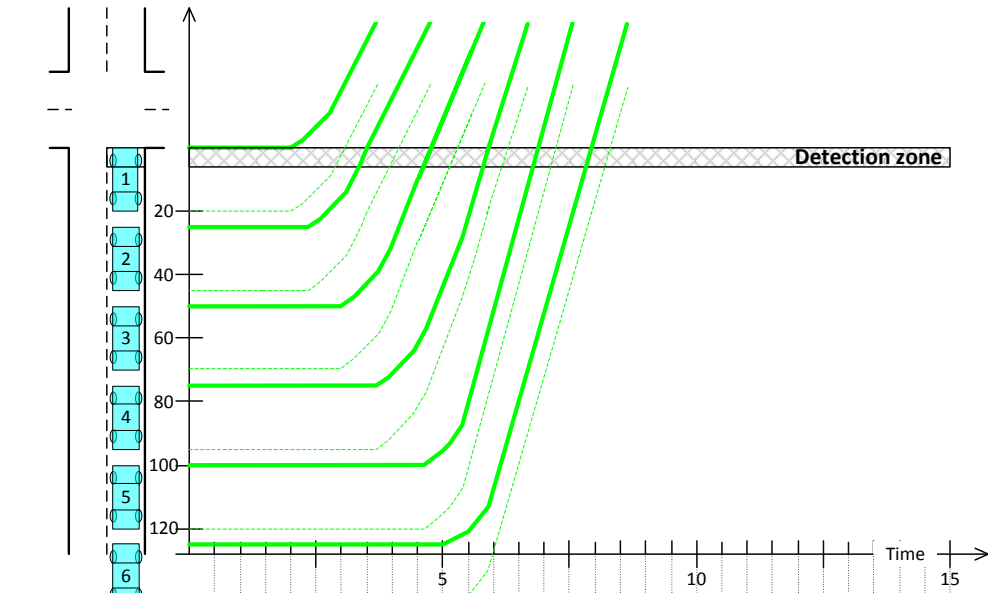


# Case 1



Min green	0s
Passage time	0s
Max green	15s

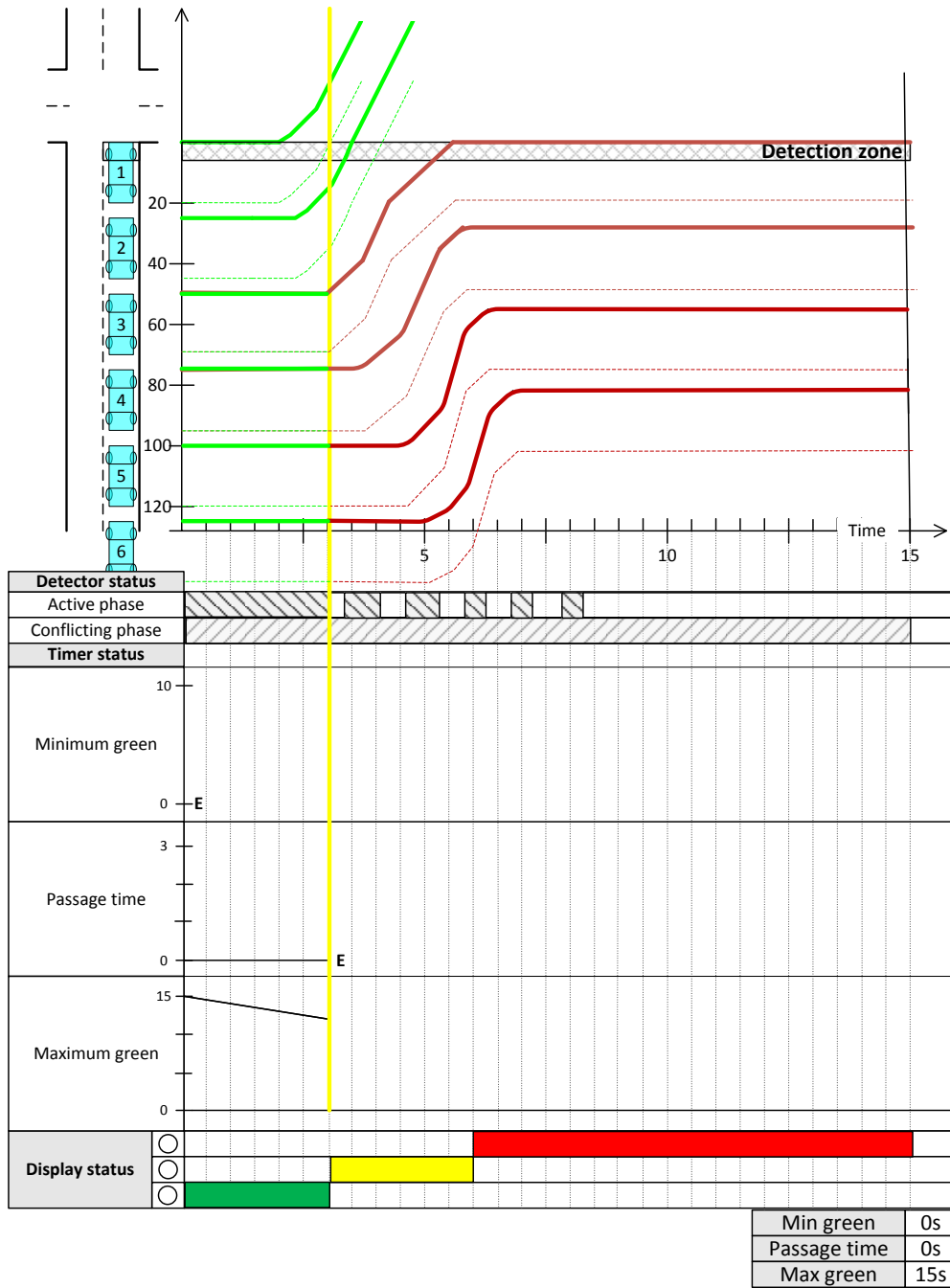
# Case 2



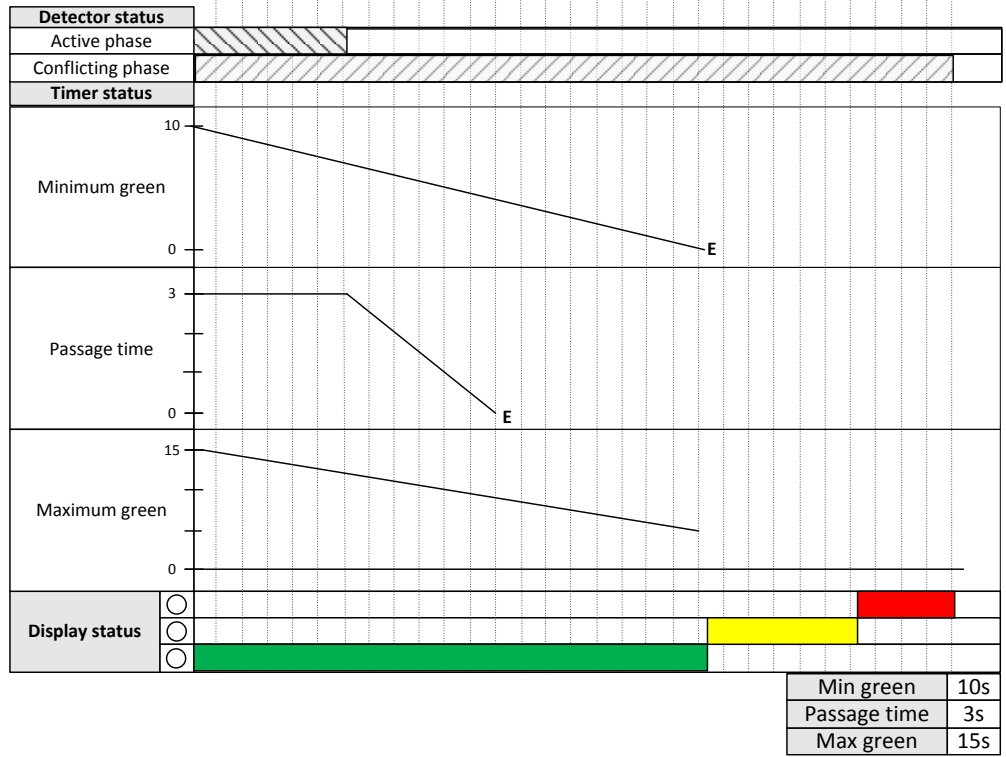
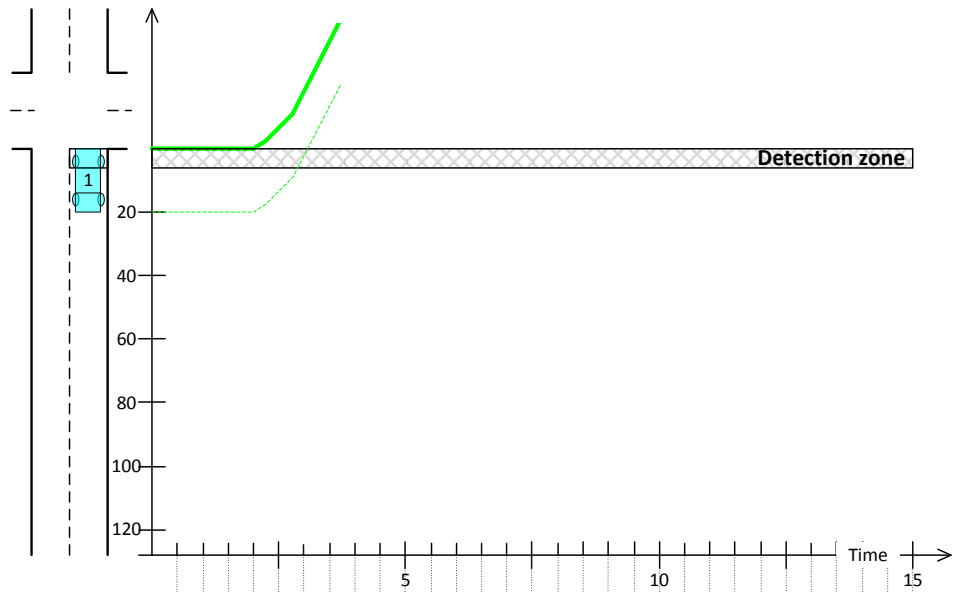
Min green	0s
Passage time	0s
Max green	15s



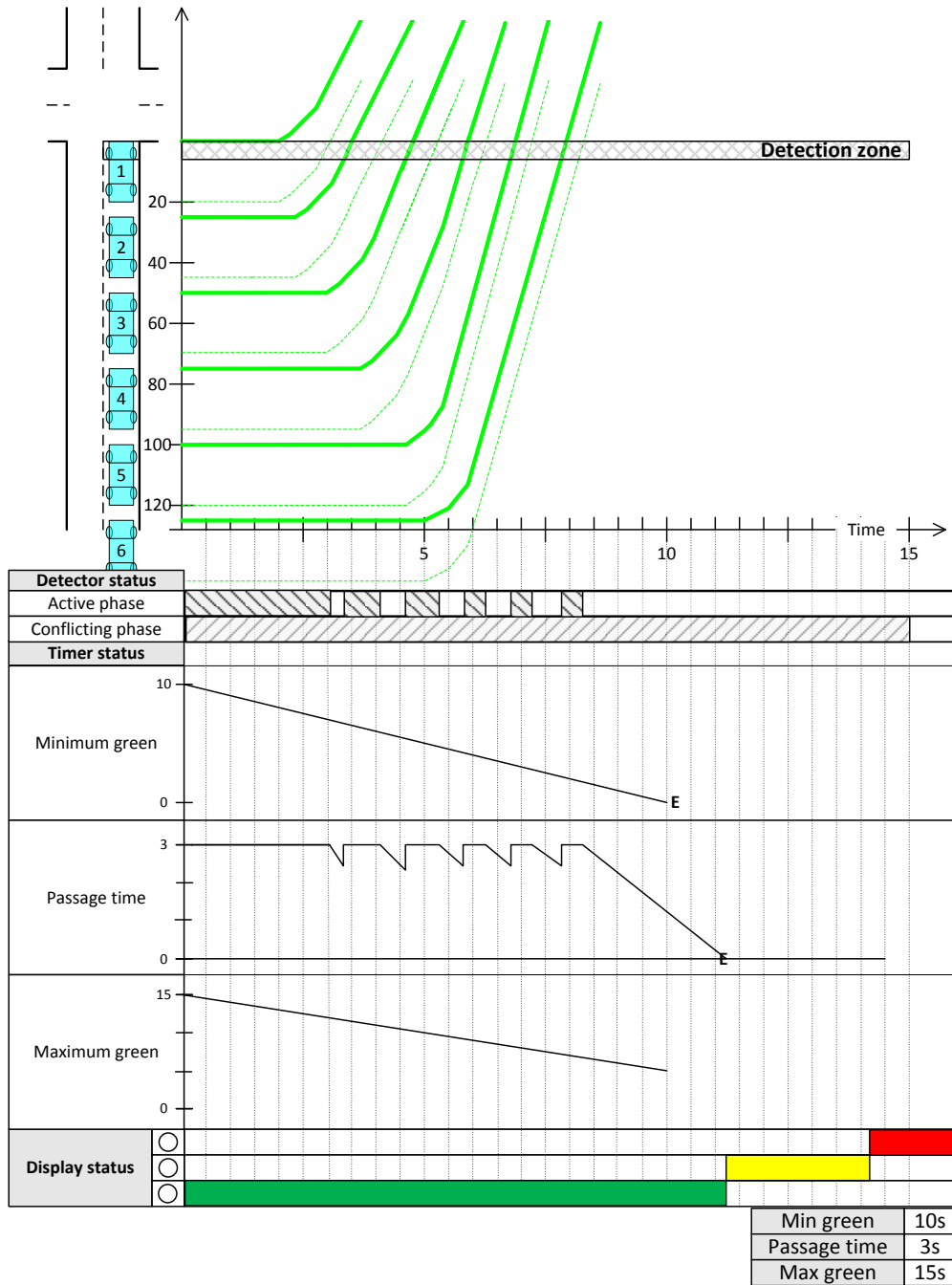
# Case 2 (with modified trajectories)



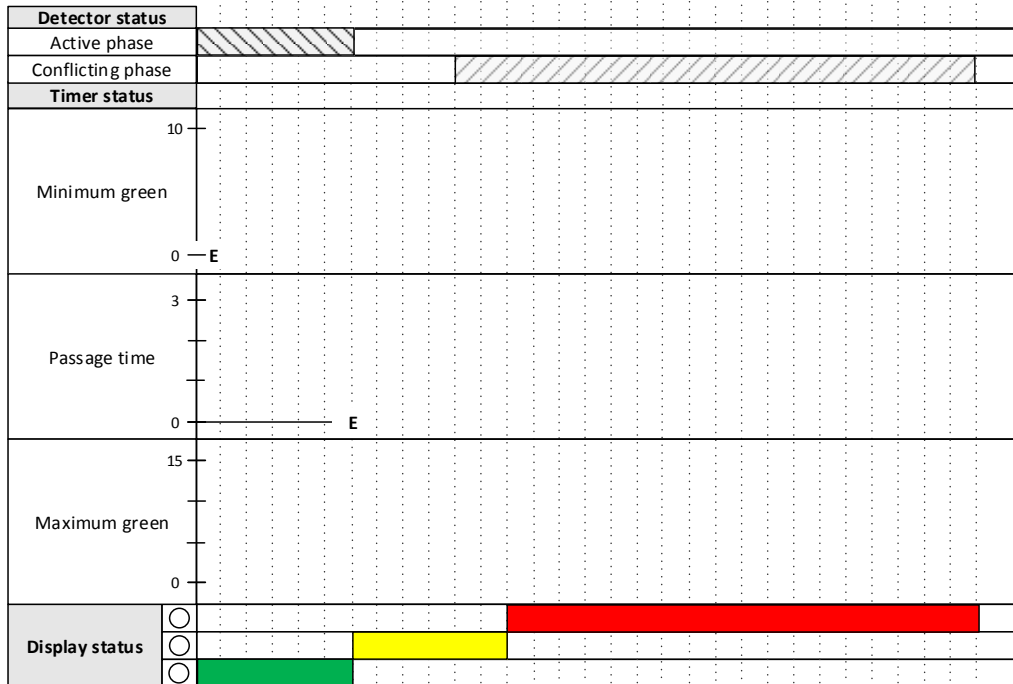
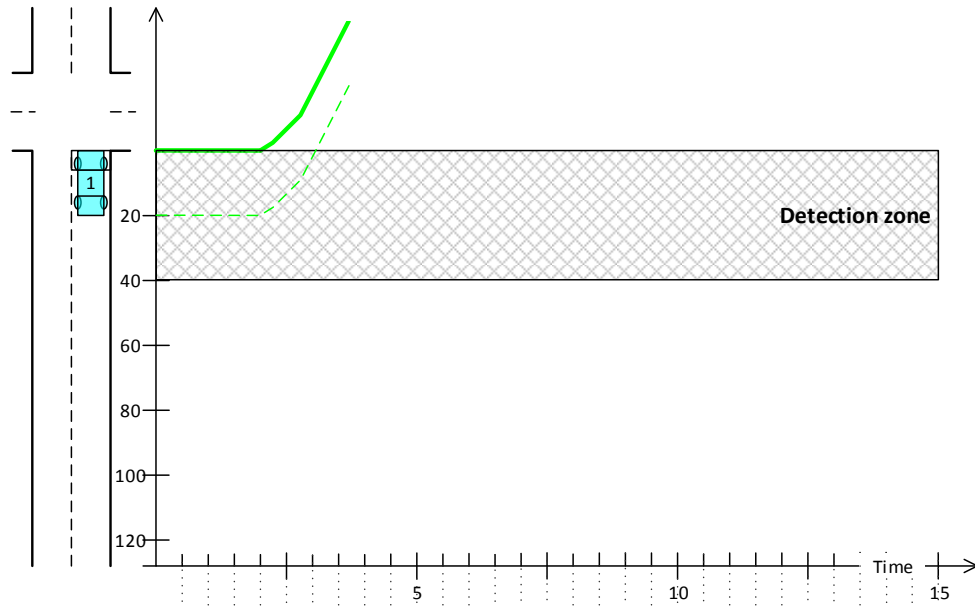
# Case 3



# Case 4

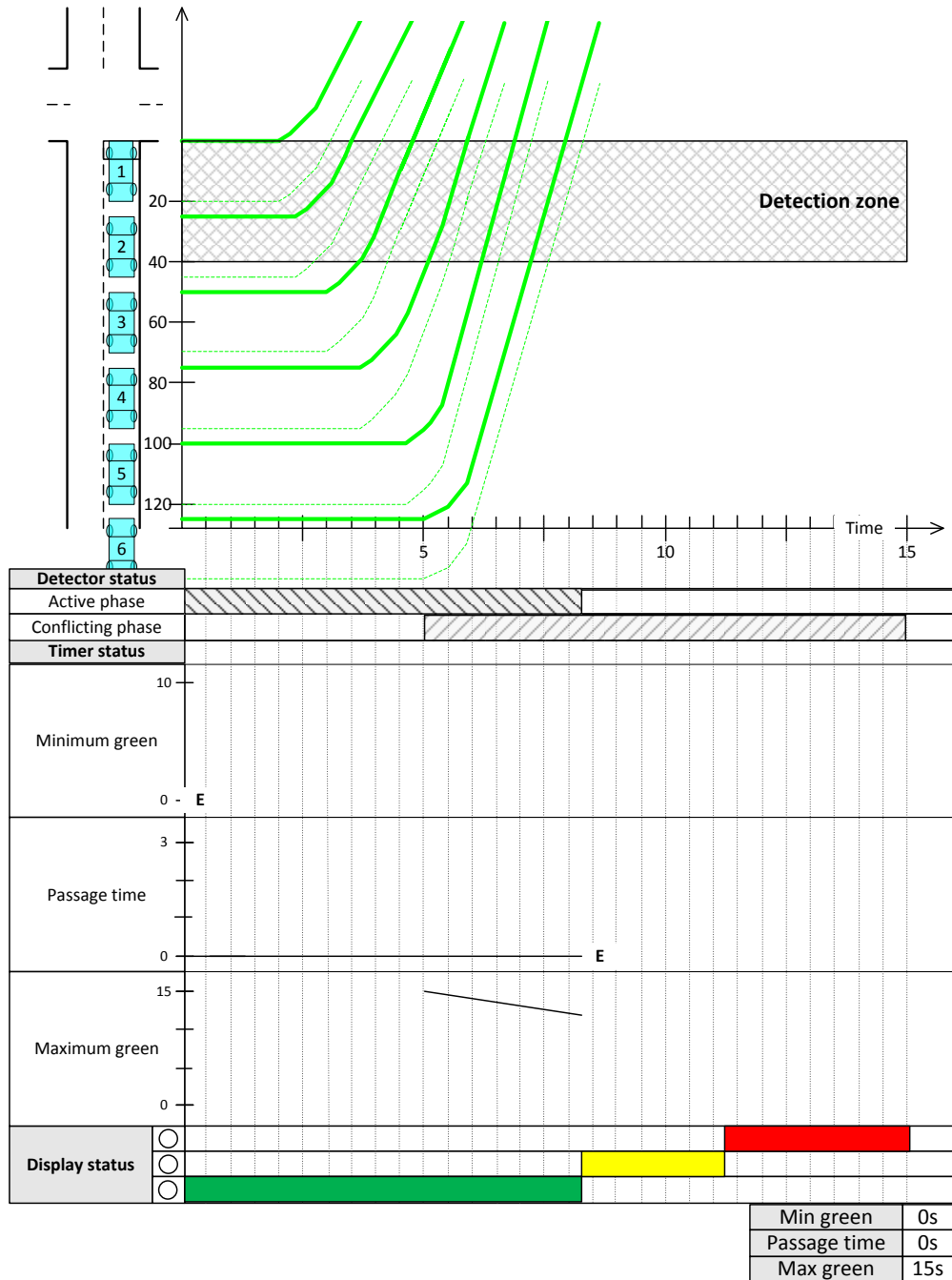


# Case 5

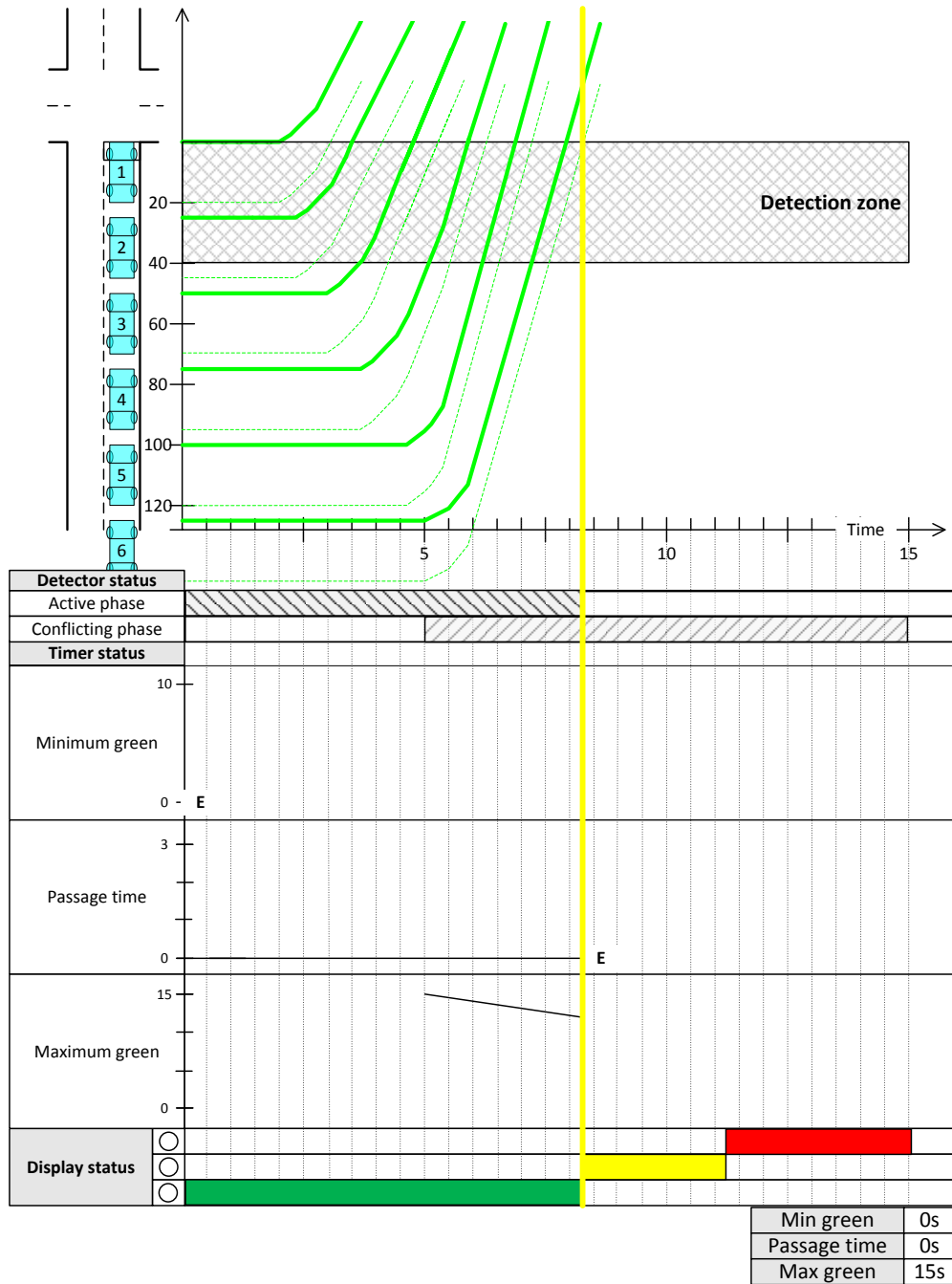


Min green	0s
Passage time	0s
Max green	15s

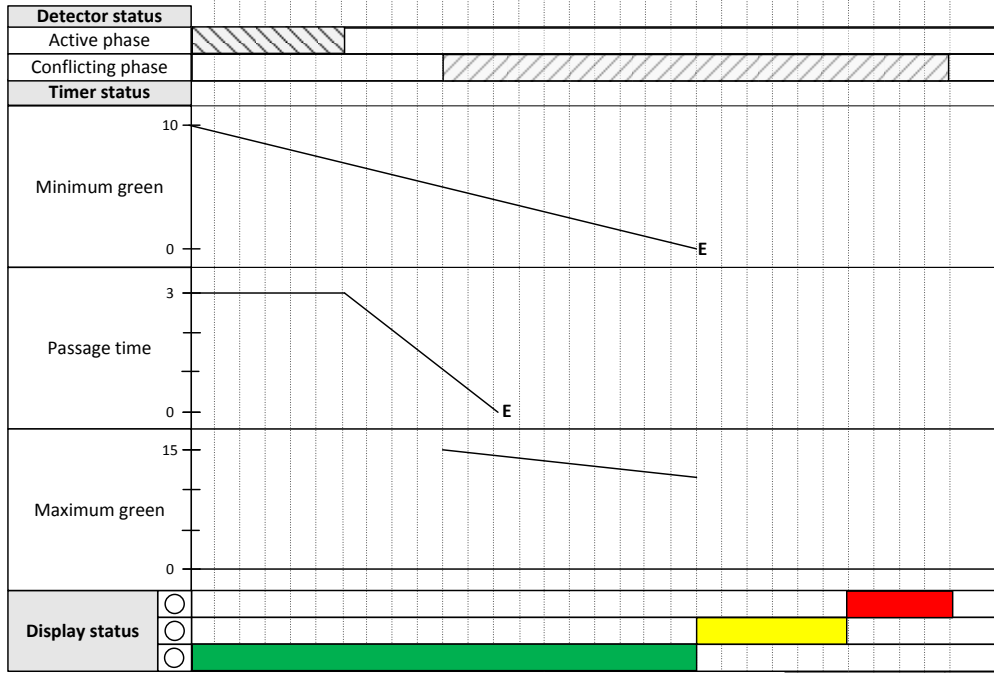
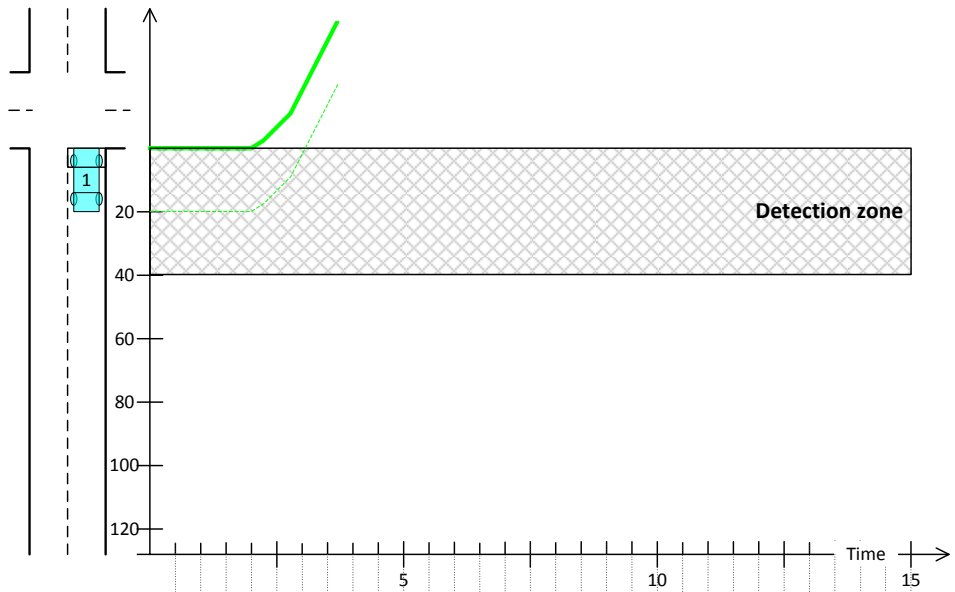
# Case 6



# Case 6

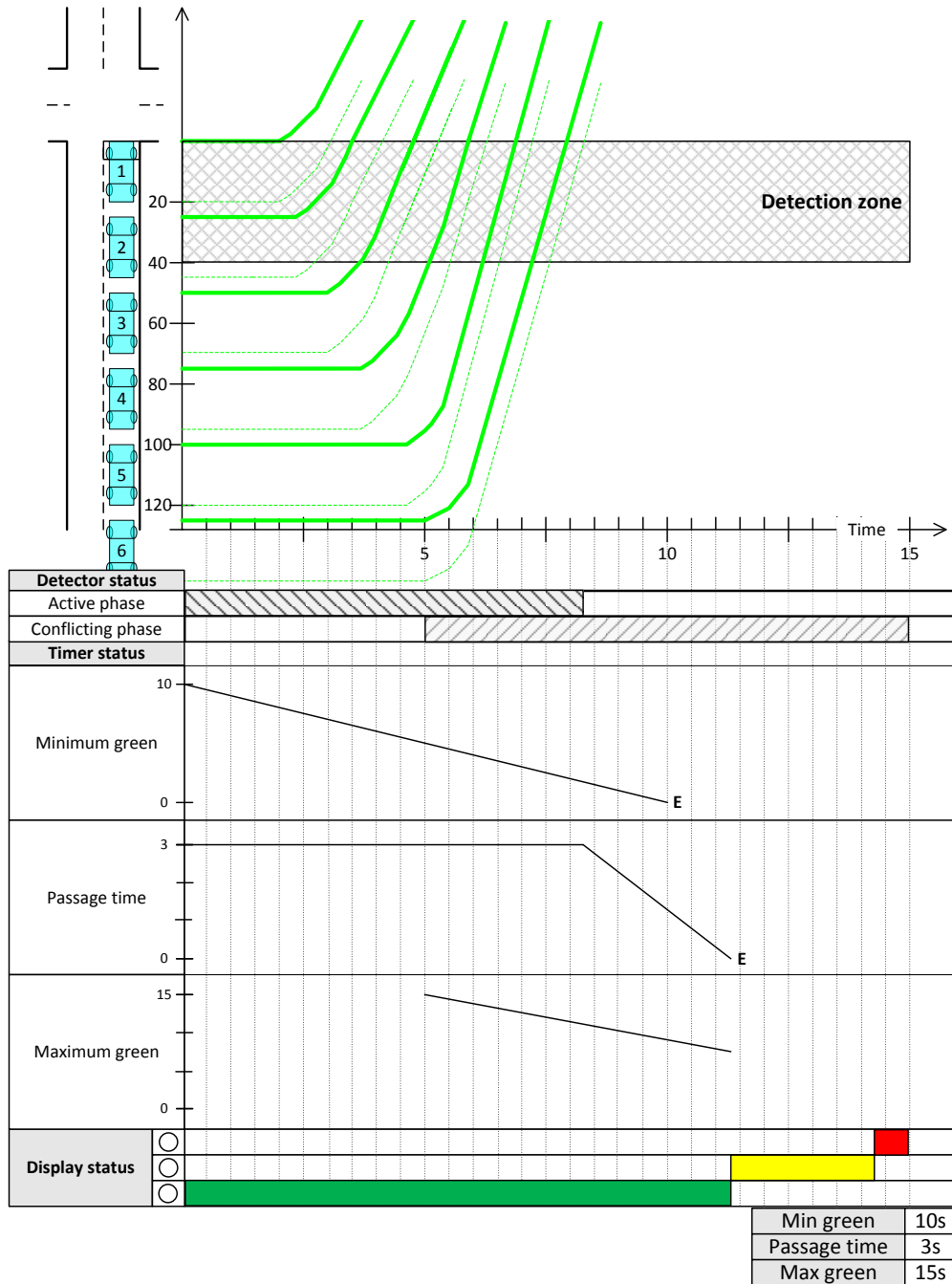


# Case 7

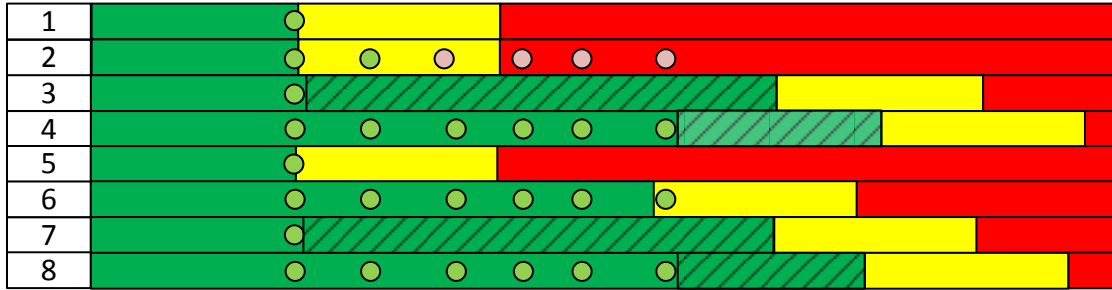
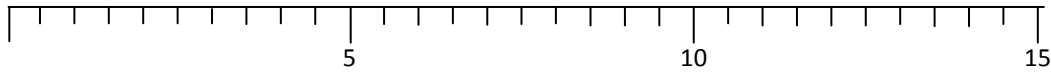


Min green	10s
Passage time	3s
Max green	15s

# Case 8







Case	Loop Length	Min Green	Passage Time	Max Green	Unused Green	Vehicles Served
1	6	0	0	15	0	1/1
2	6	0	0	15	0	2/6
3	6	10	3	15	7	1/1
4	6	10	3	15	3	6/6
5	40	0	0	15	0	1/1
6	40	0	0	15	0	6/6
7	40	10	3	15	7	1/1
8	40	10	3	15	3	6/6

## Inferring Signal Timing Parameter Values



Table 10a. Detector state data collection form

Time	Detector state (on/off)

Table 10b. Display state data collection form

Time	Display/color indication

- Minimum green time?
- Maximum green time?
- Passage (vehicle extension) time?



Table 10a. Detector state data collection form

Time (sec)	Detector state (on/off)
0.0	ON
0.8	OFF
3.8	ON
4.9	OFF
7.6	ON
9.9	OFF
11.2	ON
11.6	OFF

Table 10b. Display state data collection form

Time (sec)	Display/color indication
0.0	R
53.6	G
56.7	Y
59.6	G
148.1	Y
150.3	RC
153.4	G



Detector length = 22'



How do you intend to measure:

- Minimum green time
- Maximum green time
- Passage time (vehicle extension time)

