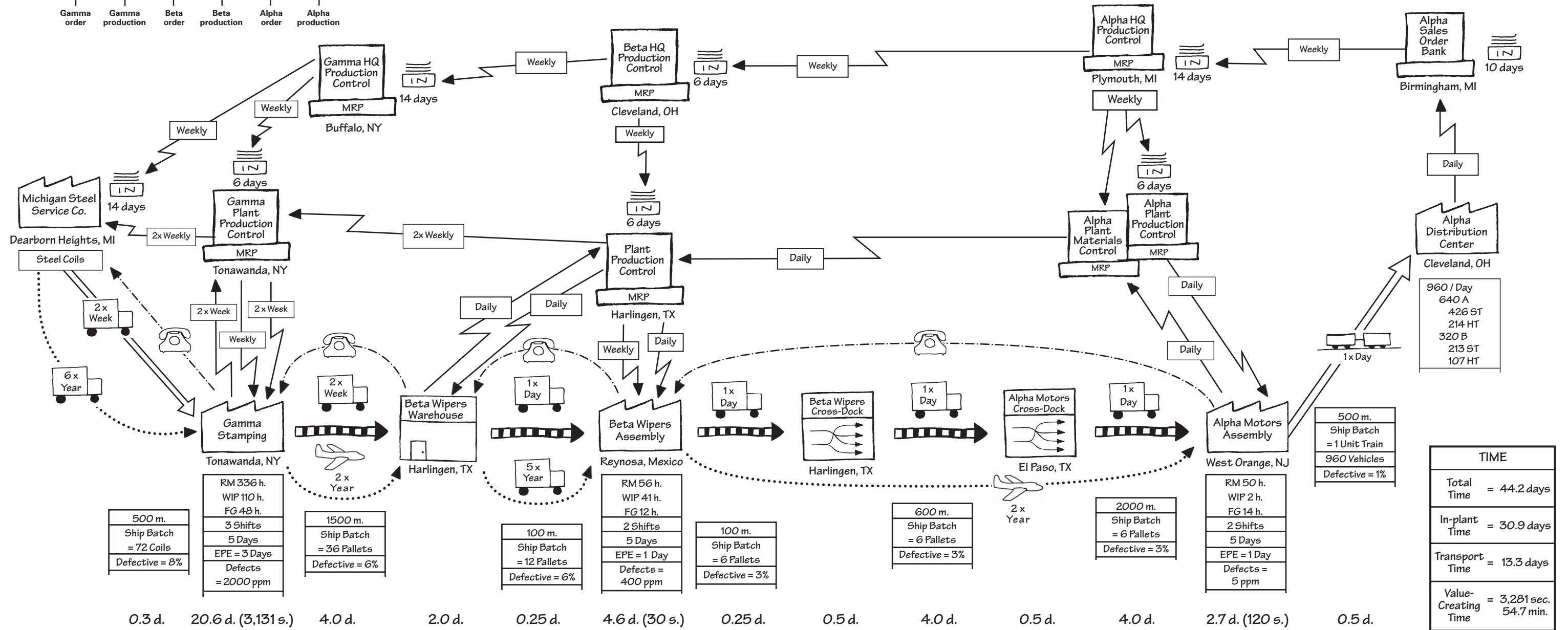
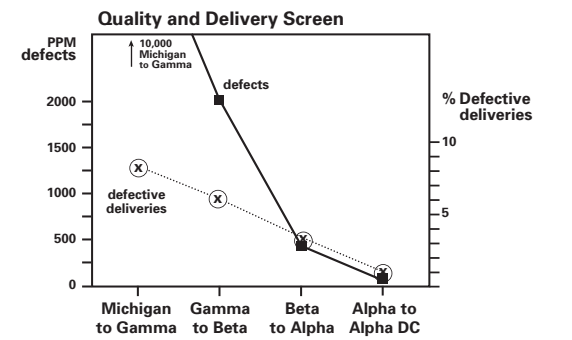


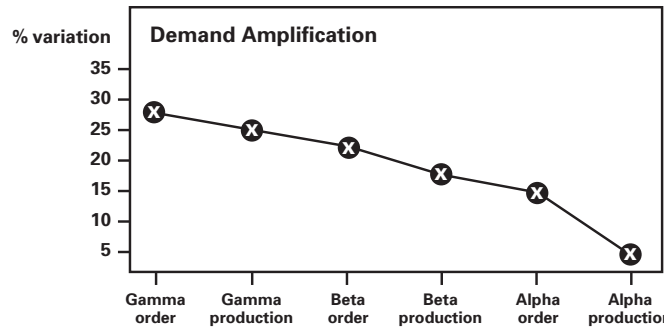
### Wiper Value-Stream Current State



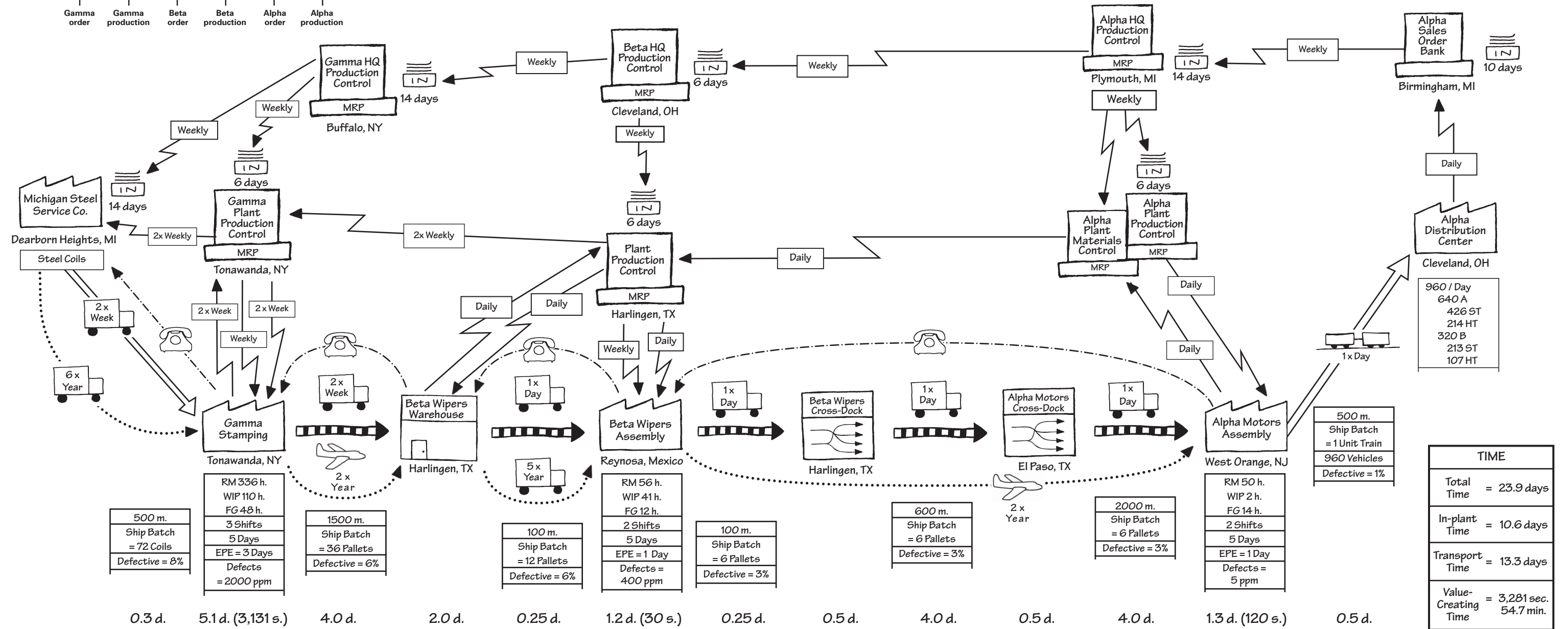
TIME	
Total Time	= 44.2 days
In-plant Time	= 30.9 days
Transport Time	= 13.3 days
Value-Creating Time	= 3,281 sec. 54.7 min.

STEPS	2	21 (3)	1	4	1	21 (3)	1	4	1	4	1	11 (2)	1	
Total Steps	= 73													
Value-Creating Steps	= 8													

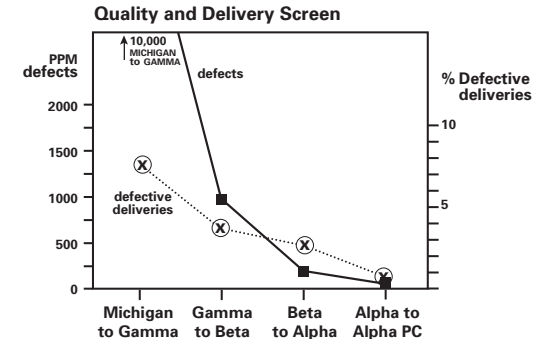




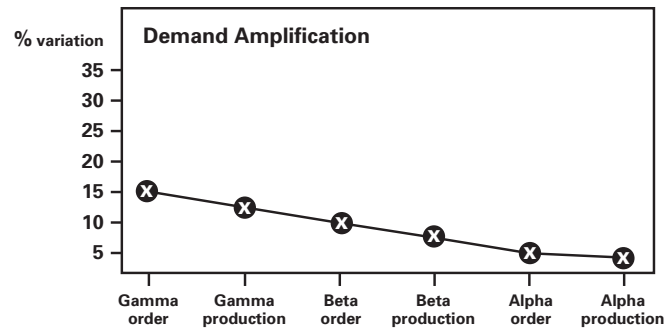
### Wiper Value-Stream Future State 1



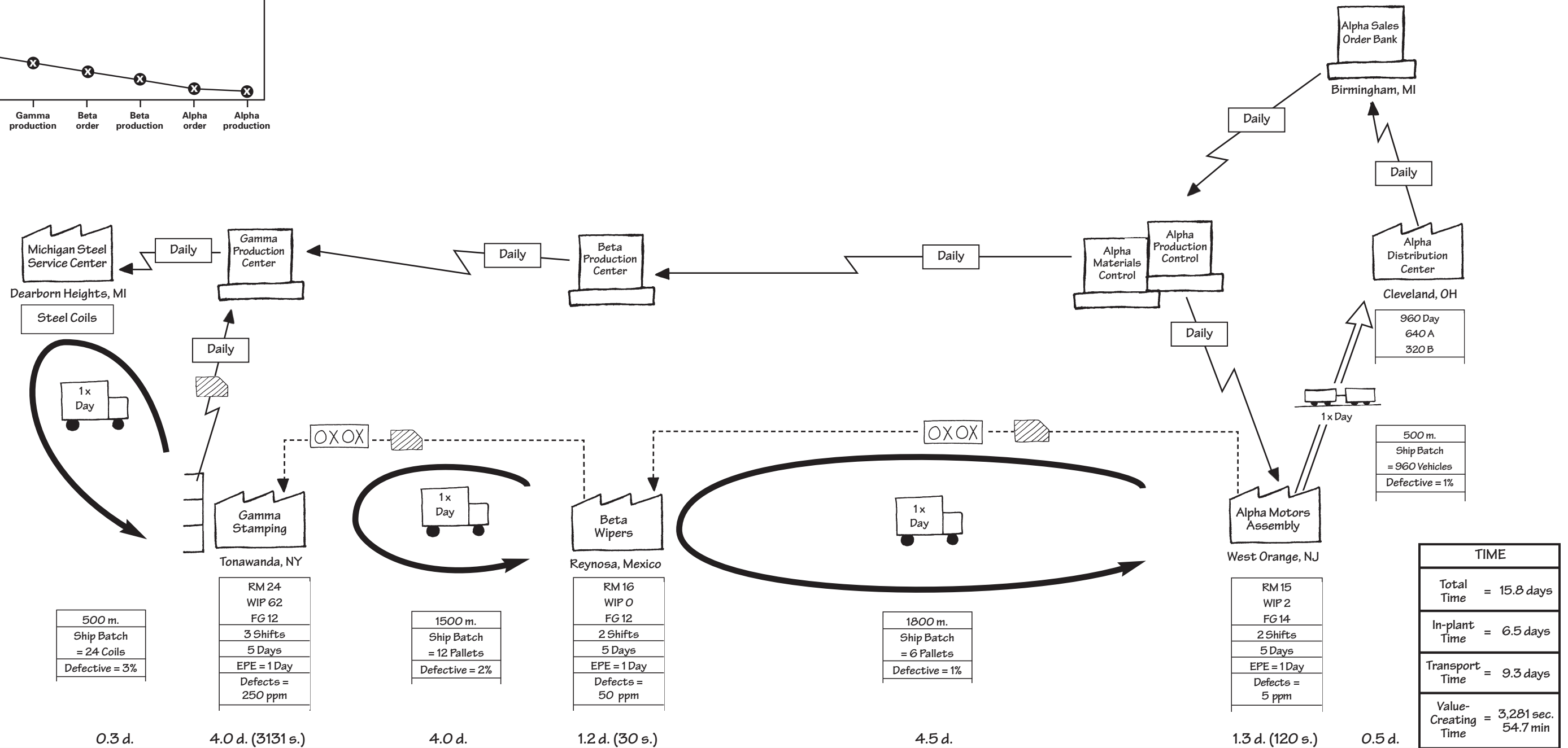
STEPS	2	19 (3)	1	4	1	8 (3)	1	4	1	4	1	7 (2)	1
Total Steps = 54													
Value-Creating = 8 Steps													



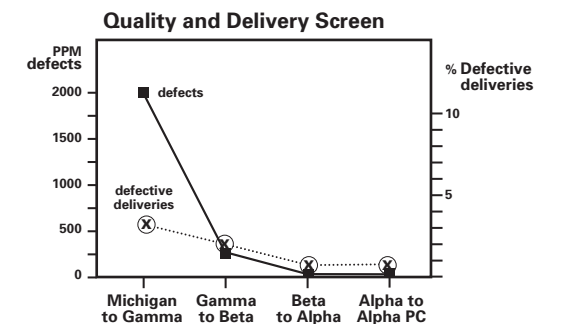
TIME	
Total Time	= 23.9 days
In-plant Time	= 10.6 days
Transport Time	= 13.3 days
Value-Creating Time	= 3,281 sec. / 54.7 min.

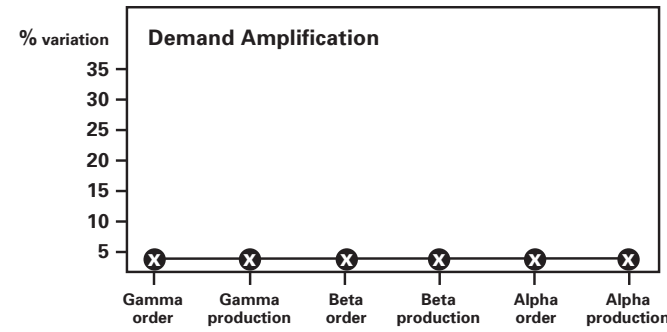


### Wiper Value-Stream Future State 2

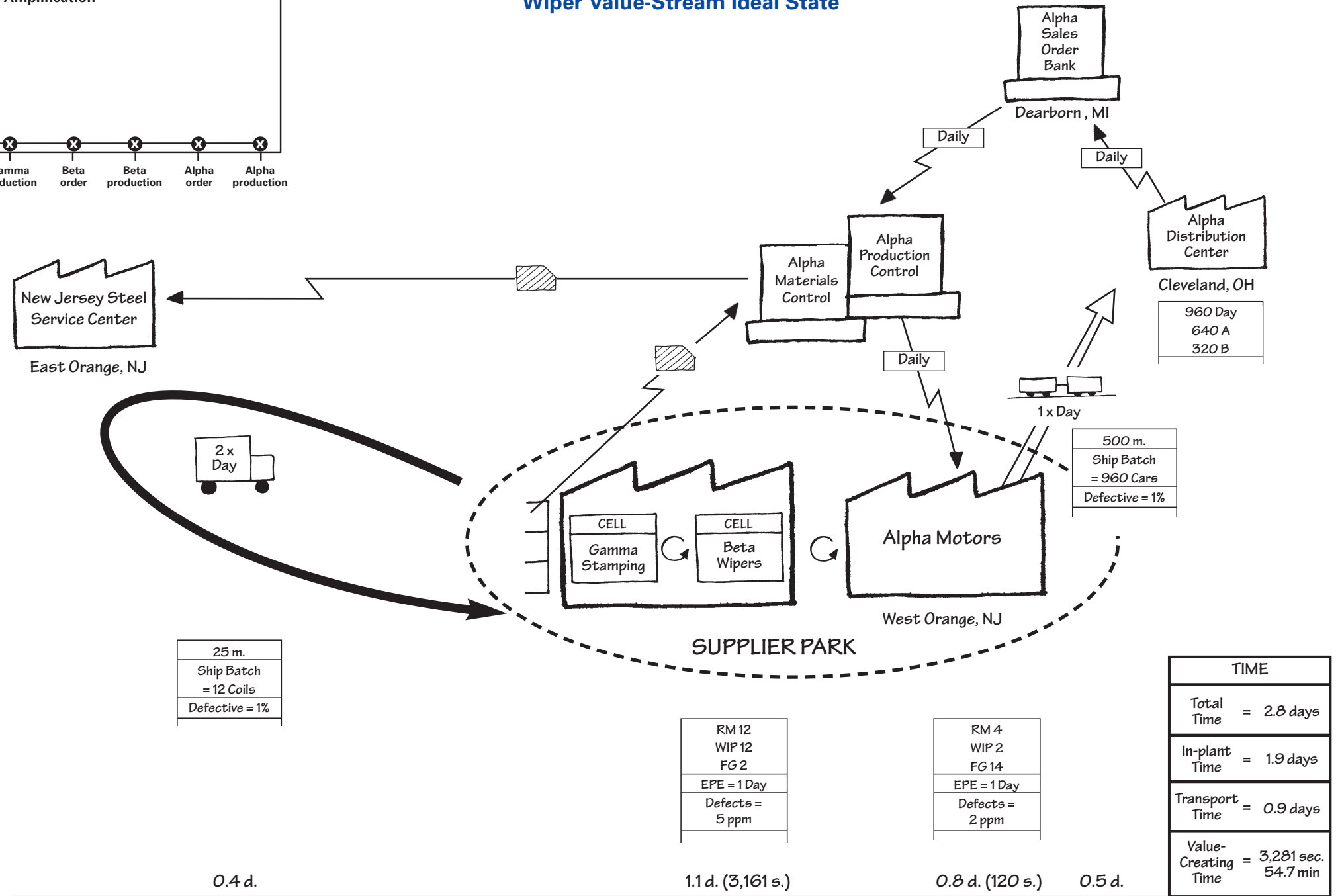


STEPS	2	19 (3)	1	8 (3)	1	7 (2)	1
Total Steps =	39						
Value-Creating =	8 Steps						

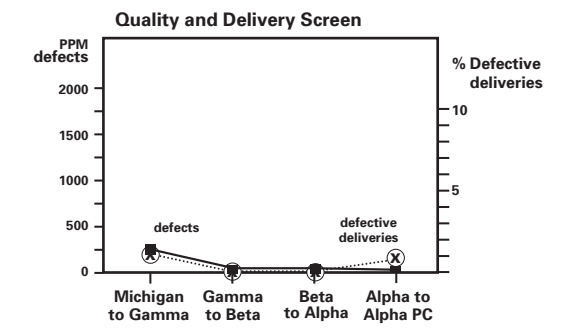




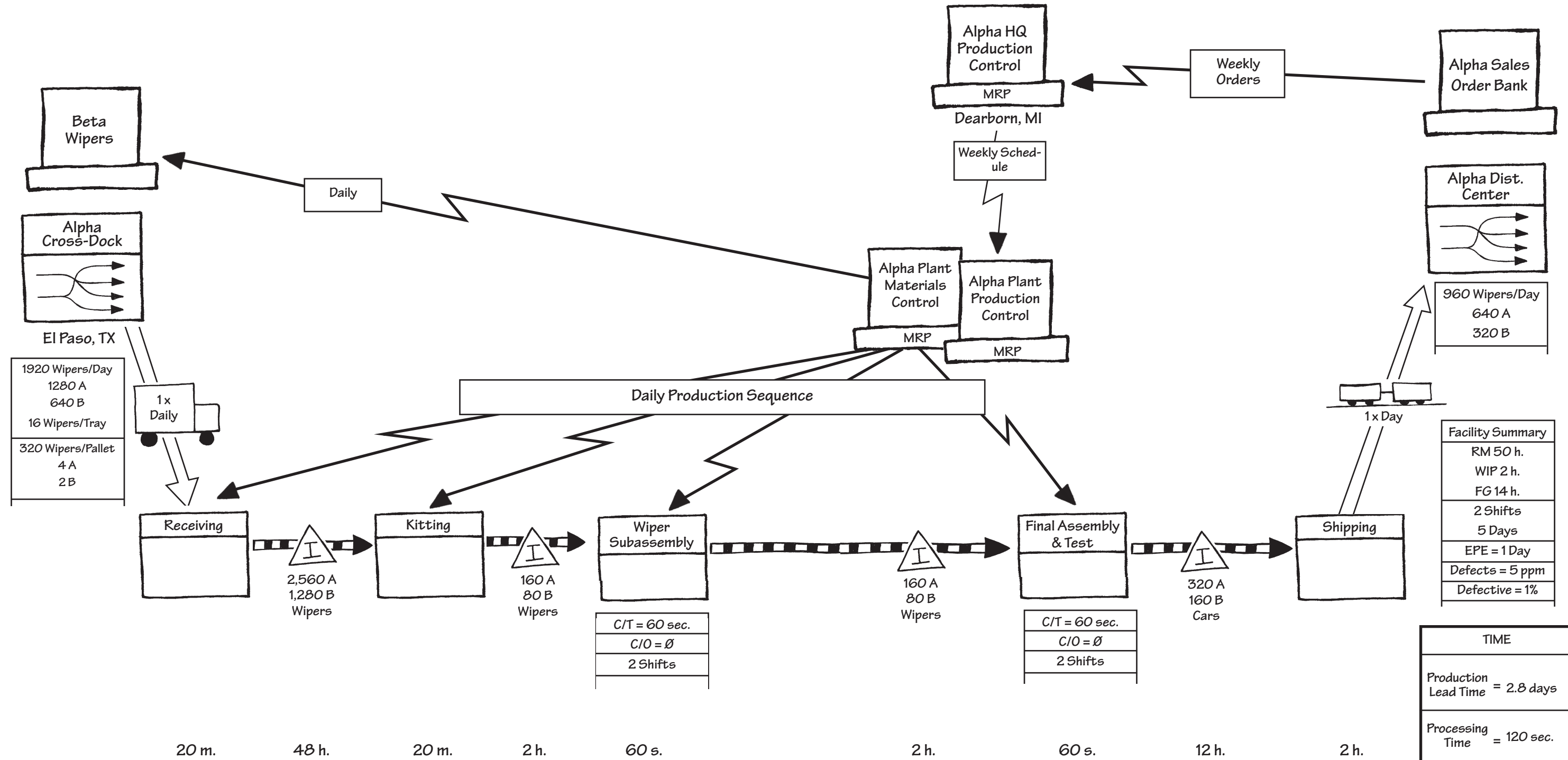
### Wiper Value-Stream Ideal State



STEPS	0.4 d.	1.1 d. (3,161 s.)	1	0.8 d. (120 s.)	0.5 d.
Total Steps	2	19 (6)	1	7 (2)	1
Value-Creating Steps					



Alpha Motors Assembly Plant, West Orange, NJ — Current State



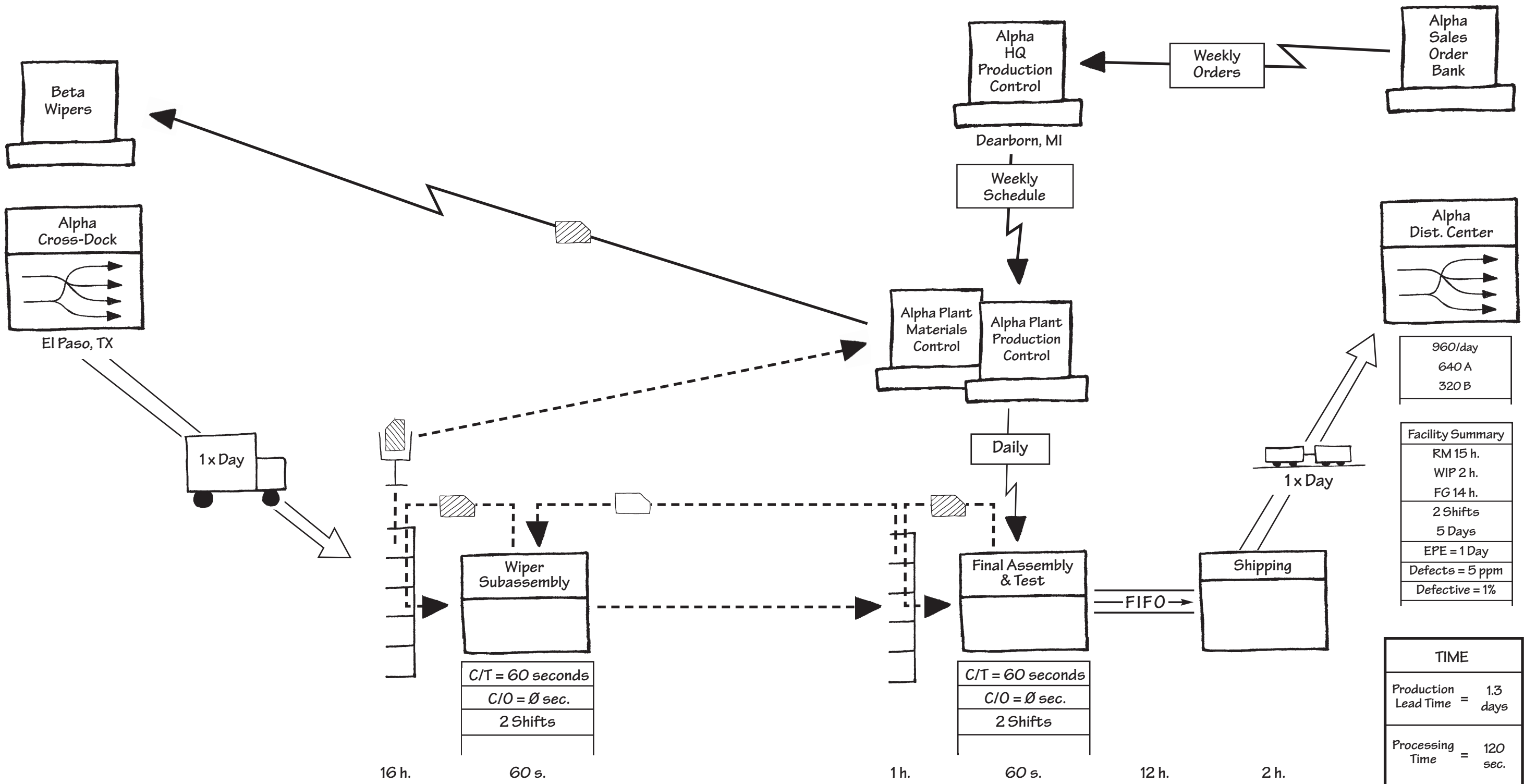
STEPS	1	2	2	1	1(1)	1	1(1)	1	1
Total Steps =	11								
Value-Creating Steps =	2								

20 m.	48 h.	20 m.	2 h.	60 s.	2 h.	60 s.	12 h.	2 h.
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<b>Facility Summary</b>
RM 50 h.
WIP 2 h.
FG 14 h.
2 Shifts
5 Days
EPE = 1 Day
Defects = 5 ppm
Defective = 1%

<b>TIME</b>
Production Lead Time = 2.8 days
Processing Time = 120 sec.

Alpha Motors Assembly Plant, West Orange, NJ — Future State



960/day
640 A
320 B

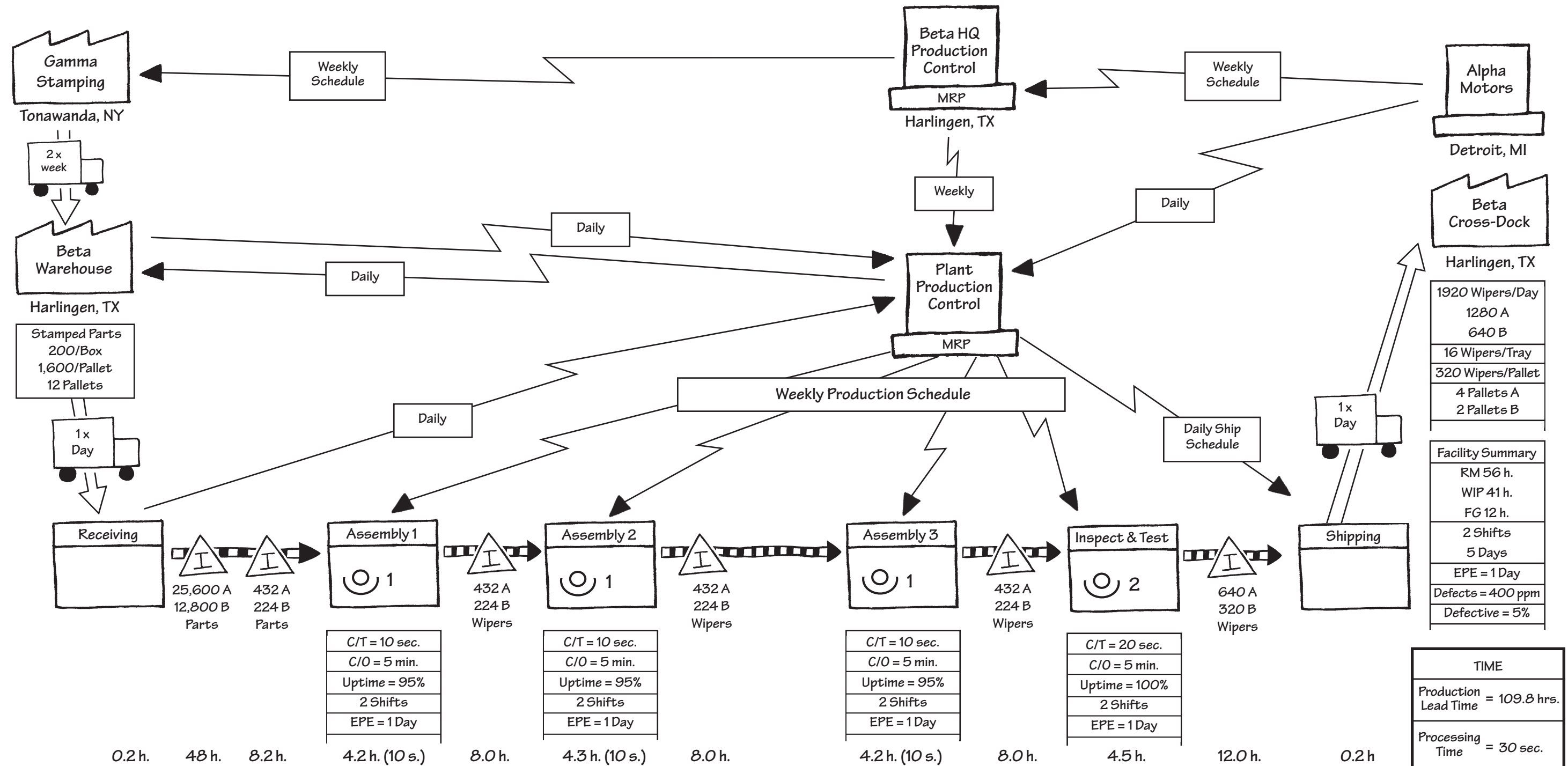
Facility Summary	
RM	15 h.
WIP	2 h.
FG	14 h.
Shifts	2
Days	5
EPE	= 1 Day
Defects	= 5 ppm
Defective	= 1%

TIME	
Production Lead Time	= 1.3 days
Processing Time	= 120 sec.

STEPS	
Total Steps	= 7
Value-Creating Steps	= 2

16 h.	60 s.	1 h.	60 s.	12 h.	2 h.
1	1 (1)	1	2 (1)	1	1

Beta Wipers Assembly Plant, Reynosa, Mexico — Current State



1920 Wipers/Day
1280 A
640 B
16 Wipers/Tray
320 Wipers/Pallet
4 Pallets A
2 Pallets B

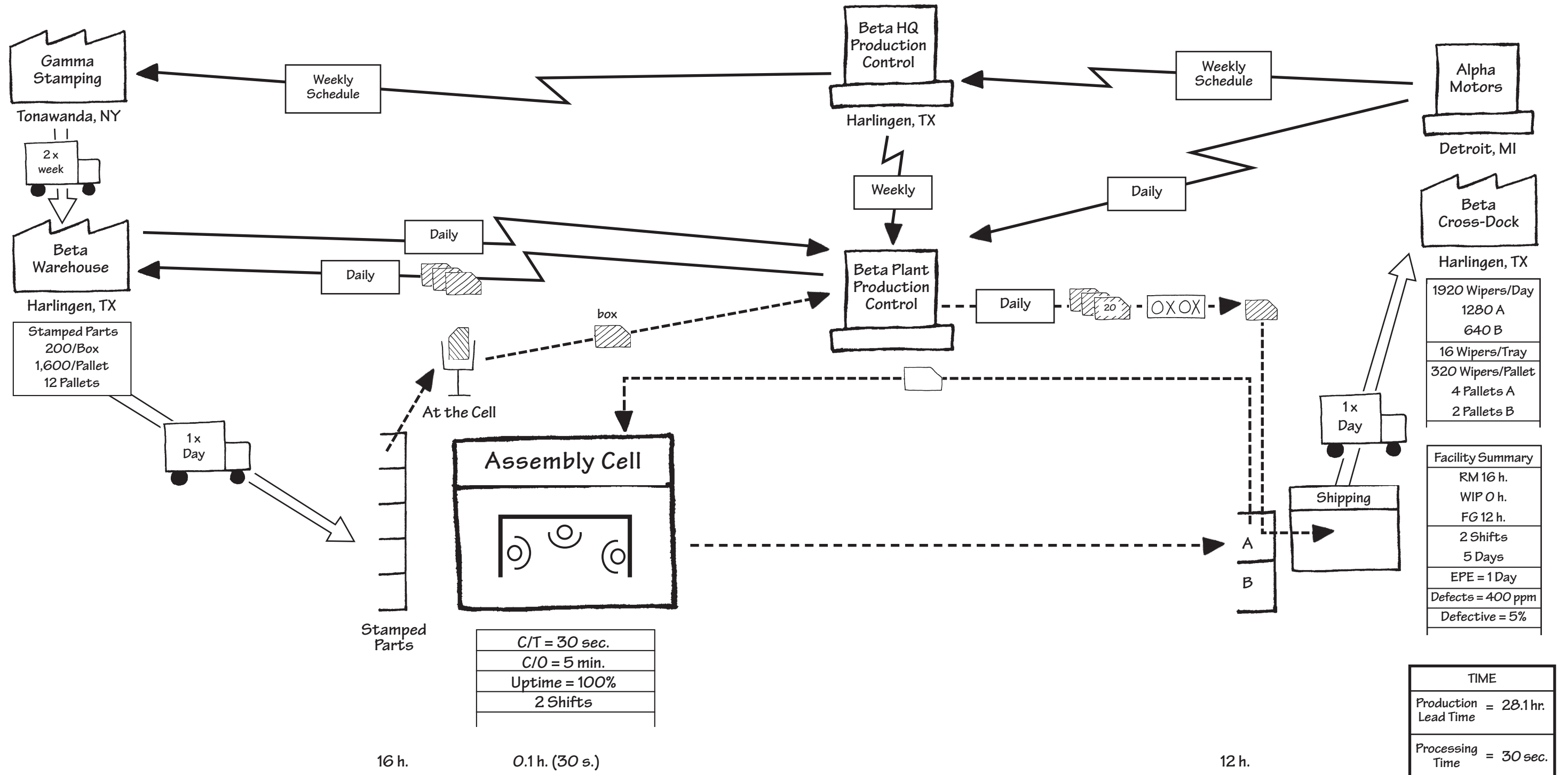
Facility Summary	
RM	56 h.
WIP	41 h.
FG	12 h.
Shifts	2
Days	5
EPE	= 1 Day
Defects	= 400 ppm
Defective	= 5%

TIME	
Production	= 109.8 hrs.
Lead Time	= 109.8 hrs.
Processing Time	= 30 sec.

STEPS	
Total Steps	= 21
Value-Creating Steps	= 3

1	1	2	3 (1)	1	3 (1)	1	3 (1)	1	3	1	1
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Beta Wipers Assembly Plant, Reynosa, Mexico — Future State

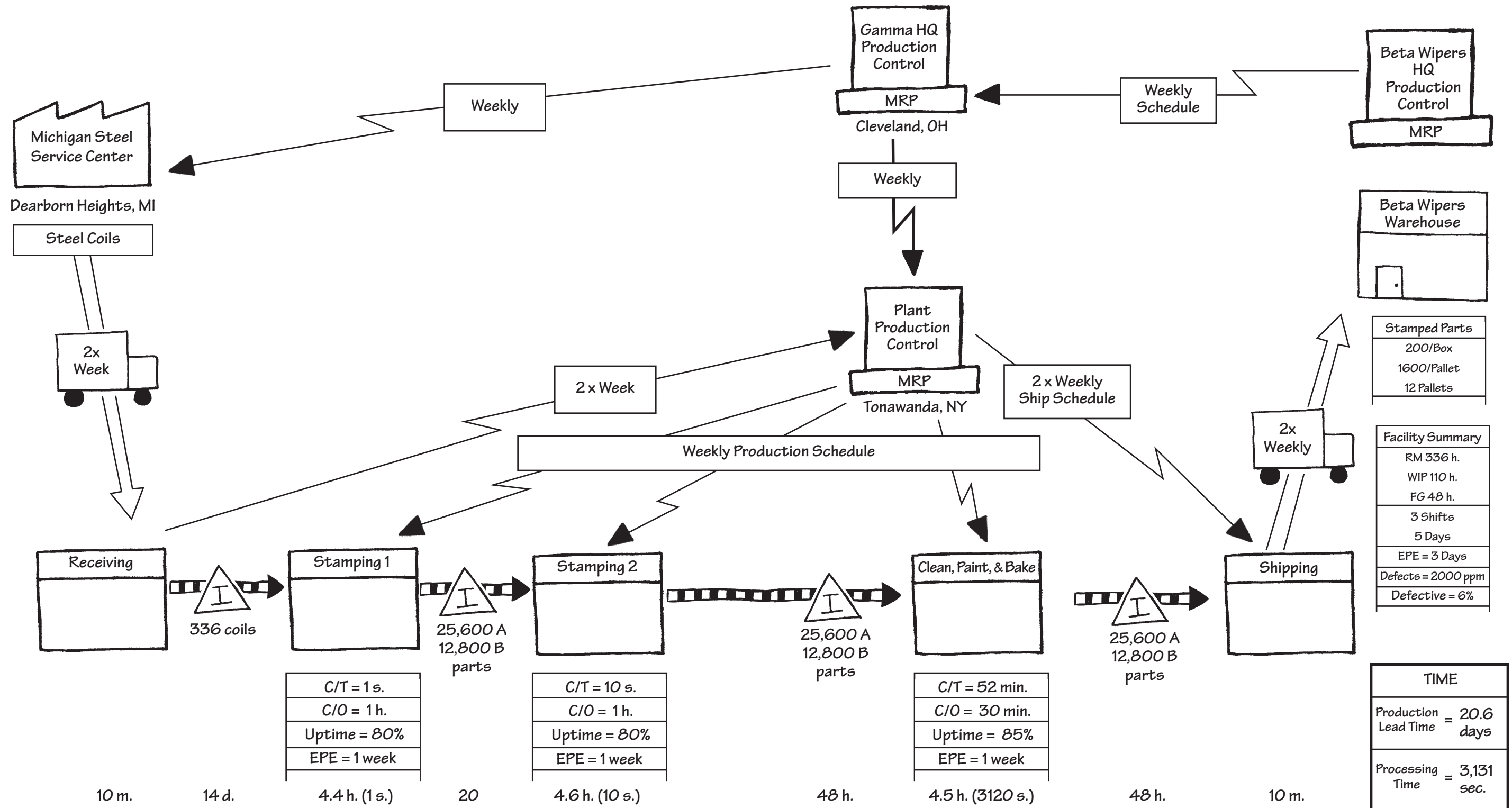


STEPS
Total Steps = 8
Value-Creating Steps = 3

16 h.	0.1 h. (30 s.)	12 h.	
2	3 (3)	2	1



Gamma Stamping Assembly Plant, Tonawanda, NY — Current State



<b>STEPS</b>	1	3	3 (1)	3	2 (1)	3	3 (1)	2	1
Total Steps =	21								
Value-Creating Steps =	3								

10 m.    14 d.    4.4 h. (1 s.)    20    4.6 h. (10 s.)    48 h.    4.5 h. (3120 s.)    48 h.    10 m.

C/T = 1 s.
C/O = 1 h.
Uptime = 80%
EPE = 1 week

C/T = 10 s.
C/O = 1 h.
Uptime = 80%
EPE = 1 week

C/T = 52 min.
C/O = 30 min.
Uptime = 85%
EPE = 1 week

<b>TIME</b>
Production = 20.6 days
Lead Time = 20.6 days
Processing Time = 3,131 sec.

**Gamma Stamping Assembly Plant,  
Tonawanda, NY — Future State**

