

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

SPEC. SECTION	CATEGORY CODE NO.	QUANTITY	DESCRIPTION
[2] 806	960022	3 EACH	12 IN., 1-WAY, 3-SECTION (R,Y,G.) SIGNAL HEAD MAST ARM MOUNT
806	960020	1 EACH	12 IN., 1-WAY, 5-SECTION (R,Y,A,Y,G,G.) SIGNAL HEAD SPAN WIRE MOUNT POLYCARBONATE
[2] 806	960015	5 EACH	12 IN., 1-WAY, 3-SECTION (R,Y,G.) SIGNAL HEAD SPAN WIRE MOUNT POLYCARBONATE
806	960048	1 EACH	12 IN., 1-WAY, 2-SECTION PEDESTRIAN SIGNAL HEAD PEDESTAL MOUNT
806	960049	1 EACH	12 IN., 2-WAY, 2-SECTION PEDESTRIAN SIGNAL HEAD POLE MOUNT
817	965001	1 EACH	PEDESTRIAN PUSH BUTTON AND SIGN
816	971017	1 EACH	EIGHT PHASE, FULLY-ACTUATED TRAFFIC SIGNAL CONTROLLER IN A NEMA SIZE '6' BASE MOUNTED SYSTEM READY CABINET
816	900000	4 EACH	FOUR CHANNEL LOOP DETECTOR AMPLIFIERS (DELAY OUTPUT)
813	973023	42 S.F.	SHEET ALUMINUM SIGNS
			- 1 EACH R3-5 SIGN (30 IN. x 36 IN.) - "LANE USE CONTROL - LEFT ONLY" SPAN WIRE MAST ARM MOUNT
			- 1 EACH D3-2 SIGN (VARIABLE x 16 IN.) - (ADVANCE STREET NAME PANEL) (DUAL FACE) BACK TO BACK - MAST ARM MOUNT
			- 1 EACH R6-(HR) SIGN (36 IN. x 12 IN.) "ONE WAY" ONE PIECE SHIELD ASSEMBLY ON A BLACK BACKGROUND (30 IN. x 51 IN.) POLE MOUNT; M3-3 SIGN (24 IN. x 12 IN.) "SOUTH" (FOR INDEPENDENT USE)
			M1-5 SIGN (30 IN. x 24 IN.) "MARYLAND 235" (FOR INDEPENDENT USE)
			M6-1 SIGN (21 IN. x 15 IN.) "DIRECTIONAL ARROW-HORIZONTAL"
			- 1 EACH R10-12 SIGN (30 IN. x 36 IN.) "LEFT TURN YIELD ON GREEN O" SPAN WIRE MOUNT
NEW [2] 806	960023	1 EACH	12 IN., 1-WAY, 3-SECTION (R, Y, G) SIGNAL HEAD MAST ARM MOUNT.

EQUIPMENT LIST "B"

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

SPEC. SECTION	ITEM No.	QUANTITY	DESCRIPTION
	104	L.S.	MAINTENANCE OF TRAFFIC
[2] 104	114245	120 EACH	FURNISH AND INSTALL 24" WHITE REMOVABLE PREFORMED PAVEMENT MARKING TAPE (STOP LINE).
[2] 205	203030	4 EACH	TEST PIT EXCAVATION
[2] 801	801004	11 EACH	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
804	837001	3 EACH	FURNISH AND INSTALL GROUND ROD - 3/4 IN. DIAMETER x 10 FT. LENGTH
805	800000	430 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805	805150	65 L.F.	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
[2] 805	800000	155 EACH	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805	805160	15 L.F.	FURNISH AND INSTALL 1 IN. LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
805	831010	1 EACH	FURNISH AND INSTALL 250 WATT H.P.S. LAMP LUMINAIRE
807	807205	1 EACH	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT
[2] 810	802501	463 EACH	FURNISH AND INSTALL STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
810	861104	361 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR ALUMINUM SHIELDED.
810	861105	44 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
810	861106	251 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 AWG)
810	861107	233 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
[2] 810	861116	94 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)
810	862101	1295 L.F.	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
[2] 811	811001	7 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813	813015	42 S.F.	INSTALL OVERHEAD SIGN
805	805023	30 L.F.	FURNISH AND INSTALL 2" ELECTRICAL CONDUIT - PVC RISER.
[2] 814	860220	4 EACH	INSTALL SIGNAL HEADS - MAST ARM MOUNT
814	860015	3 EACH	INSTALL 12 INCH 1 WAY 3 SECTION (R, Y, G) SIGNAL HEAD SPAN MOUNT POLYCARBONATE
814	860020	1 EACH	INSTALL 12 INCH 1 WAY 5 SECTION (R, Y, A, Y, G, G) SIGNAL HEAD SPAN MOUNT POLYCARBONATE
814	860048	1 EACH	INSTALL 12 INCH 1-WAY 2 SECTION PEDESTRIAN SIGNAL HEAD PEDESTAL MOUNT
[2] 815	862102	470 L.F.	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
816	871117	1 EACH	INSTALL EIGHT-PHASE (FULLY ACTUATED) CONTROLLER AND CABINET - BASE MOUNT
817	865201	1 EACH	INSTALL PUSHBUTTON AND SIGN
818	818010	1 EACH	FURNISH AND INSTALL 14 FT. BREAKAWAY PEDESTAL POLE WITH T-BASE AND ANCHOR BOLTS
DELETE [2] 818	800000	1 EACH	FURNISH AND INSTALL 2 FT. STEEL POLE WITH A SINGLE 60 FT. MAST ARM
	800000	L.S.	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT
[2]	800000	393 L.F.	FURNISH AND INSTALL ELECTRICAL OPTICOM CABLE - 4 CONDUCTOR (NO. 20 AWG)
	873001	L.S.	REMOVE EXISTING SIGNAL EQUIPMENT TO BE SALVAGED
818	800000	3 EACH	BACK GUY WOOD POLE FOR TEMPORARY TRAFFIC SIGNAL
[2] 810	861108	1082 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 A.W.G.)
805	800000	100 L.F.	FURNISH AND INSTALL 3" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
DELETE [2]	800000	1 EACH	FURNISH AND INSTALL 2" WEATHER HEAD
	800000	1 EACH	FURNISH AND INSTALL 3" WEATHER HEAD
818	866104	1 EACH	FURNISH AND INSTALL 20 FT LIGHTING ARM ON SIGNAL STRUCTURE
	800000	2 EACH	RELOCATE AND INSTALL OPTICOM DETECTOR (IT WILL BE RELOCATED UNDER PHASE 3 OF CONSTRUCTION SEE DRAWING SS-26)
*	800000	L.S.	DELIVERY OF SALVAGED MATERIALS
DELETE [2]	800000	1 EACH	FURNISH AND INSTALL CLASS 2 WOOD POLE WITH BACK GUYS
	869102	210 L.F.	FURNISH AND INSTALL 3/8" SPAN WIRE.
NEW [2] 818	800000	1 EACH	FURNISH AND INSTALL 27 FT. STEEL POLE WITH A SINGLE 40 FT. MAST ARM
NEW [2] 818	800000	1 EACH	FURNISH AND INSTALL 23 FT. STEEL POLE WITH A SINGLE 70 FT. MAST ARM

[2] EQUIPMENT LIST "B" (CONTINUED)

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

SPEC. SECTION	ITEM No.	QUANTITY	DESCRIPTION
NEW [2] 814	860049	1 EACH	INSTALL 12 INCH 2-WAY 2 SECTION PEDESTRIAN SIGNAL HEAD PEDESTAL MOUNT
NEW [2] 810	810010	33 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE 1-CONDUCTOR (NO. 4 A.W.G.)

* NON - FEDERAL AID ITEM

EQUIPMENT LIST "C"

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7941 CONNELLEY DRIVE, HANOVER, MARYLAND 21076.

QUANTITY	DESCRIPTION
1	STEEL MAST ARM POLE WITH 40 FT. MAST ARM
1	STEEL TWIN MAST ARM POLE WITH TWIN 60 FT. AND 50 FT. MAST ARMS
1	TRAFFIC SIGNAL CONTROLLER AND CABINET.

NOTES: 1. THE CONTRACTOR SHALL NOTIFY THE SHA AT 410-787-7652 AT LEAST THREE DAYS IN ADVANCE OF DELIVERY.
2. ALL EQUIPMENT TO BE REMOVED AND NOT LISTED ABOVE SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

[2] CONSTRUCTION DETAILS (CONTINUED)

NEW [2] U. INSTALL 23' STEEL POLE WITH 70' MAST ARM, TRAFFIC SIGNAL HEADS, RELOCATE OPTICOM DETECTOR, AND SIGNS AS SHOWN (NOTE 1 - 3" PVC 90 DEGREE ANGLE BEND). (SPECIAL NOTE: THE CABLE FROM THE MAST ARM SHALL TERMINATE AT THE CONTROLLER CABINET AND EACH CABLE SHALL BE BY SIGNAL HEAD NUMBER. THIS CABLE WILL BE CONNECTED TO THE CONTROLLER UNDER PHASE 2 OF THE TRAFFIC CONTROL PLANS. THE SIGNALS AND SIGNS WILL BE UNCOVERED ALSO DURING PHASE 2 OF THE TRAFFIC CONTROL PLANS, AND WIRED TO THE CONTROLLER.

CONSTRUCTION DETAILS

- A. INSTALL SPAN WIRE TO EXISTING C & P WOOD POLE. INSTALL 2" RISER FOR LOOP DETECTOR WIRE, BACK GUYS AS DIRECTED BY THE ENGINEER.
- [2] B. INSTALL 27' STEEL POLE WITH 40' MAST ARM, 20' LIGHTING ARM AND LUMINAIRE, 1-3" WEATHER HEAD, 2" WEATHER HEAD, SPAN WIRE, TRAFFIC SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, PUSH BUTTON, RELOCATED OPTICOM DETECTOR AND SIGNS AS SHOWN (NOTE 2) - 3" PVC 90 DEGREE ANGLE BENDS, AND 2-2" PVC 90 DEGREE ANGLE BENDS. (SPECIAL NOTE) THE CABLE FROM THE MAST ARM SHALL TERMINATE AT THE CONTROLLER CABINET AND EACH CABLE SHALL BE BY SIGNAL HEAD NUMBER. THIS CABLE WILL BE CONNECTED TO THE CONTROLLER UNDER PHASE 2 OF THE TRAFFIC CONTROL PLANS. THE SIGNALS AND SIGNS WILL BE UNCOVERED ALSO DURING PHASE 2 OF THE TRAFFIC CONTROL PLANS, AND WIRED TO THE CONTROLLER, AS DIRECTED BY THE ENGINEER.
- [2] C. INSTALL 14' BREAKAWAY PEDESTAL POLE WITH PEDESTRIAN SIGNAL HEADS, AS SHOWN (NOTE 1) - 2" PVC 90 DEGREE ANGLE BEND. COVER PEDESTRIAN SIGNAL HEAD. THE PEDESTRIAN SIGNAL WILL BE UNCOVERED IN PHASE 3 OF THE TRAFFIC CONTROL PLANS.
- [2] D. INSTALL NEMA SIZE '6' CABINET (NOTE: 2-4" AND 2-2" 90 DEGREE ANGLE BENDS AND 1-3" PVC 90 DEGREE ANGLE POWER FEED BEND).
- E. INSTALL 1" LIQUID - TIGHT FLEXIBLE NON-METALLIC ELECTRICAL CONDUIT (DETECTOR WIRE SLEEVE)
- F. INSTALL HANDHOLE.
- G. INSTALL 2" SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
- H. INSTALL 3" SCHEDULE 80 ELECTRICAL CONDUIT - SLOTTED.
- I. INSTALL 3" SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
- J. INSTALL 4" SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
- K. INSTALL 6"x30" LOOP DETECTOR, ENCASED IN 1/4" FLEXIBLE TUBING (3,6,3 TURNS) QUADRUPOLE TYPE.
- L. NOT USED.
- M. REMOVE AND SALVAGE EXISTING MAST ARM POLES, RELOCATE OPTICOM DETECTORS.
- N. REMOVE EXISTING HANDHOLE.
- O. REMOVE AND SALVAGE EXISTING CABINET.
- P. NOT USED
- [2] Q. INSTALL 24 IN. WHITE REMOVABLE PREFORMED PAVEMENT MARKING TAPE (STOP LINE)
- R. ABANDON EXISTING LOOP DETECTOR.
- [2] S. PROPOSED OVERHEAD SERVICE.
- T. INSTALL SPAN WIRE, SIGNAL HEADS, SIGNS AND OPTICOM DETECTOR (THE DETECTOR IS RELOCATED FROM REMOVED MAST ARM).

PHASE I
TEMPORARY TRAFFIC SIGNAL SS-20

RK RUMMEL, KLEPPER & KAHL, LLP
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REVISIONS:	APPROVALS:
[2] REDLINE REVISION NO. 2 DUE TO NEW GEOMETRICS SHA No. SM7685270 / 2000	CHEF SIGNAL DESIGN SECTION
[A] Nov. 1, 1998 Reconstruct Due To New Geometrics. SHA No. SM7685270	ASST. DISTRICT ENGINEER TRAFFIC
	CHEF TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR OFFICE OF TRAFFIC & SAFETY

MDOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION LOG MILE # 18023513.13

DRAWN BY: DED/SMH
DES. BY: DK/DLA/SMH
CHK. BY: BJH

MD 235 @ EXPLORATION PARK DRIVE
SIGNAL PLAN
COUNTY: ST. MARY'S

DATE: ARRIL, 2000 F.A.P. NO. SEE TITLE SHEET TS/STD. NO.: 3787A-XI-GII SHEET NO. 164 OF 241
SCALE: N.T.S. S.H.A. NO. SEE TITLE SHEET