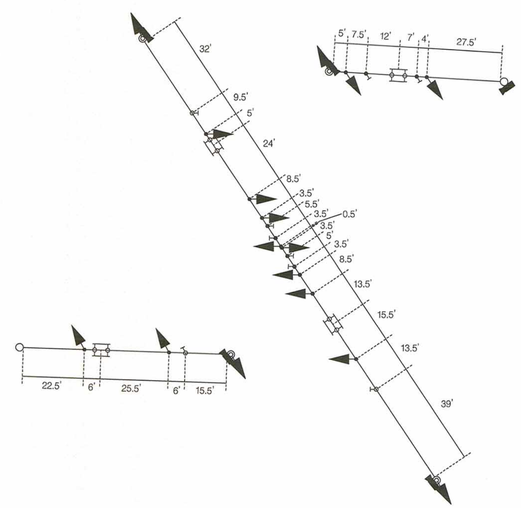
PHASE CHART

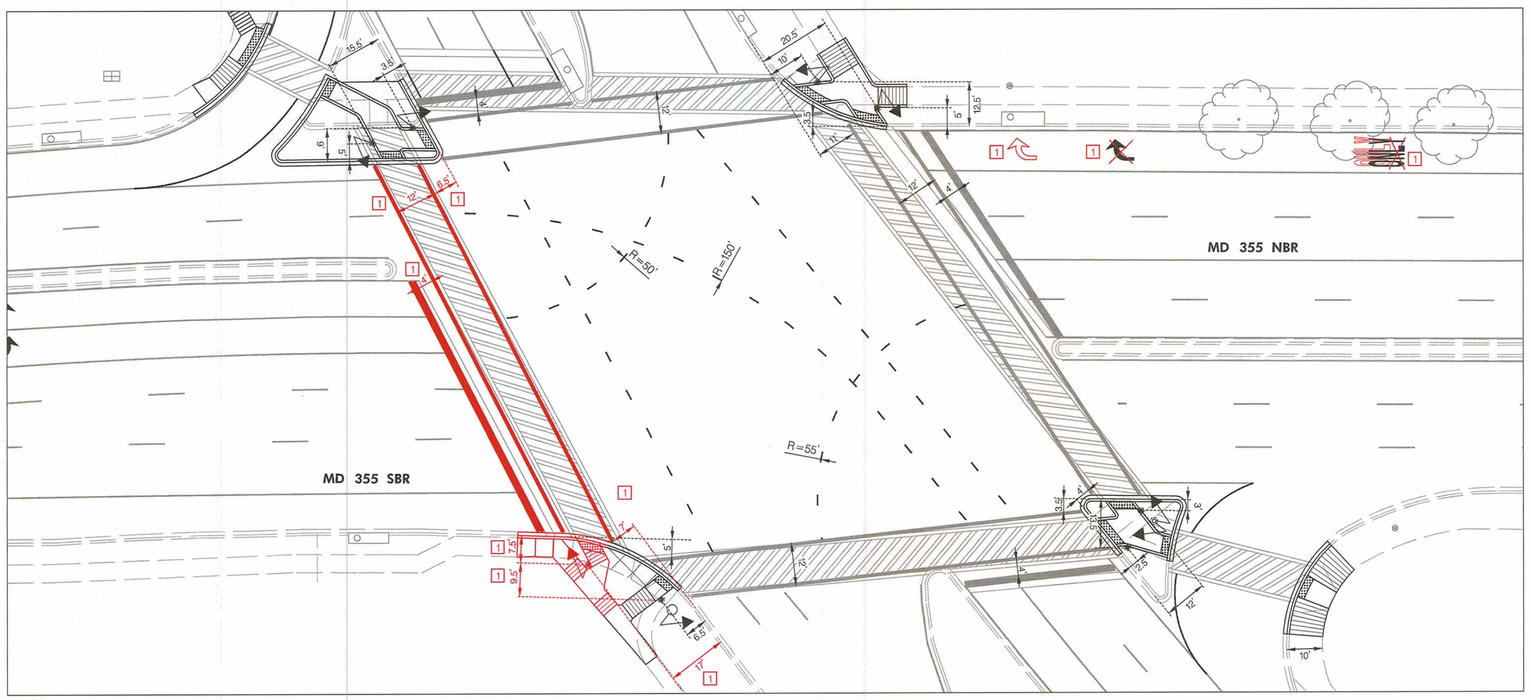
PHASE CHART	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	◄R- ◄Y- ◄G-	◄R- ◄Y- ◄G-	R Y G	R Y G	◄R- ◄Y- ◄G-	◄R- ◄Y- ◄G-	R Y G	R Y G	G ◄G- ◄G-	G ◄G- ◄G-	R Y G	G ◄G- ◄G-	G ◄G- ◄G-	R Y G	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8
PHASE 1 & 5	◄G-	◄G-	R	R	◄G-	◄G-	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
1 & 5 CHANGE TO PHASE 1 & 6 OR PHASE 2 & 5																						
PHASE 1 & 6	◄G-	◄G-	G	G	◄R-	◄R-	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
PHASE 1 CHANGE	◄Y-	◄Y-	G	G	◄R-	◄R-	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
PHASE 2 & 5	◄R-	◄R-	R	R	◄G-	◄G-	G	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
PHASE 5 CHANGE	◄R-	◄R-	R	R	◄Y-	◄Y-	G	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
PHASE 2 & 6	◄R-	◄R-	G	G	◄R-	◄R-	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED. CLEARANCE	◄R-	◄R-	G	G	◄R-	◄R-	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 & 6 CHANGE	◄R-	◄R-	Y	Y	◄R-	◄R-	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3	◄R-	◄R-	R	R	◄R-	◄R-	R	R	R	R	R	G ◄G-	G ◄G-	G	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 CHANGE	◄R-	◄R-	R	R	◄R-	◄R-	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 ALT	◄R-	◄R-	R	R	◄R-	◄R-	R	R	R	R	R	G ◄G-	G ◄G-	G	DW	DW	DW	DW	WK	DW	DW	WK
PED CLEARANCE	◄R-	◄R-	R	R	◄R-	◄R-	R	R	R	R	R	G ◄G-	G ◄G-	G	DW	DW	DW	DW	FL/DW	DW	DW	FL/DW
PHASE 3 ALT CHANGE	◄R-	◄R-	R	R	◄R-	◄R-	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4	◄R-	◄R-	R	R	◄R-	◄R-	R	R	G ◄G-	G ◄G-	G	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 CHANGE	◄R-	◄R-	R	R	◄R-	◄R-	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 ALT	◄R-	◄R-	R	R	◄R-	◄R-	R	R	G ◄G-	G ◄G-	G	R	R	R	DW	DW	DW	DW	DW	WK	WK	DW
PED CLEARANCE	◄R-	◄R-	R	R	◄R-	◄R-	R	R	G ◄G-	G ◄G-	G	R	R	R	DW	DW	DW	DW	DW	FL/DW	FL/DW	DW
PHASE 4 ALT CHANGE	◄R-	◄R-	R	R	◄R-	◄R-	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/RA	FL/RA	FL/Y	FL/Y	FL/RA	FL/RA	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

SPAN WIRE SIGNAL HEAD/SIGN SPACING

NOT TO SCALE



PROPOSED SIGNAL EQUIPMENT AND PAVEMENT MARKING LAYOUT - 1"=20'



EQUIPMENT LIST 'A'

EQUIPMENT TO BE FURNISHED BY THE SHA.

ITEM NO	QUANTITY	DESCRIPTION
		CONTROLLER CABINET, SIZE 'S' W/CTRL, VIDEO INT. 1-8CAM
1 ~~9000~~ 9104	1 EA	~~CONTROLLER CABINET TYPE 'S' WITH VIDEO DETECTION INTERFACE EQUIPMENT: 1-8 CAMERAS~~
1 ~~9000~~ 9110	1 EA	UNINTERRUPTABLE POWER SUPPLY AND EQUIPMENT FOR "S" CABINET
1 ~~9000~~	~~1 EA~~	~~ASC III CONTROLLER~~
1 ~~9000~~	~~1 EA~~	~~LAU PANEL~~
1 ~~9000~~ 9109	1 EA	EXTENDER BASE, SIZE 'S'
1 9570	34 ~~40 SF~~	[UPDATED] SHEET ALUMINIUM GROUND MOUNTED SIGN:
		3 EA - OM1-3 (18 IN. X 18 IN.)
		1 EA - R1-2 (36 IN. X 36 IN.)
		1 ~~1 EA - R3-7(R) (30 IN. X 30 IN.)~~
		1 EA - R4-7 (24 IN. x 30 IN.)
		2 EA - R5-1 (30 IN. x 30 IN.)
9571	53 SF	[UPDATED] SHEET ALUMINIUM MAST ARM/POLE MOUNTED SIGN:
		4 EA - R10-3(I) (9 IN. X 15 IN.) *PUSH BUTTON TO CROSS FREDERICK ROAD*
		4 EA - R10-3(I) (9 IN. X 15 IN.) *PUSH BUTTON TO CROSS MIDDLEBROOK ROAD*
		5 EA - R3-5L (36 IN. X 30 IN.)
		1 EA - R3-6L (36 IN. X 30 IN.)

EQUIPMENT LIST 'B'

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

ITEM NO	QUANTITY	DESCRIPTION
1001	3 EA	MAINTENANCE OF TRAFFIC
2001	19 CY	CLASS 2 EXCAVATION
2002	4 CY	TEST PIT EXCAVATION
5002	450 LF	5 INCH HEAT APPLIED WHITE OR YELLOW PERMANENT PAVEMENT MARKINGS
5003	3,260 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS
5004	1,000 LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
5005	260 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
1 5006	90 ~~360~~ SF	WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
6001	340 LF	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
1 6002	2,400 ~~2,350~~ SF	5 INCH CONCRETE SIDEWALK
6003	150 SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
8001	46 EA	12 INCH LED SIGNAL HEAD SECTION
8002	1 EA	2-WIRE CENTRAL CONTROL UNIT
8008	8 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
8009	8 EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8012	1 EA	EMBEDDED METERED SERVICE PEDESTAL WITH BYPASS SWITCH
8014	1 EA	INSTALL CONTROLLER AND CABINET BASE MOUNT (ANY SIZE)
8016	8 EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
8024	1 EA	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
8029	4 EA	VIDEO DETECTION CAMERA AND CABLE ANY LENGTH
8031	100 LF	1-CONDUCTOR ELECTRICAL CABLE, NO. 2/0 AWG/THHN
8035	610 LF	ELECTRICAL CABLE - 2-CONDUCTOR (NO. 12 AWG) TYPE T/C
8038	300 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED
8040	135 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
1 8041	100 ~~115 LF~~	WOOD SIGN SUPPORTS UP TO 4 INCH X 6 INCH
1 8042	87 ~~93 SF~~	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8044	435 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8047	25 LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
8048	1 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8055	2,575 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8057	2,200 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)

EQUIPMENT LIST 'C'

EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

ITEM NO	QUANTITY	DESCRIPTION

NONE - ALL REMOVED EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR

1 REDLINE REVISION NO. 1 JULY 2012

7/20/12

TEDD APPROVAL SHA NO. XX4395185

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 355 (FREDERICK ROAD)

AT MIDDLEBROOK ROAD

GERMANTOWN, MD

GENERAL INFORMATION SHEET (2 OF 3)

SCALE NONE ADVERTISED DATE 012012 CONTRACT NO. XX4395185

DESIGNED BY KXT COUNTY MONTGOMERY
DRAWN BY KXT LOGMILE 15035518.02
CHECKED BY MTS TIMS NO. K911
F.A.P. NO. TOD NO.

TS NO. 2283G DRAWING SG - 03 OF 04 SHEET NO. 03 OF 04

STV
STV Incorporated
7125 Ambassador Road, Suite 200
Baltimore, MD 21244
www.stvinc.com

BY: tarnovk -

PLOTTED: Monday, July 16, 2012 AT 09:33 AM
FILE: I:\PROJECTS\4014255\4014255_0154\Drawings\TRA\pSG-N001_MD355.dgn