

# PROJECT DESCRIPTION

## GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE INSTALLATION OF A TEMPORARY TRAFFIC CONTROL SIGNAL AT THE TEMPORARY INTERSECTION, AT A NEW LOCATION, OF MD 450 (ANNAPOLIS ROAD) AND MD 704 (MARTIN LUTHER KING JR. HWY) IN PRINCE GEORGES COUNTY. MD 450 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

## INTERSECTION OPERATION

THIS INTERSECTION IS TO OPERATE IN A NEMA THREE-PHASE, FULLY-TRAFFIC-ACTUATED MODE. THE MD 450 MOVEMENT WILL OPERATE ALONE. A MD 704 TO MD450 RIGHT TURN OVER LAP WILL BE INCLUDED. THE THROUGH MOVEMENTS ON MD 704 WILL OPERATE CONCURRENTLY.

## CONTROLLER REQUIREMENTS

INSTALL AN EIGHT PHASE FULL-TRAFFIC-ACTUATED, SOLID STATE DIGITAL CONTROLLER WITH THREE, TWO-CHANNEL, TIME DELAY OUTPUT LOOP DETECTOR AMPLIFIERS, INTERSECTION MONITOR, WITH BATTERY BACK-UP FOR PHONE DROP, TELEMETRY MODULE, ISOLATION BOARD AND SPECIAL RELAY TO BE HOUSED IN A NEMA SIZE '5' POLE MOUNTED CABINET.

## SPECIAL NOTE

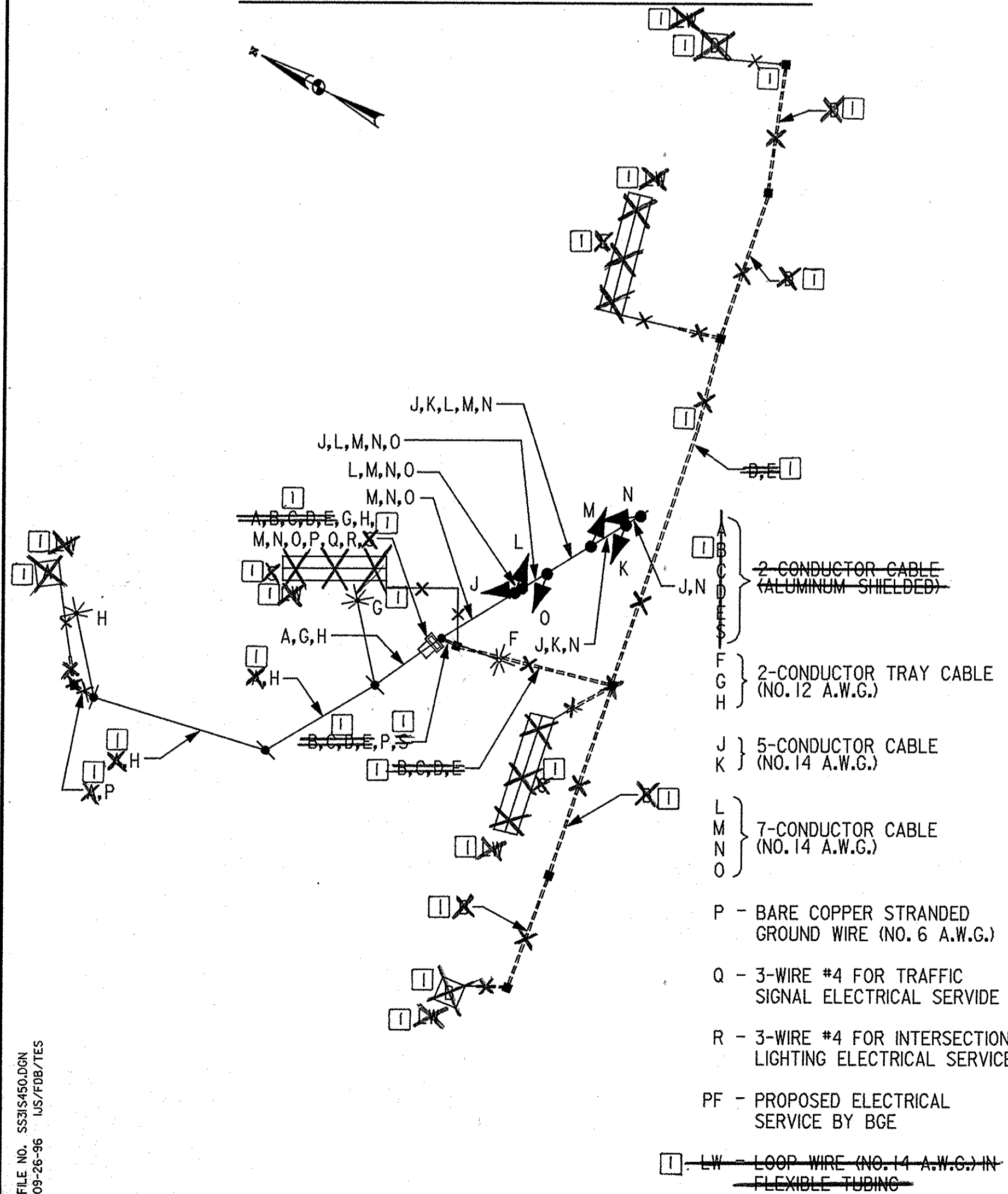
THIS NEW INTERSECTION IS APPROXIMATELY 1100 FT. EAST OF THE EXISTING MD 450 AT MD 704 INTERSECTION.

ONCE THIS TRAFFIC SIGNAL IS OPERATIONAL AND TRAFFIC IS SHIFTED, THE EXISTING MD 450 AT MD 704 INTERSECTION WILL BE DEACTIVATED.

ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC AND ARE NOT TO BE CONSIDERED COMPLETE BECAUSE THESE UNDERGROUND AND OVERHEAD UTILITIES MAY BE MODIFIED PRIOR TO AND DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL EQUIPMENT WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE PROJECT ENGINEER IMMEDIATELY.

72 HOURS PRIOR TO ANY WORK ON THE TRAFFIC SIGNALS, THE CONTRACTOR SHALL NOTIFY THE DISTRICT 3 TRAFFIC SECTION REPRESENTATIVE, MR. RICHARD BUETTNER (301-513-7316) AND THE SIGNAL OPERATIONS SUPERVISOR, MR. EDWARD RODENHIZER (410-787-7652).

# WIRING DIAGRAM



# EQUIPMENT LIST "A"

## A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION

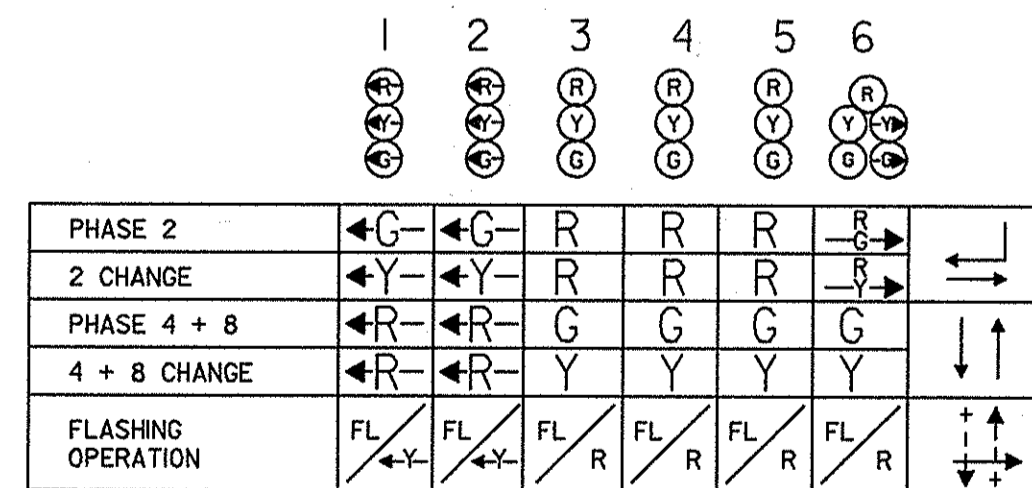
CATEGORY CODE NO.	SPEC. SECTION	QUANTITY	DESCRIPTION
960035	814	3 EA.	12 IN. 1 WAY 3 SECTION (R,Y,G) POLYCARBONATE VEHICLE SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR MAST ARM MOUNTING AND TUNNEL VISORS
960037	814	2 EA.	12 IN. 1 WAY 3 SECTION (R,Y,GA) POLYCARBONATE VEHICLE SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR MAST ARM MOUNTING AND TUNNEL VISORS
960040	814	1 EA.	12 IN. 1 WAY 5 SECTION (R,Y,YA,G,GA) POLYCARBONATE VEHICLE SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR MAST ARM MOUNTING AND TUNNEL VISORS
<del>963007</del>	<del>817</del>	<del>3 EA.</del>	<del>TWO CHANNEL LOOP DETECTOR AMPLIFIER (DELAY OUTPUT)</del>
971016	816	1 EA.	EIGHT PHASE, FULL-TRAFFIC-ACTUATED, SOLID STATE DIGITAL CONTROLLER WITH INTERSECTION MONITOR AND BATTERY BACK-UP FOR PHONE DROP, TELEMETRY MODULE, ISOLATION BOARD AND SPECIAL RELAY HOUSED IN A NEMA SIZE '5' POLE MOUNTED CABINET.
973023	813	77.25 S.F.	SHEET ALUMINUM SIGNS - 1 EACH R10-12 MOD (36" X 42") - 3 EACH W3-3 SIGN (48" X 48") WITH "NEW" PANEL (30" X 30") AND FLAGS - GROUND MOUNT

# EQUIPMENT LIST "B"

## B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

CATEGORY CODE NO.	SPEC. SECTION	QUANTITY	DESCRIPTION
114245	104	63 L.F.	24 IN. WHITE REMOVABLE PREFORMED PAVEMENT MARKING TAPE
203030	205	4 C.Y.	TEST PIT EXCAVATION
801004	801	4.65 C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
801104	812	35 L.F.	FURNISH AND INSTALL WOOD SIGN SUPPORTS - 4" X 4"
802501	810	46 L.F.	FURNISH AND INSTALL NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
<del>805011</del>	<del>805</del>	<del>40 L.F.</del>	<del>FURNISH AND INSTALL 1 IN. ELECTRICAL CONDUIT - GALVANIZED STEEL</del>
805023	805	50 L.F.	FURNISH AND INSTALL 2 IN. ELECTRICAL CONDUIT - PVC RISER
<del>805125</del>	<del>805</del>	<del>770 L.F.</del>	<del>FURNISH AND INSTALL 2 IN. SCHEDULE 40 RIGID PVC CONDUIT - TRENCHED</del>
805135	805	10 L.F.	FURNISH AND INSTALL 3 IN. SCHEDULE 40 RIGID PVC CONDUIT - TRENCHED
<del>805150</del>	<del>805</del>	<del>40 L.F.</del>	<del>FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED</del>
<del>805160</del>	<del>805</del>	<del>50 L.F.</del>	<del>FURNISH AND INSTALL 1 IN. LIQUID TIGHT NON-METALLIC CONDUIT FOR DETECTOR SLEEVE</del>
810010	810	45 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 1 CONDUCTOR (NO. 4 A.W.G. THHN/THWN)
811001	811	1 EA.	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813014	813	66.75 S.F.	INSTALL GROUND-MOUNTED SIGN
813015	813	10.5 S.F.	INSTALL OVERHEAD SIGN
837001	804	2 EA.	FURNISH AND INSTALL GROUND ROD - 3/4 IN. DIAMETER X 10 FT. LENGTH
838002	807	1 EA.	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT (240/480V, 1 PHASE, 3 WIRE SYSTEM)
860035	814	3 EA.	INSTALL 12 IN. 1 WAY 3 SECTION (R,Y,G) POLYCARBONATE SIGNAL HEAD - MAST ARM MOUNT
860037	814	2 EA.	INSTALL 12 IN. 1 WAY 3 SECTION (RA,YA,GA) POLYCARBONATE SIGNAL HEAD - MAST ARM MOUNT
860040	814	1 EA.	INSTALL 12 IN. 1 WAY 5 SECTION (R,Y,G,YA,GA) POLYCARBONATE SIGNAL HEAD - MAST ARM MOUNT
<del>861104</del>	<del>810</del>	<del>1665 L.F.</del>	<del>FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)</del>
861107	810	75 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G.)
861108	810	275 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 A.W.G.)
861116	810	510 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 A.W.G.)
<del>862101</del>	<del>810</del>	<del>1700 L.F.</del>	<del>FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 A.W.G.)</del>
<del>862102</del>	<del>815</del>	<del>480 L.F.</del>	<del>FURNISH AND INSTALL SAWCUT FOR SIGNAL (LOOP DETECTOR)</del>
866104	818	1 EA.	FURNISH AND INSTALL 20 FT. LIGHTING ARM ON SIGNAL STRUCTURE
869102	819	335 L.F.	FURNISH AND INSTALL STEEL SPAN WIRE - 3/8 IN. DIAMETER
871201	816	1 EA.	INSTALL CONTROLLER AND CABINET - POLE MOUNT
<del>800000</del>	<del>805</del>	<del>230 L.F.</del>	<del>FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED</del>
800000	806	3 EA.	FURNISH AND INSTALL 250-WATT HIGH PRESSURE SODIUM VAPOR LUMINAIRE WITH PHOTO-CELL
800000	818	2 EA.	FURNISH AND INSTALL 20 FT. LIGHTING ARM ON WOOD POLE
800000	818	1 EA.	FURNISH AND INSTALL 27 FT. STEEL POLE WITH 60 FT. MAST ARM
800000	XXX	3 EA.	FURNISH AND INSTALL 50 FT. CLASS II WOOD POLE WITH TWO BACK GUYS
800000	XXX	1 EA.	FURNISH AND INSTALL 2 IN. WEATHERHEAD

# PHASE DIAGRAM



THE WILSON T. BALLARD CO.  
CONSULTING ENGINEERS  
OWINGS MILLS, MARYLAND

REVISIONS	APPROVALS
(A) AUGUST 1996 - WTB MODIFY EXISTING SIGNAL SHA NO. P69005171	ASST. DIVISION CHIEF, TEDD
	ASST. DISTRICT ENGINEER, TRAFFIC
	CHEF, TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR, OFFICE OF TRAFFIC & SAFETY

**MARYLAND DOT - STATE HIGHWAY ADMINISTRATION**  
Office of Traffic & Safety  
**TRAFFIC ENGINEERING DESIGN DIVISION**

MD 450 (ANNAPOLIS ROAD) AT MD 704 (MARTIN LUTHER KING JR. HWY)

LOG MILE NO. 16045007.35 DATE 2 / 6 / 91

DRAWN BY: D. A. NIES  
CHECK BY: D. DODA 7/25/91, E. MILESKY 7/26/91

F.A.P. NO. SEE TITLE SHEET  
S.H.A. NO. P-981-451-385

PLAN SHEET NO.: TS-3167A-X2-91  
SHEET NO. 358 OF 465

TEMPORARY SIGNAL  
PHASE III STAGE 1  
DWG. NO. TS-12