Traffic Light System

Thursday, December 8, 2022 12:49 PM

| Num | PE2 walk | Input Patterns PE1 North | PE0 East | Result | | |
|-----|----------|-----------------------------|---------------------------|-------------------------|--|--|
| 0 | | 000 | | No Cars No pedestrians | | |
| 1 | | 001 | Cars on East | | | |
| 2 | | 010 | Cars on North | | | |
| 3 | | 011 | Cars on East and North | | | |
| 4 | | 100 | Pedestrians ,No cars | | | |
| 5 | | 101 | | Pedestrians ,East cars | | |
| 6 | | 110 | | Pedestrians ,North cars | | |
| 7 | | 111 | Cars on both ,Pedestrians | | | |

| State | 6-Led output PF5 to PF0 | Hex | Walk-Led output PF3 - PF1 | Hex | |
|-----------|----------------------------|------|------------------------------|------|--|
| GoEast | 001100 | 0xC | 0010 | 0x02 | |
| WaitEast | 010100 | 0x14 | 0010 | 0x02 | |
| GoNorth | 100001 | 0x21 | 0010 | 0x02 | |
| WaitNorth | 100010 | 0x22 | 0010 | 0x02 | |
| Walk | 100100 | 0x24 | 1000 | 0x08 | |
| FlashOff1 | 100100 | 0x24 | 0000 | 0x00 | |
| FlashOn1 | 100100 | 0x24 | 0010 | 0x02 | |

| Num | Name | 6-LED | PF3,PF1 | Time | In=0 | In=1 | In=2 | In=3 | In=4 | In=5 | In=6 | In=7 |
|-----|-----------|------------------------|---------|-------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|
| 0 | GoEast | East green, North red | Red | 0.8 S | GoEast | GoEast | WaitEast | WaitEast | WaitEast | WaitEast | WaitEast | WaitEast |
| 1 | WaitEast | East yellow, North red | Red | 0.5 S | GoNorth | GoNorth | GoNorth | GoNorth | Walk | Walk | Walk | Walk |
| 2 | GoNorth | North green, East red | Red | 0.8 S | GoNorth | WaitNorth | GoNorth | WaitNorth | WaitNorth | WaitNorth | WaitNorth | WaitNorth |
| 3 | WaitNorth | North yellow, East red | Red | 0.5 S | GoEast | GoEast | GoEast | GoEast | Walk | Walk | Walk | GoEast |
| 4 | Walk | Both roads red | Green | 0.8 S | Walk | FlashOff1 | FLashOff1 | FlashOff 1 | Walk | FlashOff1 | FlashOff | FlashOFF1 |
| 5 | FlashOff1 | Both roads red | off | 0.5 S | FlashOn1 | FlashOn1 | FlashOn1 | FlashOn1 | FlashOn1 | FlashOn1 | FlashOn1 | FlashOn1 |
| 6 | FlashOn1 | Both roads red | Green | 0.5 S | FlashOff2 | FlashOff2 | FlashOff2 | FlashOff2 | FlashOff2 | FlashOff2 | FlashOff2 | FlashOff2 |
| 7 | FlashOff2 | Both roads red | Off | 0.5 S | FlashOn2 | FlashOn2 | FlashOn2 | FlashOn2 | FlashOn2 | FlashOn2 | FlashOn2 | FlashOn2 |
| 8 | FlashOn2 | Both roads red | Green | 0.5 S | GoEast | GoEast | GoNorth | GoEast | GoEast | GoEast | GoNorth | GoNorth |