WIRING DETAIL FOR NORTHSTAR CONTROLS NQ4 LONG VEHICLE OVERSPEED DETECTION SYSTEM NO. 2 - PHASE 6 APPROACH
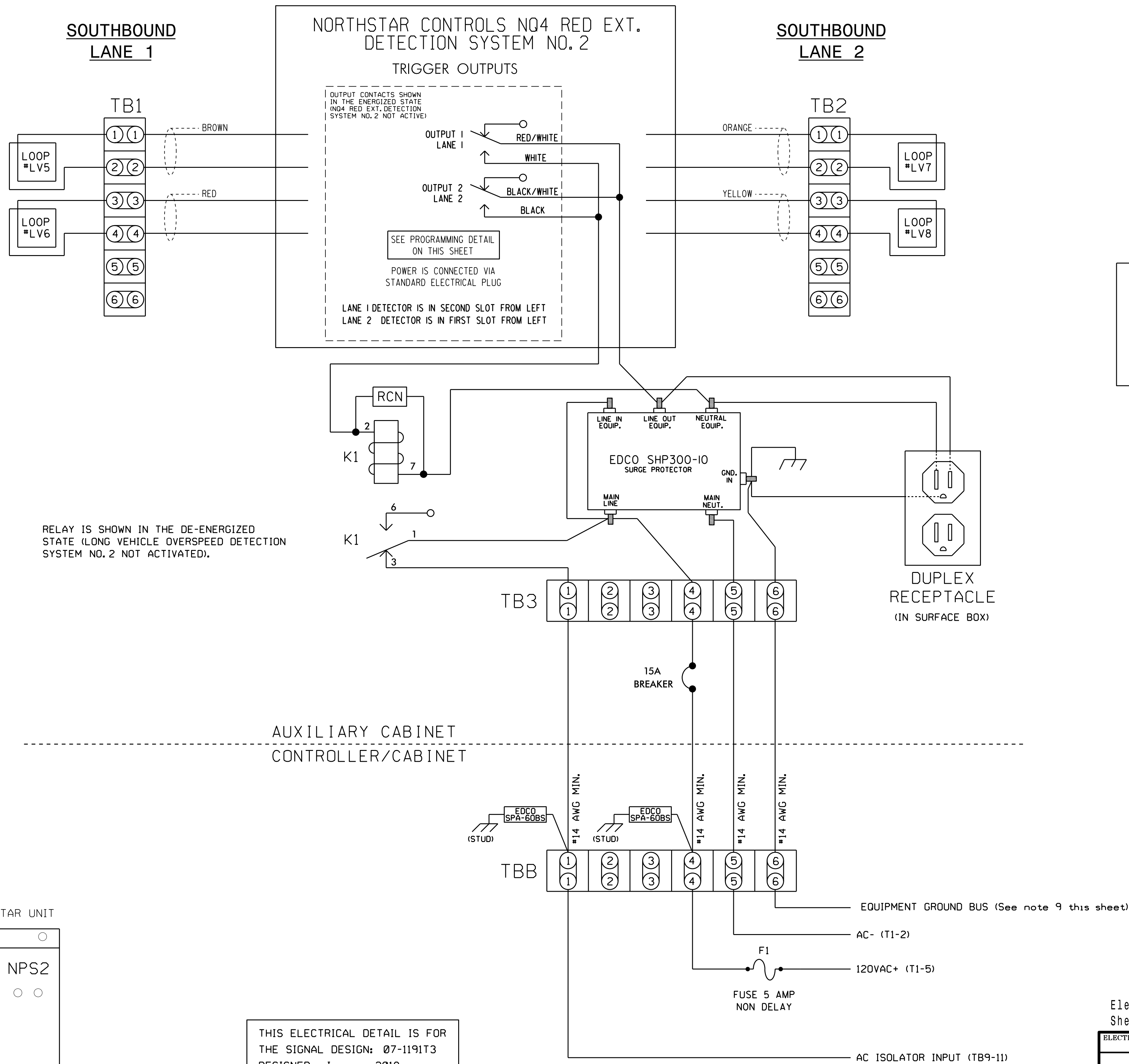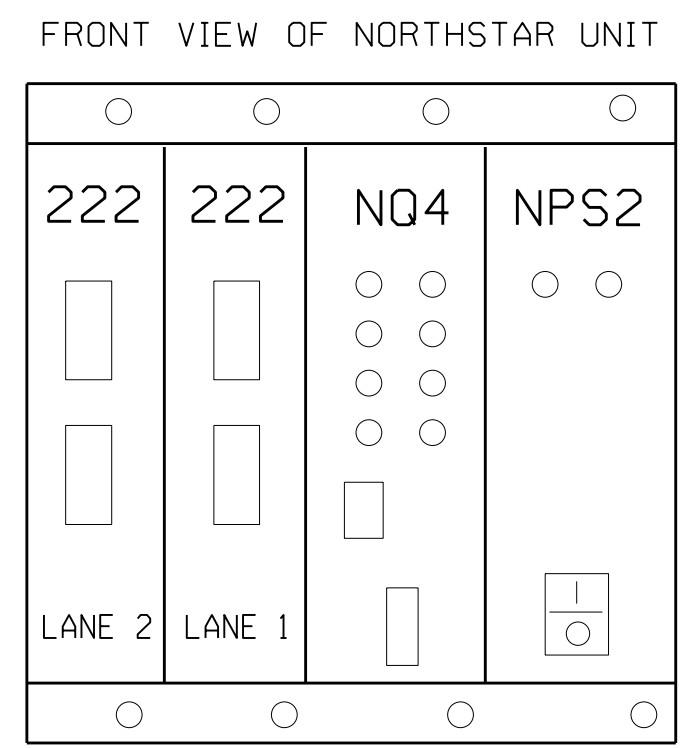
(wire unit as shown below)

NOTES

1. Loop spacing is critical to the proper operation of this Overspeed Detection system. Make sure loop spacing is correctly programmed in the NQ4 unit.

2. The NQ4 unit shall be located in an auxiliary cabinet adjacent to the Long Vehicle Overspeed Detection loops.

3. Relay K1 is an enclosed SPDT general purpose relay with a 120VAC coil, 10A contacts, and octal style plug.

4. The RC network across the coil of K1 is 0.1 micro farad, 100 ohm.

5. EDCO SPA-60BS is a surge protector for 120VAC interconnect circuits.

6. EDCO SHP300-10 is an AC service surge protector.

7. Terminal strips TB1, TB2, TB3, and TBB to be added by the installer.

8. DO NOT install ground rods at the auxiliary cabinet.

9. Install equipment ground from the controller cabinet to the auxiliary cabinet if not already present.

10. Install a disconnect at the auxiliary cabinet if there is no disconnect already present.

SOUTHBOUND LANE 1

SOUTHBOUND LANE 2

NORTHSTAR CONTROLS NQ4 RED EXT. DETECTION SYSTEM NO.2

TRIGGER OUTPUTS

OUTPUT CONTACTS SHOWN IN THE ENERGIZED STATE (NQ4 RED EXT. DETECTION SYSTEM NO.2 NOT ACTIVE)

OUTPUT 1 LANE 1 — RED/WHITE / WHITE

OUTPUT 2 LANE 2 — BLACK/WHITE / BLACK

SEE PROGRAMMING DETAIL ON THIS SHEET

POWER IS CONNECTED VIA STANDARD ELECTRICAL PLUG

LANE 1 DETECTOR IS IN SECOND SLOT FROM LEFT
LANE 2 DETECTOR IS IN FIRST SLOT FROM LEFT

TB1

LOOP #LV5
LOOP #LV6

BROWN
RED

TB2

LOOP #LV7
LOOP #LV8

ORANGE
YELLOW

RCN

K1

EDCO SHP300-10 SURGE PROTECTOR

LINE IN EQUIP. / LINE OUT EQUIP. / NEUTRAL EQUIP.

MAIN LINE / MAIN NEUT. / GND. IN

DUPLEX RECEPTACLE
(IN SURFACE BOX)

RELAY IS SHOWN IN THE DE-ENERGIZED STATE (LONG VEHICLE OVERSPEED DETECTION SYSTEM NO. 2 NOT ACTIVATED).

K1

TB3

NORTHSTAR CONTROLS MODEL NQ4 PROGRAMMING DETAIL

(program unit as shown below)

NOTE: Unit must be programmed using a PC and a terminal emulator program. For connection to the terminal emulator, refer to the NQ4 operation manual.

Program the NQ4 by typing the following commands:

1. SET SPEED = 55

2. SET LENGTH = 22'

3. SET ALARMTIME = 12

4. SET SEPARATION = 16' (leading edge to leading edge – program actual measured separation)

5. SET LOOP LENGTH = 6' (program actual measured loop length)

6. SAVE

15A BREAKER

AUXILIARY CABINET
CONTROLLER/CABINET

EDCO SPA-60BS (STUD)
EDCO SPA-60BS (STUD)

#14 AWG MIN.
#14 AWG MIN.
#14 AWG MIN.
#14 AWG MIN.

TBB

EQUIPMENT GROUND BUS (See note 9 this sheet)

AC- (T1-2)

F1

120VAC+ (T1-5)

FUSE 5 AMP NON DELAY

AC ISOLATOR INPUT (TB9-11)

FRONT VIEW OF NORTHSTAR UNIT

222 | 222 | NQ4 | NPS2

LANE 2 | LANE 1

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 07-1191T3
DESIGNED: January 2018
SEALED: 2/7/2018
REVISED: N/A

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