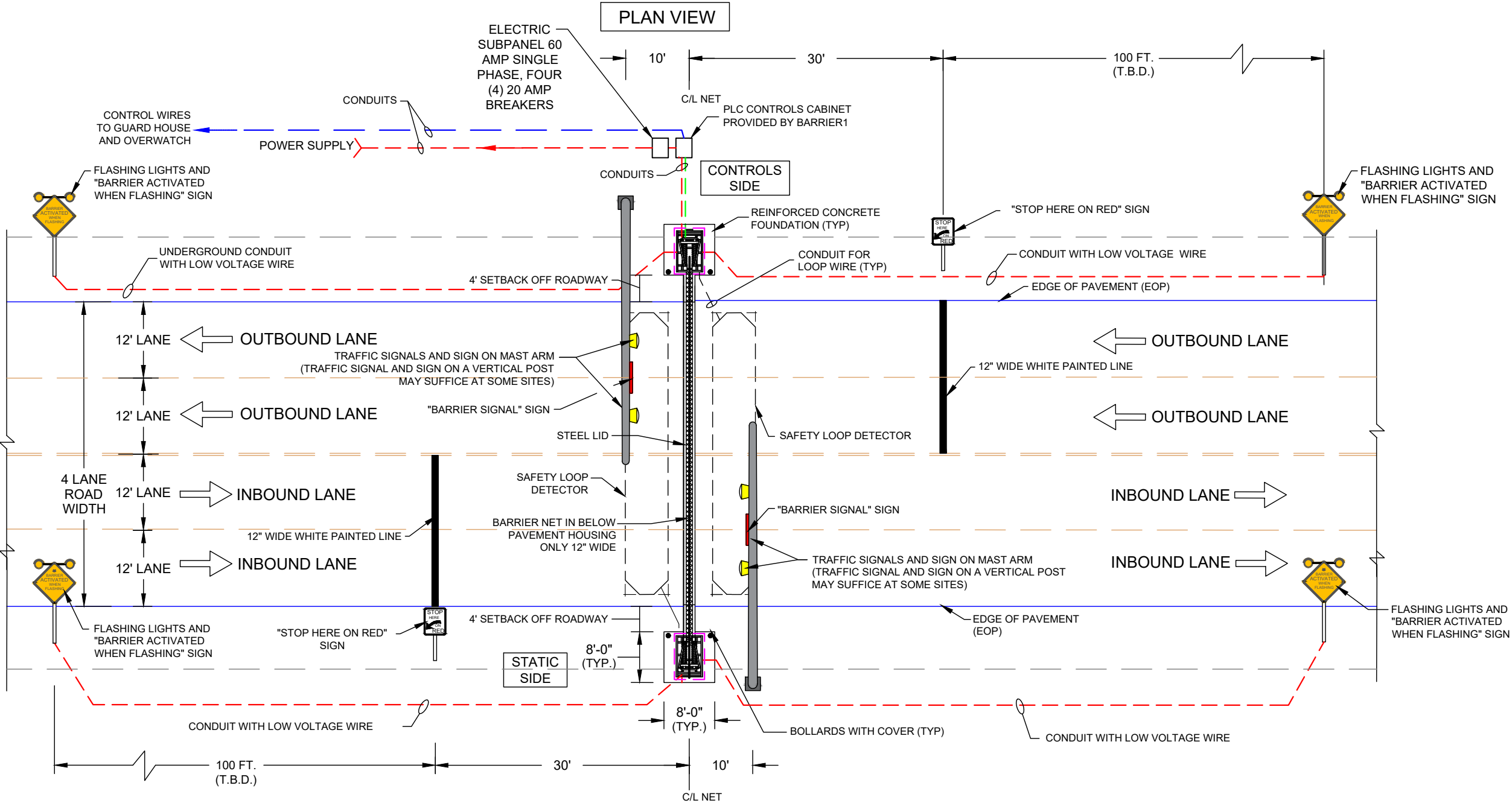


**NET BARRIER - MODEL VA-NET-300 (REDUCED RISK ARRESTING BARRIER)**

STOPS 15,000 LBS VEHICLE IMPACT @ 50 MPH - NET SPAN CERTIFIED UP TO 80 FEET  
F2656-07 ASTM M50 CERTIFIED (K12) , APPROVED ON DOD ANTI-RAM LIST

TYPICAL LAYOUT - 2 INBOUND AND 2 OUTBOUND LANES (4 LANE ROAD)



- NOTE:**
- 1. BARRIER LAYOUT TO BE MODIFIED BASED ON SITE SPECIFIC CONDITIONS.
  - 2. OVERHEAD MAST ARMS SHOWN MAY NOT BE REQUIRED.



**BARRIER1 SYSTEMS, INC.**  
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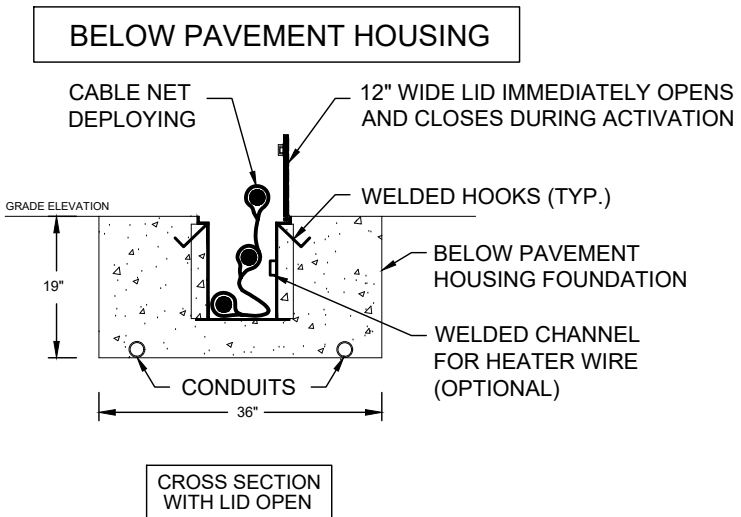
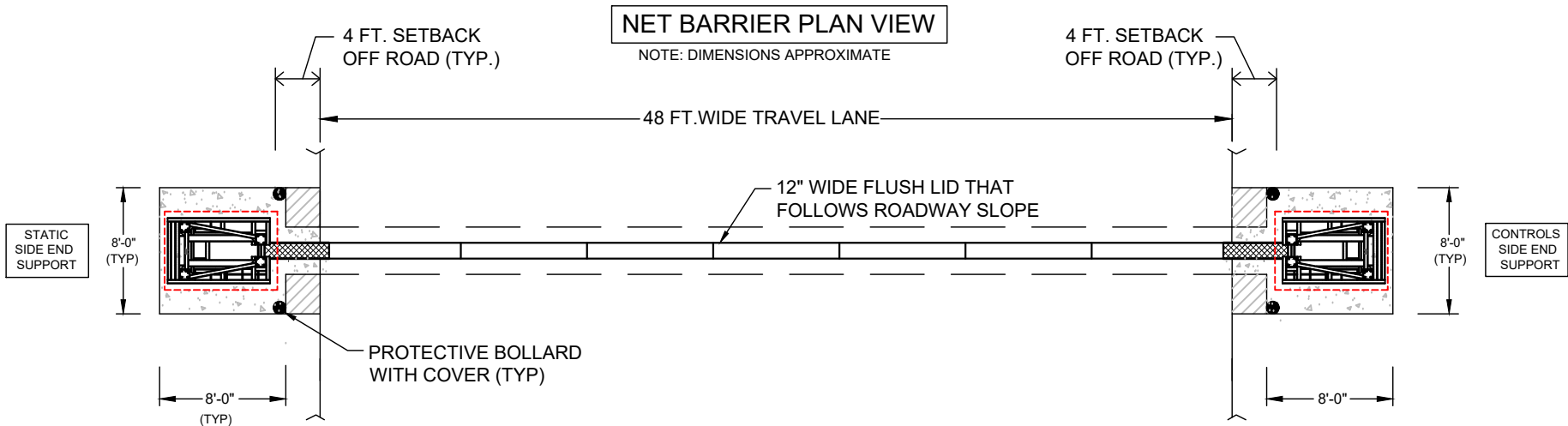
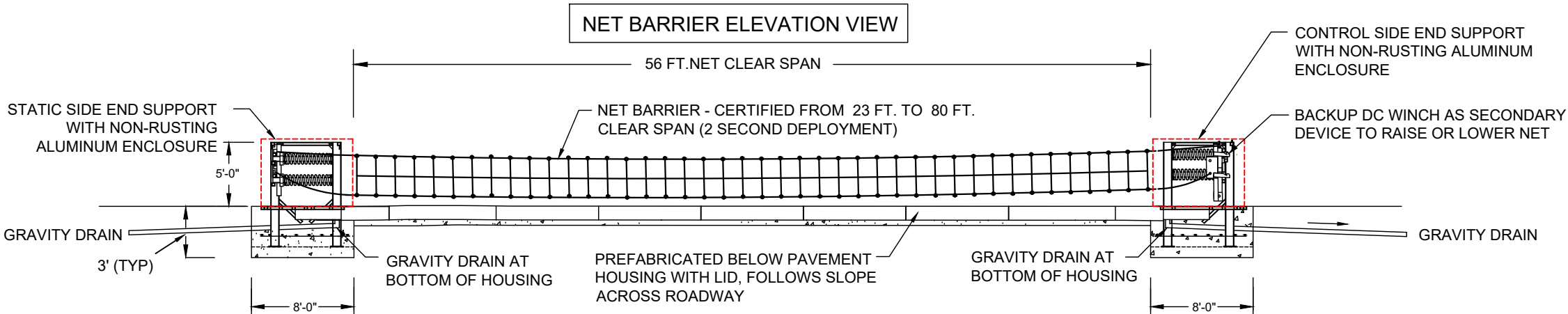
INBOUND AND OUTBOUND  
LANE LAYOUT  
ACTIVE NET BASED BARRIER

SAMPLE DRAWING

SHEET: 1 OF 9  
20180716-04-PD  
SCALE: N.T.S.

**NET BARRIER - MODEL VA-NET-300 (REDUCED RISK ARRESTING BARRIER)**

**STOPS 15,000 LBS VEHICLE IMPACT @ 50 MPH - NET SPAN CERTIFIED UP TO 80 FEET**  
**F2656-07 ASTM M50 CERTIFIED (K12) , APPROVED ON DOD ANTI-RAM LIST**



- KEY CAPABILITIES:**
1. BI-DIRECTIONAL STOPPING CAPABILITY, ASTM M50 CERTIFIED TO STOP BOTH INBOUND & OUTBOUND TRAFFIC.
  2. BATTERY BACKUP PROVIDED TO CYCLE BARRIER NET 20+ TIMES DURING A POWER OUTAGE. COMPONENTS, SYSTEMS, LIGHTS, DEVICES, PLC, ETC. ARE BACKED UP.
  3. BARRIER NET IS REUSABLE AFTER IMPACT AND DOES NOT "KINK". NET DOES NOT DEGRADE FROM WATER, SALT OR TEMPERATURE CHANGES.
  4. NET AND ENERGY ABSORPTION SYSTEMS AUTOMATICALLY AND IMMEDIATELY RESET AFTER A TYPICAL IMPACT. NO MANPOWER, EQUIPMENT OR REPLACEMENT COMPONENTS ARE NEEDED TO RESET SYSTEM.
  5. 12" WIDE FLUSH LID ACROSS ROADWAY THAT FOLLOWS THE SLOPE OF THE ROADWAY.
  6. BACKUP DC WINCH IS PRE-INSTALLED AS A SECONDARY BACKUP DEVICE TO RAISE OR LOWER THE NET (STANDARD).
  7. ABOVE GROUND COMPONENTS ON 1 SIDE ONLY. BIODEGRADABLE FLUID.



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**ELEVATION, PLAN VIEWS AND**  
**BELOW PAVEMENT HOUSING**  
**CROSS SECTIONS ACTIVE NET**  
**BASED BARRIER**

**SAMPLE DRAWING**

SHEET: 2 OF 9  
20180716-04-PD  
SCALE: N.T.S.

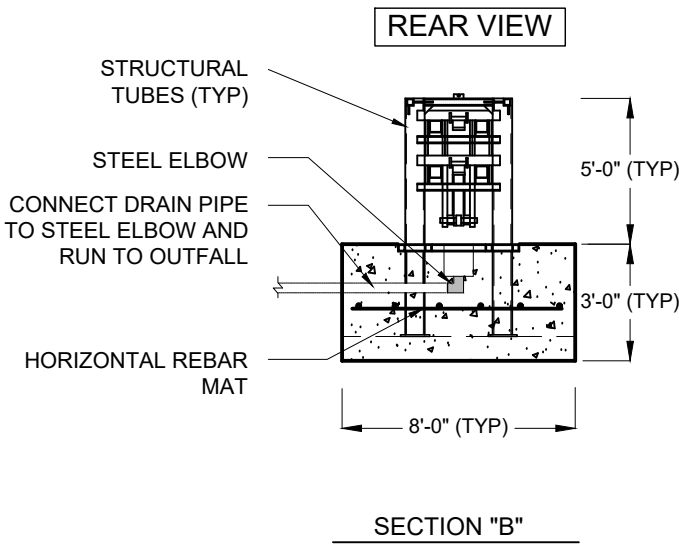
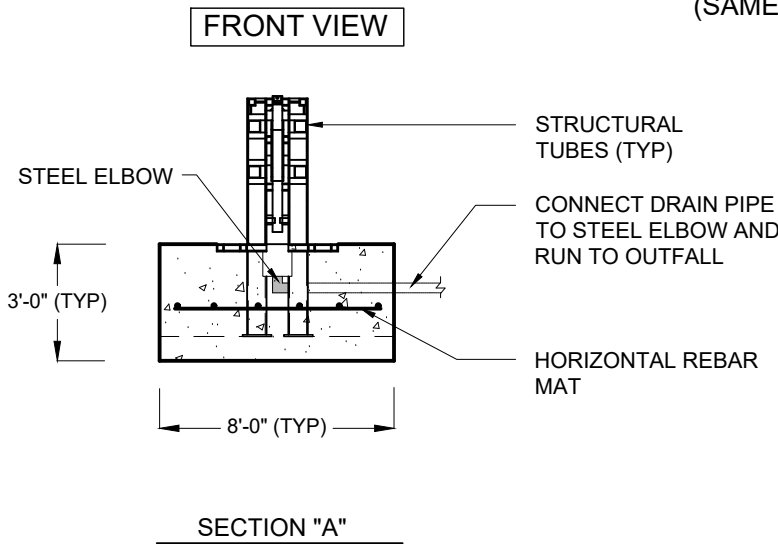
# NET BARRIER - MODEL VA-NET-300 (REDUCED RISK ARRESTING BARRIER)

STOPS 15,000 LBS VEHICLE IMPACT @ 50 MPH - NET SPAN CERTIFIED UP TO 80 FEET  
F2656-07 ASTM M50 CERTIFIED (K12) , APPROVED ON DOD ANTI-RAM LIST

## ELEVATION VIEWS

### PREFABRICATED END SUPPORTS AND FOUNDATION

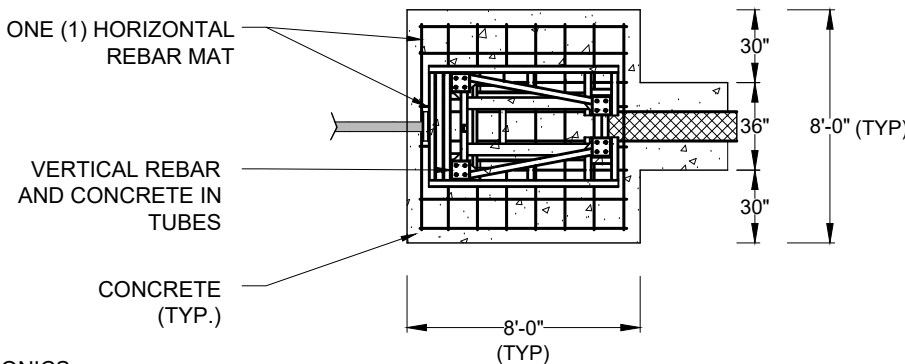
(SAME FOR CONTROLS SIDE AND STATIC SIDE)



## TOP VIEW

### FOUNDATION AND REINFORCEMENT

(SAME FOR CONTROLS SIDE AND STATIC SIDE)



#### KEY CAPABILITIES:

1. END SUPPORTS ARE DELIVERED PRE-ASSEMBLED WITH ELECTRONICS, ACTUATORS, COMPONENTS, AND DEVICES INSTALLED. END SUPPORTS ARE READY TO SET IN EXCAVATIONS AND POUR CONCRETE.
2. BARRIER1 SYSTEMS PROVIDES PRECUT REBAR FOR FOUNDATIONS AND VERTICAL TUBES.



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END SUPPORT SECTIONS  
AND FOUNDATION  
ACTIVE NET BARRIER

SAMPLE DRAWING

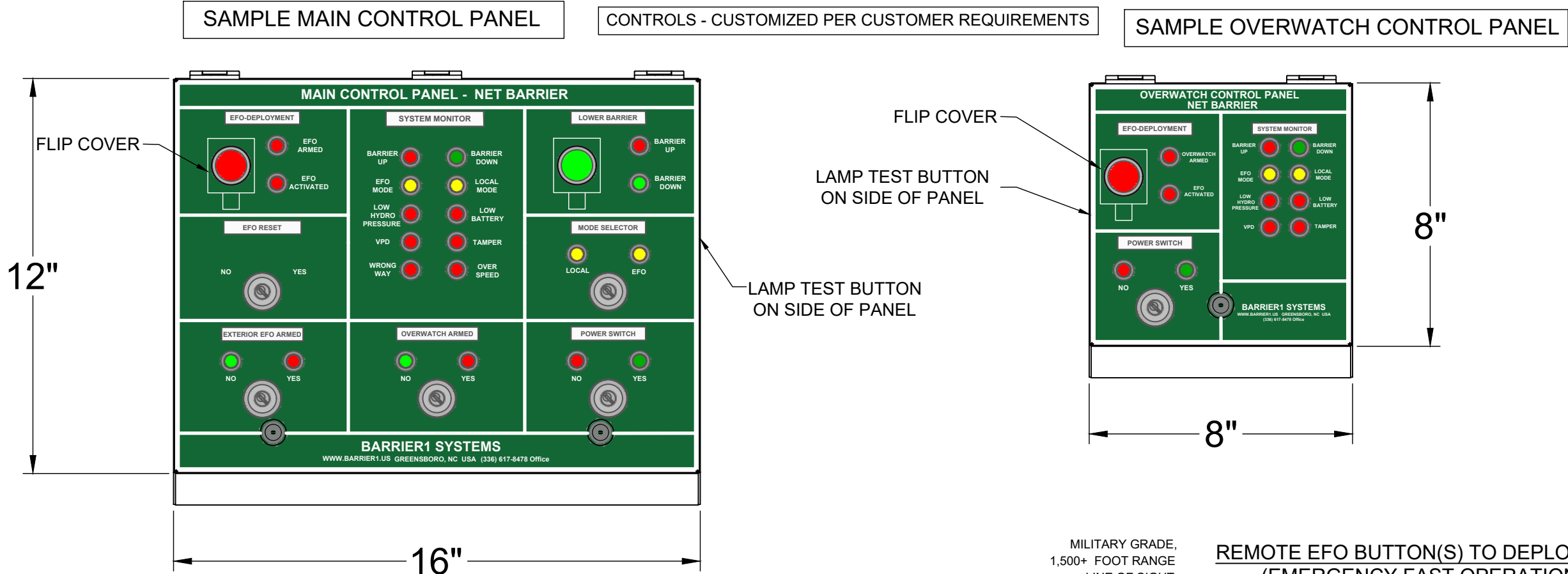
SHEET: 3 OF 9

20180716-04-PD

SCALE: N.T.S.

NET BARRIER - MODEL VA-NET-300 (REDUCED RISK ARRESTING BARRIER)

STOPS 15,000 LBS VEHICLE IMPACT @ 50 MPH - NET SPAN CERTIFIED UP TO 80 FEET  
F2656-07 ASTM M50 CERTIFIED (K12) , APPROVED ON DOD ANTI-RAM LIST



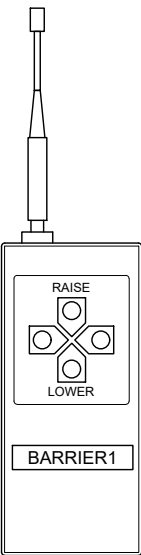
KEY CAPABILITIES:

1. CONTROL PANELS, ALARMS, KEYED SWITCHES, AND OTHER FEATURES ARE CUSTOMIZED BY BARRIER1 SYSTEMS.
2. UPS BATTERY BACKUP IS PROVIDED FOR ALL CONTROLS AND SYSTEMS DURING POWER OUTAGE (20+ CYCLES).
3. TAMPER SWITCH MONITORS DOOR OPENINGS ON AESTHETIC END SUPPORT ENCLOSURES AND PLC CABINET DOOR.
4. DATA LOGGER IS INCLUDED WHICH RECORDS THE DATE, TIME, AND LOCATION OF EACH NET BARRIER DEPLOYMENT.
5. IF VEHICLE SITS ON LOOP FOR 12 SECONDS, INDICATOR LIGHT ACTIVATES. THIS ACTIVATION TIME CAN BE ADJUSTED.
6. LOCAL CONTROLS AND LOCKOUT DURING MAINTENANCE.

OPTIONAL ITEMS:

1. OVER SPEED DETECTION WITH EARLY WARNING ALARMS
2. WRONG WAY DETECTION WITH ALARMS.
3. CAMERAS WITH CONTINUOUS DVR RECORDING AND CAMERA VIEW SCREENS.
4. CORRIDOR CABLE FENCING (PREVENTS VEHICLES FROM CIRCUMVENTING THE BARRIER).
5. CRASH RATED BOLLARDS AND COVERS. ASTM M30 (K4), M40 (K8), M50 (K12).
6. TRIGGER LOOPS AND/OR RFID TAGS TO AUTOMATICALLY RAISE OR LOWER BARRIER ARM.
7. TOUCH SCREEN CONTROLLER WITH ICONS USED FOR MAIN CONTROL PANEL, IN THE GUARD HOUSE, OVER WATCH AND/OR LOCAL CONTROLLER.
8. IN PAVEMENT WARNING LIGHTS.
9. COLD WEATHER PACKAGE INCLUDING THERMOSTAT CONTROLLED SPACE HEATER, INSULATED ENCLOSURE ON 'CONTROLS SIDE', WEATHER SEAL WITH GASKETS ON ENCLOSURE DOORS & THERMOSTAT CONTROLLED HEATER WIRE FOR BELOW PAVEMENT HOUSING.
10. SOLAR POWERED BARRIER OPERATIONS FOR USE IN REMOTE LOCATIONS (RENEWABLE ENERGY).

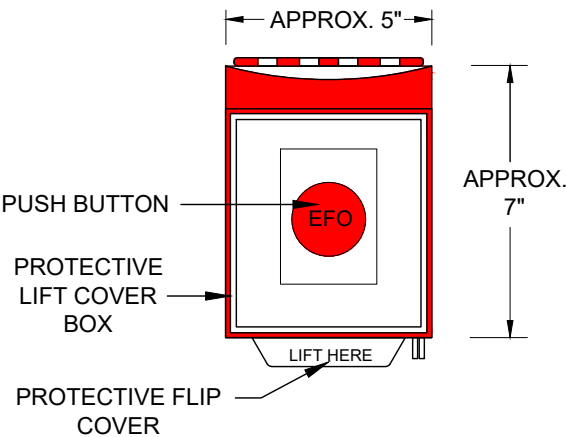
MILITARY GRADE,  
1,500+ FOOT RANGE  
LINE OF SIGHT



OPTIONAL REMOTE  
WIRELESS CONTROLLER

REMOTE EFO BUTTON(S) TO DEPLOY NET  
(EMERGENCY FAST OPERATION)

1 AT EACH GAURD BOOTH (3)  
1 OUTSIDE WALL OF GUARD HOUSE



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MAIN CONTROL PANEL,  
OVERWATCH PANEL & EFO  
BUTTON CONTROL  
ACTIVE NET BARRIER

SAMPLE DRAWING

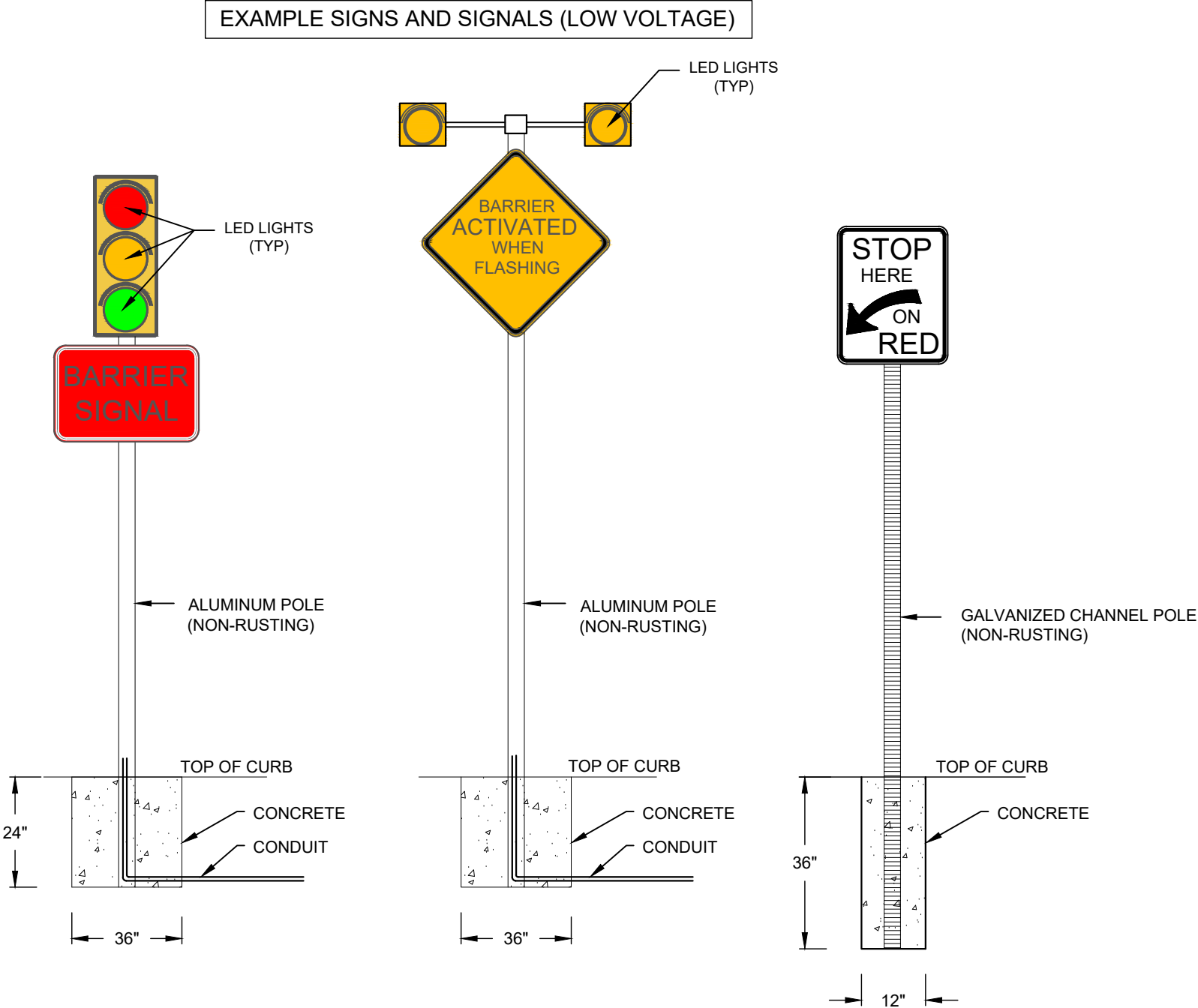
SHEET: 4 OF 9

20180716-04-PD

SCALE: N.T.S.

**NET BARRIER - MODEL VA-NET-300 (REDUCED RISK ARRESTING BARRIER)**

STOPS 15,000 LBS VEHICLE IMPACT @ 50 MPH - NET SPAN CERTIFIED UP TO 80 FEET  
F2656-07 ASTM M50 CERTIFIED (K12) , APPROVED ON DOD ANTI-RAM LIST



**KEY CAPABILITIES:**

1. SIGNS AND SIGNALS ARE CUSTOMIZED PER CUSTOMER NEEDS.
2. SIGNS ARE DIAMOND GRADE WITH RETRO REFLECTIVE PROPERTIES.
3. UPS BATTERY BACKUP POWER FEEDS ALL LIGHTS, SIGNALS, CONTROL PANELS, DEVICES, ETC. IF POWER OUTAGE OCCURS.
4. IF OVERHEAD MAST ARMS ARE REQUIRED ACROSS ROAD (ABOVE ROAD), SIGNS AND SIGNALS ARE MOUNTED ON MAST ARM.



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SIGNS AND SIGNALS  
(LOW VOLTAGE)  
ACTIVE NET BARRIER

SAMPLE DRAWING

SHEET: 5 OF 9

20180716-04-PD

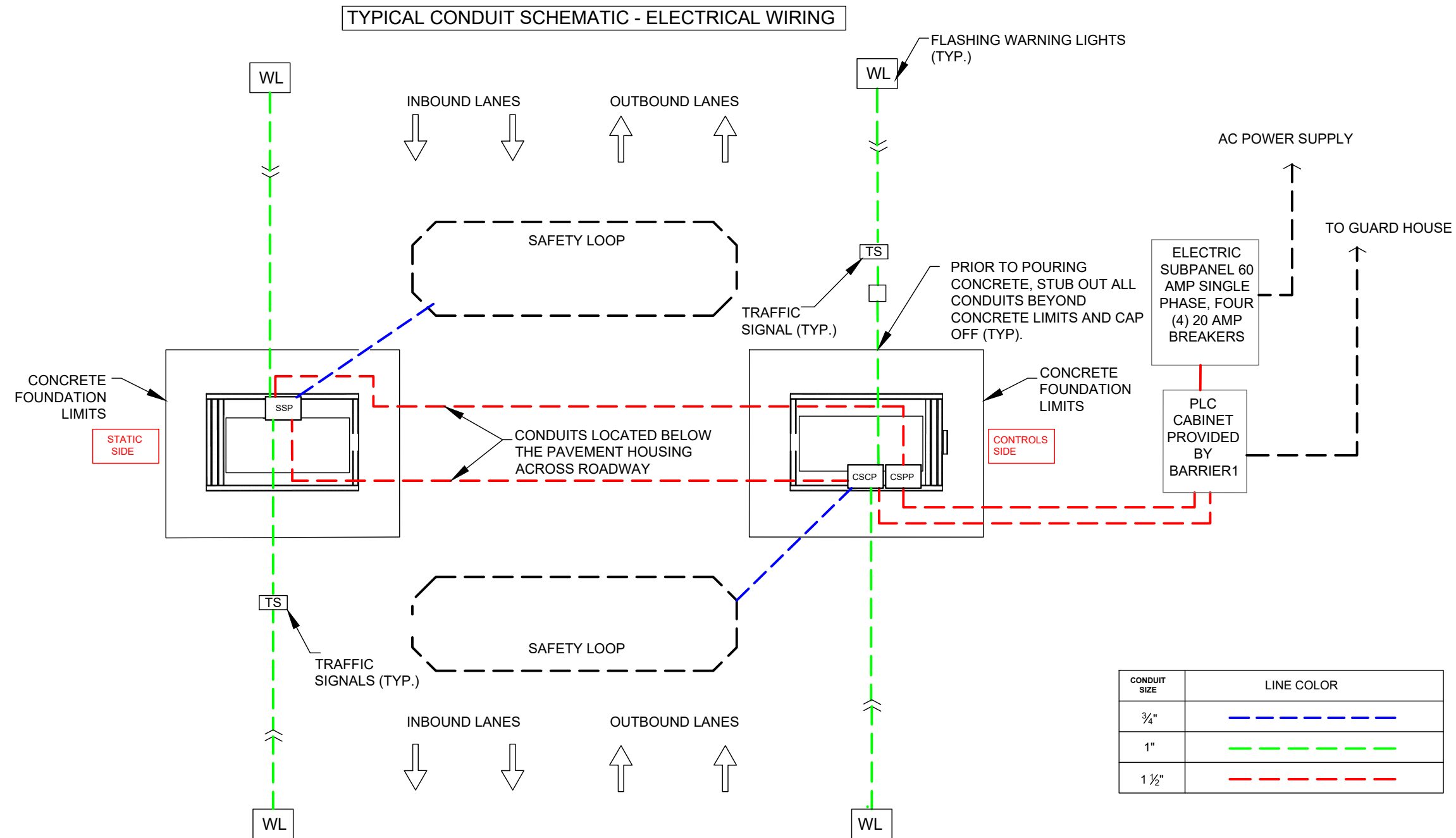
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## NET BARRIER - MODEL VA-NET-300 (REDUCED RISK ARRESTING BARRIER)

STOPS 15,000 LBS VEHICLE IMPACT @ 50 MPH - NET SPAN CERTIFIED UP TO 80 FEET

F2656-07 ASTM M50 CERTIFIED (K12) , APPROVED ON DOD ANTI-RAM LIST



**KEY CAPABILITIES:**

1. **ONLY 60 AMP SINGLE PHASE POWER SUPPLY NEEDED (TYPICAL). 100 AMP SINGLE PHASE POWER SUPPLY REQUIRED IF COLD WEATHER PACKAGE IS ADDED.**
2. **AS AN ALTERNATIVE TO OVERHEAD MAST ARMS, A VERTICAL POST FOR TRAFFIC SIGNAL AND SIGN ON SIDES OF ROADWAY MAY SUFFICE AT SOME SITES.**



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### CONDUIT SCHEMATIC ACTIVE NET BARRIER

### SAMPLE DRAWING

SHEET: 6 OF 9

20180716-04-PD

SCALE: N.T.S.

NET BARRIER - MODEL VA-NET-300 (REDUCED RISK ARRESTING BARRIER)

STOPS 15,000 LBS VEHICLE IMPACT @ 50 MPH - NET SPAN CERTIFIED UP TO 80 FEET  
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TYPICAL SEQUENCING OF TRAFFIC SIGNALS, WARNING LIGHTS, AND ALARMS UPON ACTIVATION

CONVENTIONAL TRAFFIC SAFETY CONTROL SYSTEM	OPERATIONAL SEQUENCING FOR EMERGENCY FAST OPERATION (MIN FOR SAFETY - 25 MPH (40KPH) DESIGN SPEED)											
	TRAFFIC CONTROL	-	1	2	3	4	5	6	7	8	9	10
		NORMAL OPS	GUARD PERCEPTION AND REACTION TIME TO THREAT (EFO BUTTON)			YELLOW CHANGE (MUTCO MINIMUM)			ALL RED SAFETY	DEPLOYING BARRIER		THREAT CONTAINED
	WARNING SIGN WITH BEACONS	DARK	DARK	DARK	DARK	ALT FY	ALT FY	ALT FY	ALT FY	ALT FY	ALT FY	ALT FY
	HYBRID BEACON	DARK	DARK	DARK	DARK	STEADY YELLOW	STEADY YELLOW	STEADY YELLOW	ALT FR	ALT FR	ALT FR	ALT FR
	TRAFFIC SIGNAL	G	G	G	G	Y	Y	Y	R	R	R	R
	IN-ROADWAY LIGHTS OR ON BARRIER	DARK	DARK	DARK	DARK	DARK	DARK	DARK	FR	FR	FR	FR
	ACTIVE VEHICLE BARRIER	DOWN	DOWN	DOWN	DOWN	DOWN	DOWN	DOWN	DOWN	ACTIVATED	ACTIVATED	DEPLOYED

KEY:

R = RED  
Y = YELLOW  
G = GREEN  
FY = FLASHING YELLOW  
ALT = ALTERNATING

NOTES:

- BARRIER IS DEPLOYED WITHIN 6 SECONDS AFTER GUARD HITS BUTTON, WITH 3 SECONDS OF WARNINGS AND CLEARANCE TIME.
- THE ABOVE SEQUENCING AND TIMING OF SIGNALS, ALARMS AND LIGHTS CAN BE FIELD MODIFIED USING PLC.



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SEQUENCING OF TRAFFIC  
LIGHTS, WARNING LIGHTS  
AND ALARMS  
ACTIVE NET BARRIER

SAMPLE DRAWING

SHEET: 7 OF 9

20180716-04-PD

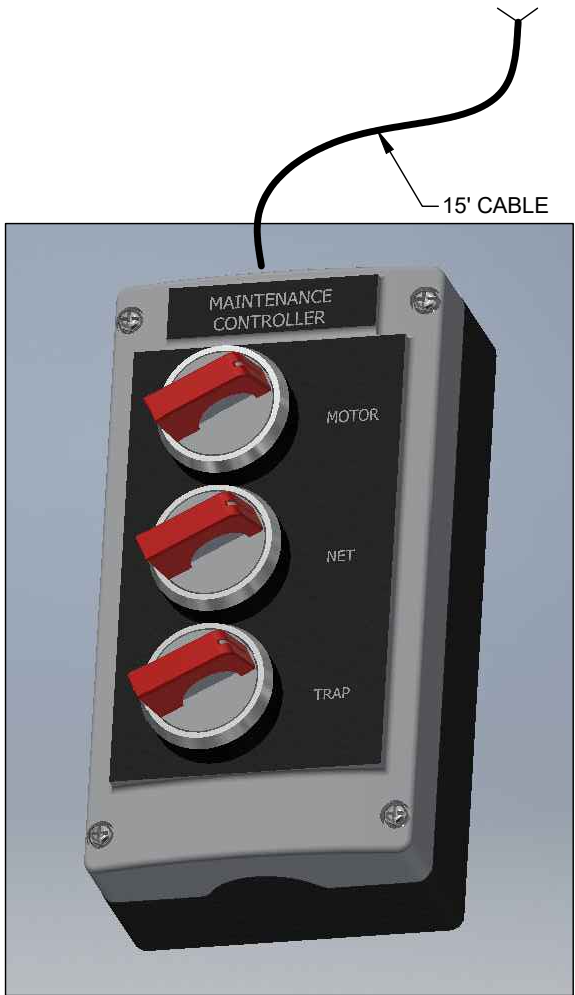
SCALE: N.T.S.

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MAINTENANCE AND LOCAL CONTROLLERS LOCKED INSIDE END SUPPORT ENCLOSURE

HAND HELD MAINTENANCE CONTROLLER



LOCAL CONTROLLER



OPTIONAL TOUCH SCREEN LOCAL CONTROLLER

4.3" DIAGONAL  
PROGRAMMABLE TOUCH SCREEN WITH ICONS



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LOCAL CONTROLS INSIDE END  
SUPPORT ENCLOSURE SIDE  
ACTIVE NET BARRIER

SAMPLE DRAWING

SHEET: 8 OF 9

20180716-04-PD

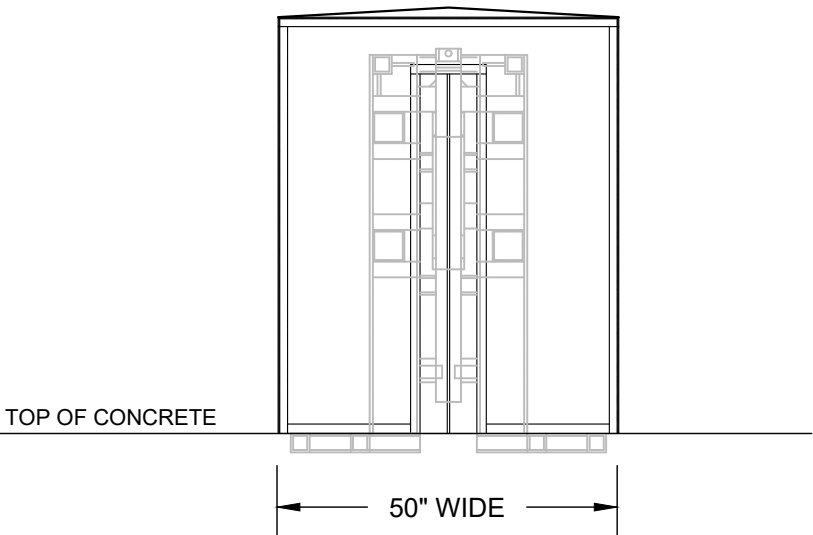
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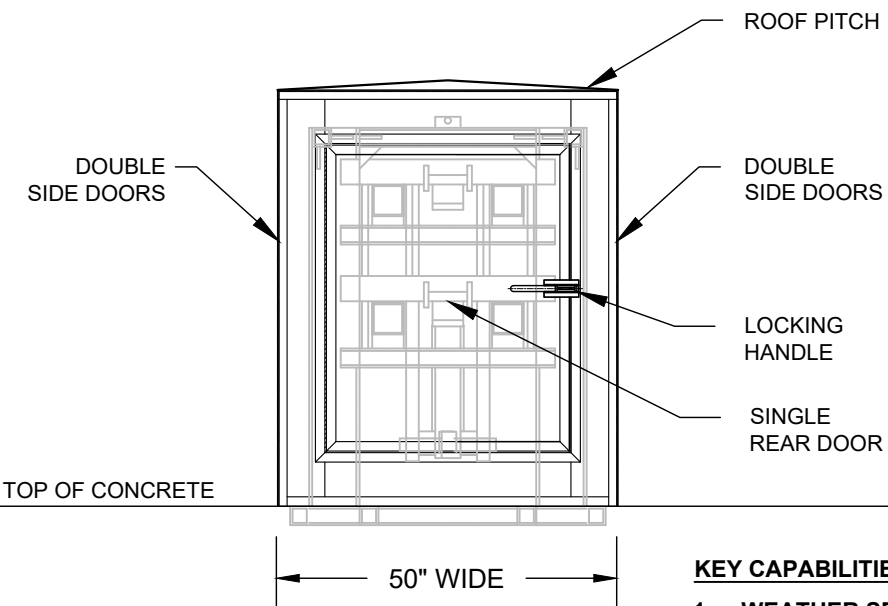
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AESTHETIC LOCKING ENCLOSURES OVER END SUPPORTS NON-RUSTING ALUMINUM COVERS



FRONT SIDE



REAR SIDE

KEY CAPABILITIES:

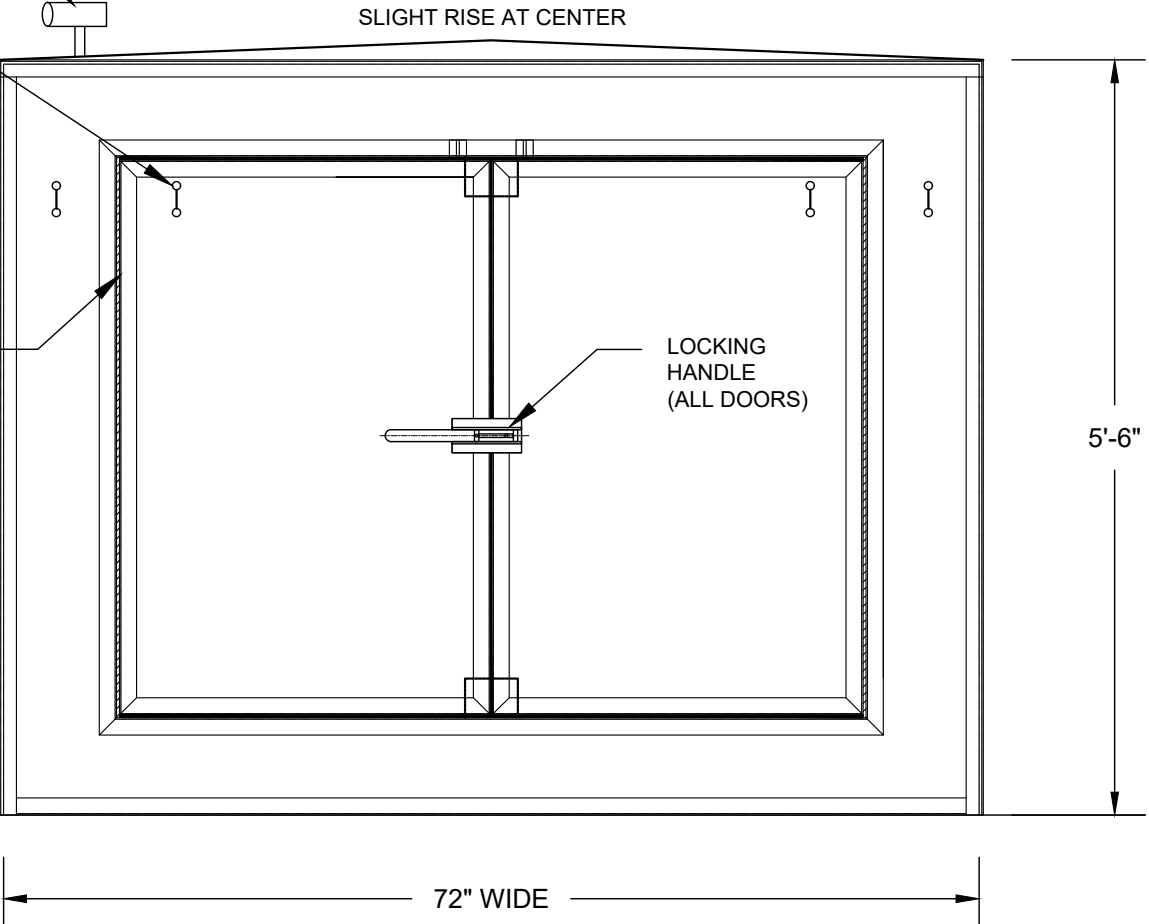
1. WEATHER SEAL WITH GASKETS ON DOOR OPENINGS (OPTIONAL).
2. INSULATED ENCLOSURE WITH THERMOSTAT CONTROLLED HEATER ON "CONTROLS SIDE" (OPTIONAL).
3. COMPONENTS AND ELECTRONICS SENSITIVE TO WATER ARE 6" MINIMUM OFF TOP OF CONCRETE.
4. ENCLOSURES HAVE DOUBLE DOORS ON BOTH SIDES AND SINGLE DOOR ON REAR.

OPTIONAL DAY/NIGHT CAMERA WITH CONTINUOUS DVR RECORDING TO VIDEO TAPE INCIDENTS

DOOR STAYS, LATCH TO HOLD DOOR IN OPEN POSITION (TYP)



TOP OF CONCRETE



SIDE VIEW

5'-6"



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END SUPPORT COVERS  
ACTIVE NET BARRIER

SAMPLE DRAWING

SHEET: 9 OF 9

20180716-04-PD

SCALE: N.T.S.