



Appendix H:

Traffic Signal Permit Plans



PERMIT NUMBER: 87-258 SHEET 2 OF 2
DATE ISSUED: 04-30-07 DATE REVISED: 7-1-11

T-271

INSTALLATION, OPERATION, AND MAINTENANCE
OF THIS TRAFFIC SIGNAL TO BE IN ACCORDANCE
WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
REGULATIONS ON OFFICIAL TRAFFIC CONTROL DEVICES.

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN WRITING, BY THE DEPARTMENT.

ALL MAINTENANCE NECESSARY FOR PROPER VISIBILITY
OF THE SIGNALS, INCLUDING TRIMMING TREES, IS THE
RESPONSIBILITY OF THE PERMITTEE.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND ARE TO BE INSTALLED AND MAINTAINED BY THE PERMITTEE, UNLESS OTHERWISE INDICATED. EXCEPT THE LONGITUDINAL PAVEMENT MARKINGS ON STATE HIGHWAYS WHICH WILL BE MAINTAINED BY THE DEPARTMENT.

INSTALL POST MOUNTED SIGNALS WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF THE CURB OR EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS WILL HAVE A MINIMUM HORIZONTAL CLEARANCE OF 2 FEET.

THE BOTTOM OF SIGNAL HEADS AND SIGNS ERECTED OVER THE ROADWAY ARE NOT TO BE LESS THAN 15 FEET NOR MORE THAN 19 FEET ABOVE THE ROADWAY. THE BOTTOM OF POST MOUNTED SIGNAL HEADS ARE NOT TO BE LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK OR PAVEMENT GRADE.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNAL HEADS
MEASURED AT RIGHT ANGLES TO THE APPROACH IS TO BE
8 FEET.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR EMBANKMENT REMOVAL, CURBING AND/OR SIDEWALK, DRAINAGE STRUCTURES, CHANGES IN HIGHWAY GEOMETRY, PAVEMENT WIDENING, OR INSTALLATION OF ADDITIONAL LANES.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-7800 SERIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION
DRAWING UNLESS THE PERMITEE COMPLIES WITH THE
PROVISIONS OF ACT 199, PREVENTION OF DAMAGE TO
UNDERGROUND UTILITIES, EFFECTIVE NOVEMBER 30, 2004
PRIOR TO CONSTRUCTION CONSULT
WITH UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH
MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

PAVEMENT MARKINGS WILL BE PLACED IN ACCORDANCE WITH THE DEPARTMENT OF TRANSPORTATION PAVEMENT MARKING HANDBOOK.

PERMITTEE IS RESPONSIBLE FOR OBTAINING APPROVAL
FOR INSTALLATION OF TRAFFIC SIGNAL DEVICES LOCATED
OUTSIDE HIGHWAY RIGHT-OF-WAY.

TRAFFIC SIGNALS INSTALLED USING LIQUID FUELS TAX FUNDS MUST CONFORM TO DEPARTMENT SPECIFICATIONS AS SET FORTH IN CURRENT PUBLICATION 408, SUPPLEMENTS AND STANDARD DRAWINGS.

[illegible]

▲ FOR DURATION OF PRE-EMPTION
MAXIMUM 2 TO OPERATE FROM 2:00 PM TO 7:00 PM, MONDAY THRU FRIDAY
MAXIMUM 1 TO OPERATE ALL OTHER TIMES

DETECTOR NOTES

- ① ~~G~~ IF FOLLOWED BY 2+6
- ② G IF FOLLOWED BY 2+6
- ③ SIGNAL TO INDICATE G WHEN RETURNING TO NORMAL OPERATION

DETECTOR NOTES

DETECTOR 2 CALLS AND EXTENDS PHASE 2 - PRESENCE

DETECTOR 5a CALLS AND EXTENDS PHASE 5 - PRESENCE

DETECTOR 6 CALLS AND EXTENDS PHASE 6 - PRESENCE

DETECTION ZONE 8a CALLS AND EXTENDS PHASE 8 - PRESENCE

CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION EQUIPMENT FOR BOTH THE NORTHBOUND AND SOUTHBOUND APPROACHES OF CLOVERLEAF ROAD (SR 4025) AND THE WESTBOUND OFF-RAMP OF PA 0283 WHICH SHALL PROVIDE A SELECTIVE YELLOW INTERVAL, A GREEN INDICATION WILL BE GIVEN TO THE PRE-EMPTED APPROACH AND A RED INDICATION ON ALL OTHER APPROACHES.

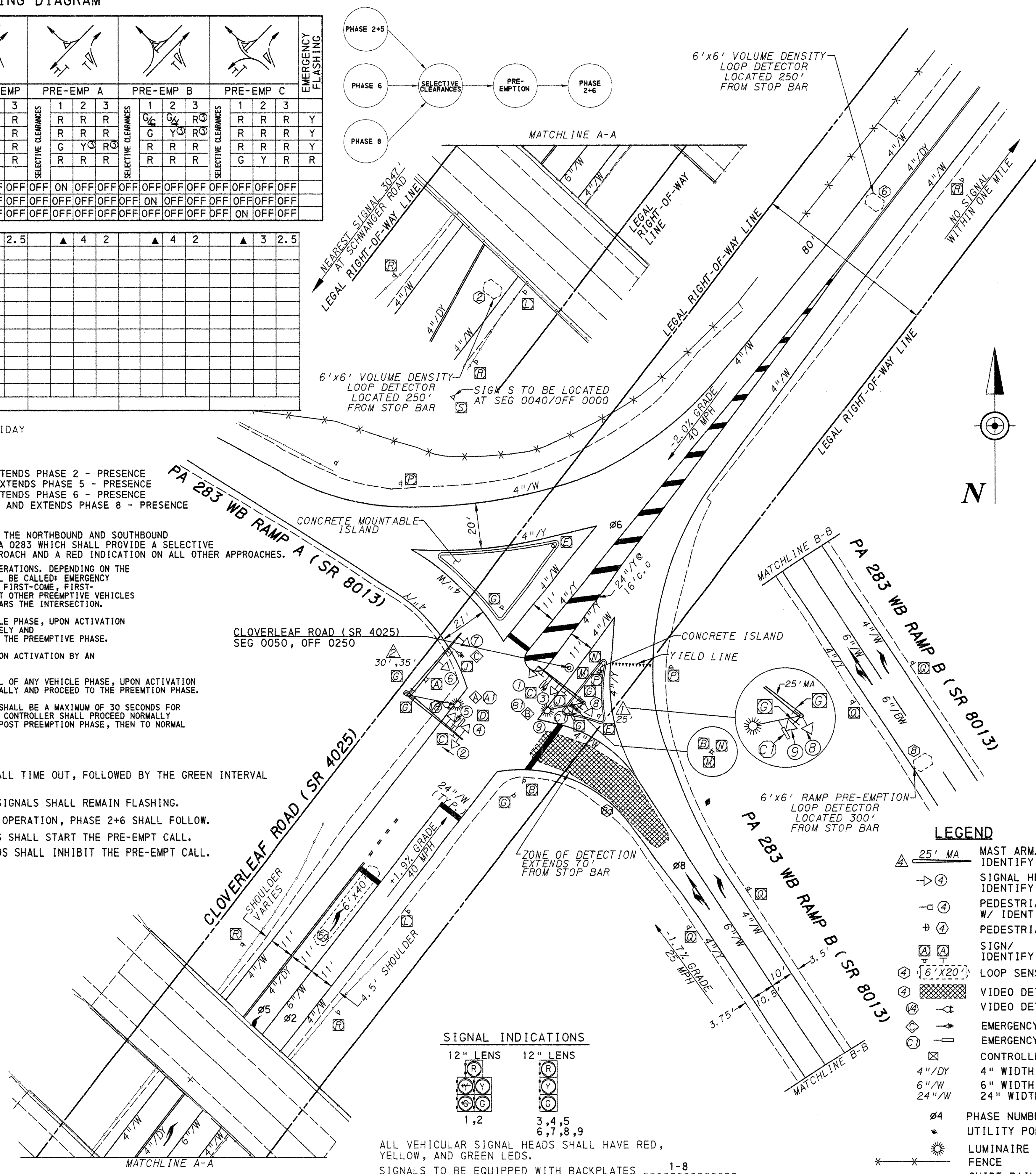
EMERGENCY PREEMPTION MAY OCCUR DURING ANY INTERVAL OF THE NORMAL CONTROLLER OPERATIONS. DEPENDING ON THE DIRECTION OF TRAVEL OF THE EMERGENCY VEHICLE, ONE OF THE FOLLOWING PHASES SHALL BE CALLED: EMERGENCY PREEMPTION PHASE A, PHASE B, OR PHASE C. THE SYSTEM SHALL PROVIDE SERVICE ON A FIRST-COME, FIRST-SERVE BASIS. ONCE THE FIRST PRIORITY VEHICLE CALLS THE SYSTEM, IT SHALL PREVENT OTHER PREEMPTIVE VEHICLES FROM ENTERING CALLS UNTIL THE FIRST EMERGENCY VEHICLE RELEASES CONTROL AND CLEARS THE INTERSECTION.

- 1.) IF THE CONTROLLER OPERATION IS IN THE GREEN INTERVAL OF A NON-PREEMPTIVE VEHICLE PHASE, UPON ACTIVATION BY AN EMERGENCY VEHICLE, THE CONTROLLER SHALL TERMINATE THE INTERVAL IMMEDIATELY AND PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS BEFORE PROCEEDING TO THE PREEMPTIVE PHASE.
- 2.) IF THE CONTROLLER OPERATION IS IN THE GREEN INTERVAL OF A PREEMPTIVE PHASE, UPON ACTIVATION BY AN EMERGENCY VEHICLE, THE CONTROLLER SHALL REMAIN IN THAT INTERVAL.
- 3.) IF THE CONTROLLER OPERATION IS IN THE YELLOW, YELLOW ARROW, OR ALL RED INTERVAL OF ANY VEHICLE PHASE, UPON ACTIVATION BY AN EMERGENCY VEHICLE, THE CONTROLLER SHALL TIME OUT OF THOSE INTERVALS NORMALLY AND PROCEED TO THE PREEMPTION PHASE.
- 4.) THE GREEN INTERVAL SHALL EXTEND FOR THE LENGTH OF THE PREEMPTION ACTUATION BUT SHALL BE A MAXIMUM OF 30 SECONDS FOR EACH EMERGENCY PREEMPTION PHASE. UPON TERMINATION OF THE PREEMPTION PHASE, THE CONTROLLER SHALL PROCEED NORMALLY THROUGH THE YELLOW, YELLOW ARROW, AND ALL RED INTERVALS TO THE PRE-DESIGNATED POST PREEMPTION PHASE, THEN TO NORMAL "PHASE NEXT" OPERATION.

- WHEN PREEMPTION IS ACTIVATED, ALL YELLOW AND RED INDICATIONS, SHALL TIME OUT, FOLLOWED BY THE GREEN INTERVAL OF THE PRE-EMPTION PHASE.

- IF THE SIGNALS ARE FLASHING WHEN ACTIVATED FOR PRE-EMPTION, ALL SIGNALS SHALL REMAIN FLASHING.
- UPON COMPLETION OF THE PRE-EMPTION PHASE, IN RETURNING TO NORMAL OPERATION, PHASE 2+6 SHALL FOLLOW.
- A CONSTANT CALL ON THE RAMP PRE-EMPTION DETECTOR 8 FOR 10 SECONDS SHALL START THE PRE-EMPT CALL.
- A CONSTANT CALL ON THE RAMP PRE-EMPTION DETECTOR 8 FOR 180 SECONDS SHALL INHIBIT THE PRE-EMPT CALL.

SIGN TABULATION			
PLAN SYMBOL	SERIES	SIZE	MESSAGE
	D3-4	84"x16"	STREET SIGN "Cloverleaf Rd"
	R5-1	36"x36"	DO NOT ENTER
	R10-12	30"x36"	LEFT TURN YIELD ON GREEN ●
	R3-3	36"x36"	NO TURNS SIGN
	W12-1	36"x36"	DOUBLE ARROW SIGN
	R9-3	18"x18"	NO PEDESTRIAN CROSSING
	R3-1	36"x36"	NO RIGHT TURN SIGN
	R3-8A (L-S)	30"x30"	LANE USE CONTROL SIGN
	R6-1L	36"x12"	HORIZONTAL LEFT ONE WAY SIGN
	R6-1R	36"x12"	HORIZONTAL RIGHT ONE WAY SIGN
	R1-2	48"x48"	YIELD SIGN
	R3-8A(LS-R)	30"x30"	LANE USE CONTROL SIGN
	R8-3	24"x24"	NO PARKING SYMBOL SIGN
	W3-3	36"x36"	SIGNAL AHEAD



ALL VEHICULAR SIGNAL HEADS SHALL HAVE RED,
YELLOW, AND GREEN LEDS.

SIGNALS TO BE EQUIPPED WITH BACKPLATES ----- 1-8

\\Fs:\Traffic Signal Permits\Intersections\T-271 Cloverleaf Road & PA 283 WB Ramp B\Revised permit: 2011-06\08Permit.dgn
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GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

REFER TO TRAFFIC SIGNAL PERMIT DRAWING FOR INDIVIDUAL INTERSECTION OPERATION, GEOMETRY, PHASING AND CRITICAL TIMES.

FOR CONSTRUCTION AND INSPECTION THE SYSTEM PERMIT SHOULD ALWAYS BE ACCOMPANIED WITH TRAFFIC SIGNAL PERMIT DRAWING.

TEST THE SYSTEM AT LOCAL INTERSECTION LEVEL, SUBSYSTEM LEVEL MASTER CONTROLLER LEVEL AND PERSONAL COMPUTER REMOTE DIAL UP LEVEL.

GATHER THE SYSTEM FAILURE CRITICAL ALARMS REPORT AND ARCHIVE THEM WHERE APPLICABLE.

ASSIGN LOOP DETECTORS AND PROGRAM THE CONTROLLERS TO GATHER TRAFFIC VOLUMES IN 15 MINUTE INTERVAL, WHERE APPLICABLE.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

OBTAIN POLE ATTACHMENT PERMIT FOR AERIAL FIBER OPTIC INSTALLATION.

MAINTAIN MASTER CONTROLLER COMMUNICATION SUCH AS PHONE DROPS.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-7800 SERIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

TRAFFIC SIGNALS INSTALLED USING LIQUID FUELS TAX FUNDS MUST CONFORM TO DEPARTMENT SPECIFICATIONS AS SET FORTH IN CURRENT PUBLICATION 408, SUPPLEMENTS AND STANDARD DRAWINGS.

COUNTY: LANCASTER
MUNICIPALITY: MOUNT JOY TOWNSHIP

INTERSECTION: CLOVERLEAF ROAD (SR 4025)
CORRIDOR

REVIEWED: *Sheila A. Carr* 8/1/2011
MUNICIPAL OFFICIAL DATE

RECOMMENDED: *Deann C. Bewley* 08/25/2011
DIST TRAFFIC ENGR DATE

INTERSECTIONS 12-14

WEEKLY PROGRAM CHART				
EVENT	DAY	TIME	PROGRAM*	REMARKS
1	1-7	0000	MAXIMUM 1	FREE
2	1-5	0600	1	AM PEAK
3	1-5	0900	MAXIMUM 1	FREE
4	1-5	1430	1	PM PEAK
5	1-5	1900	MAXIMUM 1	FREE
6	6	0900	3	WEEKEND PEAK
7	6	1700	MAXIMUM 1	FREE

* DAY 1 = MONDAY
* MAX / FREE WHERE NOTED IN CYCLE / SPLIT / OFFSET MATRIX.

INTERSECTION 15

WEEKLY PROGRAM CHART				
EVENT	DAY	TIME	PROGRAM*	REMARKS
1	1-7	0000	MAXIMUM 1	FREE

* DAY 1 = MONDAY
* MAX / FREE WHERE NOTED IN CYCLE / SPLIT / OFFSET MATRIX.

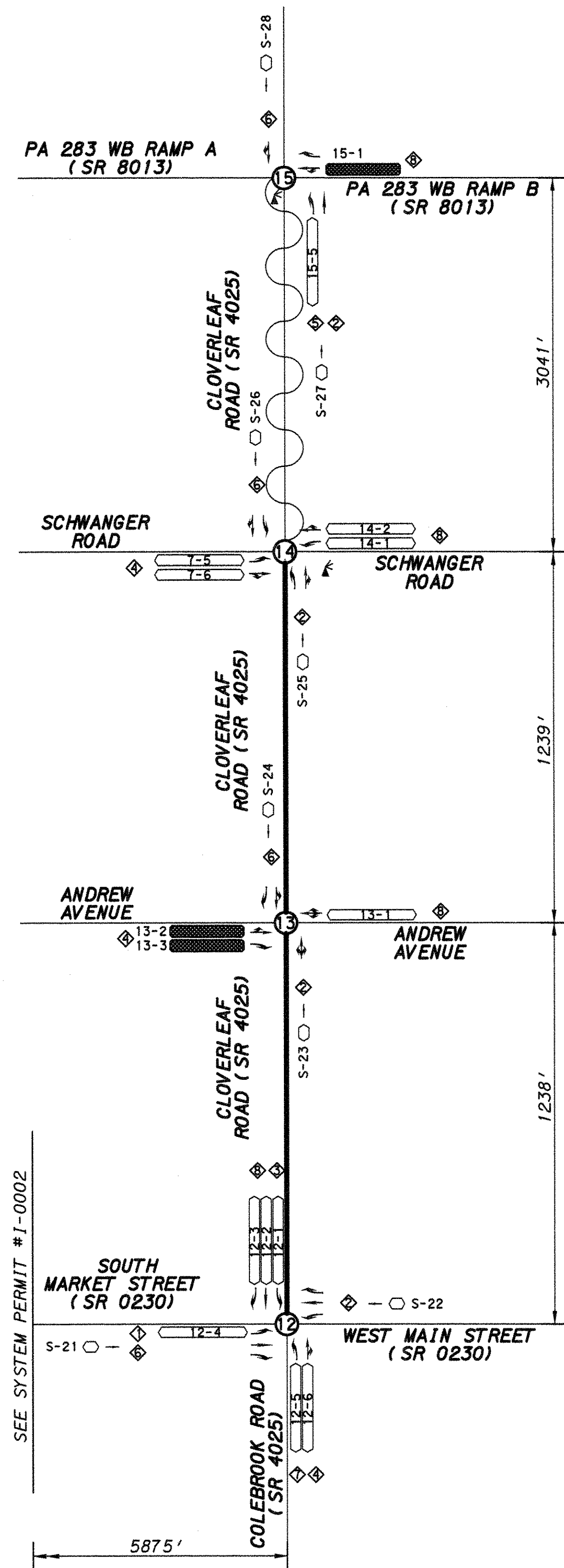
CYCLE / SPLIT / OFFSET

PROGRAM 1 = AM PEAK		PHASE								CYCLE	OFFSET	
INTERSECTIONS		FILE #	1	2	3	4	5	6	7	8		
15 CLOVERLEAF ROAD (SR 4025) & PA 283 WB RAMP B (SR 8013)		T-271									FREE	
14 CLOVERLEAF ROAD (SR 4025) & SCHWANGER ROAD		T-273		45		25		45		25	70	0
13 CLOVERLEAF ROAD (SR 4025) & ANDREW AVENUE		T-272		53		17		53		17	70	63
12 HARRISBURG PIKE (SR 0230), CLOVERLEAF ROAD (SR 4025) & COLEBROOK ROAD (SR 4025)		T-044									FREE	
PROGRAM 2 = PM PEAK		PHASE								CYCLE	OFFSET	
INTERSECTIONS		FILE #	1	2	3	4	5	6	7	8		
15 CLOVERLEAF ROAD (SR 4025) & PA 283 WB RAMP B (SR 8013)		T-271									FREE	
14 CLOVERLEAF ROAD (SR 4025) & SCHWANGER ROAD		T-273		43		17		43		17	60	0
13 CLOVERLEAF ROAD (SR 4025) & ANDREW AVENUE		T-272		45		15		45		15	60	25
12 HARRISBURG PIKE (SR 0230), CLOVERLEAF ROAD (SR 4025) & COLEBROOK ROAD (SR 4025)		T-044	23(LEAD)	45	20(LEAD)	32		68	15(LEAD)	37	120	107
PROGRAM 3 = WEEKEND PEAK		PHASE								CYCLE	OFFSET	
INTERSECTIONS		FILE #	1	2	3	4	5	6	7	8		
15 CLOVERLEAF ROAD (SR 4025) & PA 283 WB RAMP B (SR 8013)		T-271									FREE	
14 CLOVERLEAF ROAD (SR 4025) & SCHWANGER ROAD		T-273		40		20		40		20	60	0
13 CLOVERLEAF ROAD (SR 4025) & ANDREW AVENUE		T-272		44		16		44		16	60	33
12 HARRISBURG PIKE (SR 0230), CLOVERLEAF ROAD (SR 4025) & COLEBROOK ROAD (SR 4025)		T-044									FREE	
PROGRAM 4 = PA283 EB INCIDENT MANAGEMENT		PHASE								CYCLE	OFFSET	
INTERSECTIONS		FILE #	1	2	3	4	5	6	7	8		
15 CLOVERLEAF ROAD (SR 4025) & PA 283 WB RAMP B (SR 8013)		T-271									FREE	
14 CLOVERLEAF ROAD (SR 4025) & SCHWANGER ROAD		T-273		110		30		110		30	140	0
13 CLOVERLEAF ROAD (SR 4025) & ANDREW AVENUE		T-272		110		30		110		30	140	119
12 HARRISBURG PIKE (SR 0230), CLOVERLEAF ROAD (SR 4025) & COLEBROOK ROAD (SR 4025)		T-044	98	14	14	14		112	14	14	140	98
PROGRAM 5 = PA283 WB INCIDENT MANAGEMENT		PHASE								CYCLE	OFFSET	
INTERSECTIONS		FILE #	1	2	3	4	5	6	7	8		
15 CLOVERLEAF ROAD (SR 4025) & PA 283 WB RAMP B (SR 8013)		T-271		30			SKIP	30		110	140	118
14 CLOVERLEAF ROAD (SR 4025) & SCHWANGER ROAD		T-273		110		30		110		30	140	0
13 CLOVERLEAF ROAD (SR 4025) & ANDREW AVENUE		T-272		110		30		110		30	140	21
12 HARRISBURG PIKE (SR 0230), CLOVERLEAF ROAD (SR 4025) & COLEBROOK ROAD (SR 4025)		T-044	15	15	55	55		30		110	140	42

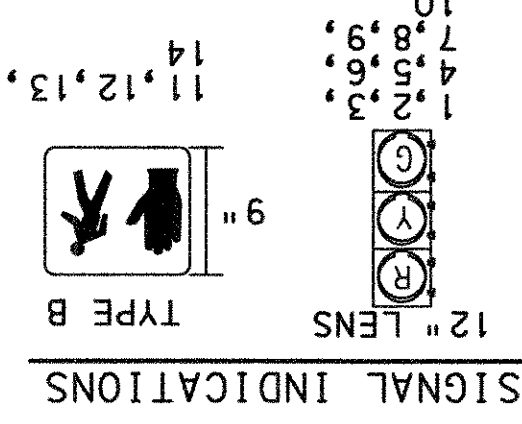
Notes:
- ALL SPLIT TIMES INCLUDE YELLOW AND RED TIMES FOR A GIVEN PHASE.
- REFER TO SIGNAL PERMIT PLAN FOR MAX 1, MAX 2 AND CLEARANCE AND PED TIMES.
- SPLIT TIMES AND OFFSETS ARE IN SECONDS.
- OFFSETS REFERENCED TO BEGINNING OF MAIN STREET YELLOW (2+6).

LEGEND

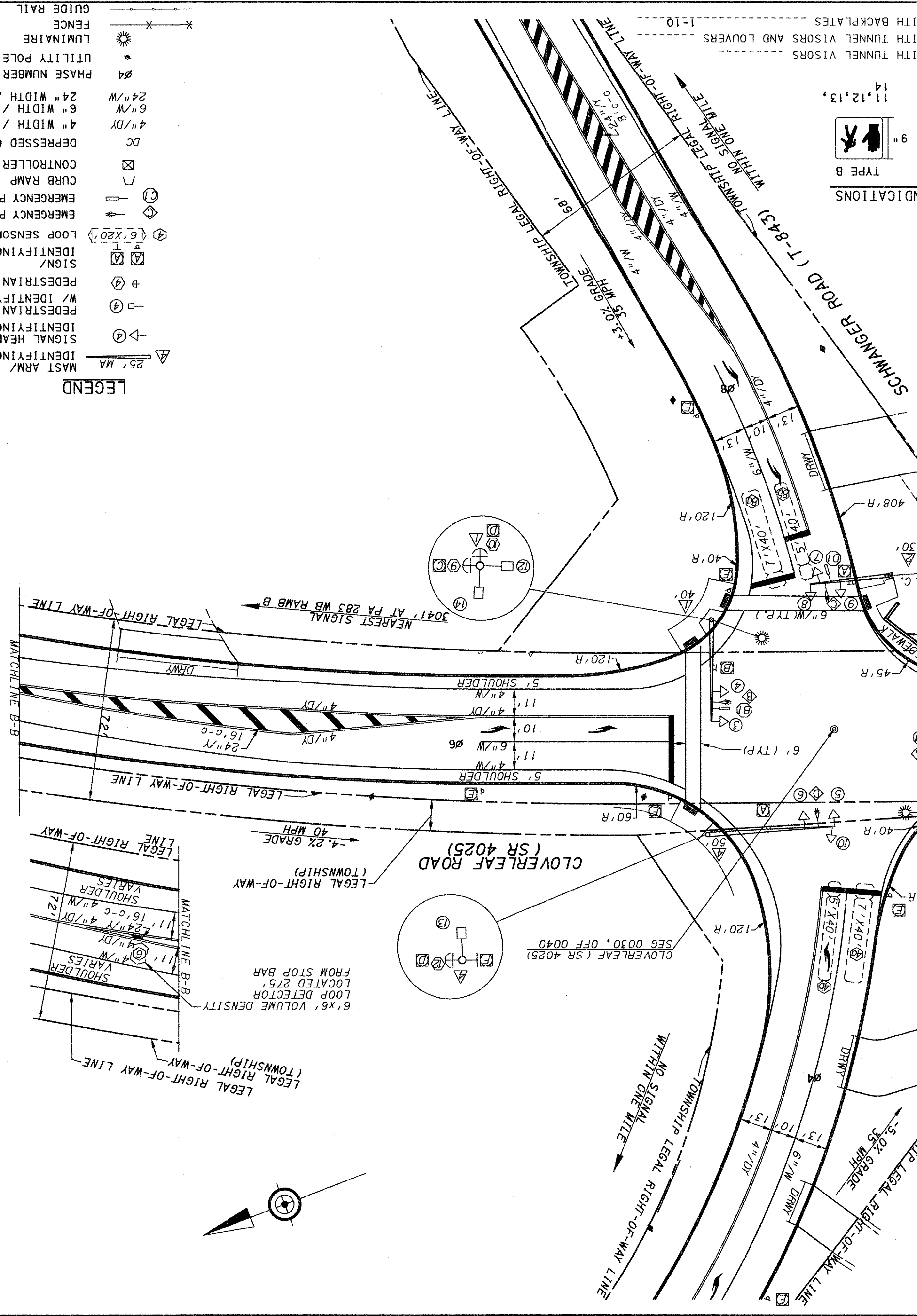
- ④ INTERSECTION ADDRESS
- (S*) SYSTEM LOOP/IDENTIFYING NUMBER
- LOOP SENSOR / INTERSECTION X - LOOP NUMBER Y
- VIDEO DETECTION AREA
- ◆ PHASE NUMBER
- ⚡ SPREAD SPECTRUM RADIO RECEIVER
- FIBER OPTIC INTERCONNECTION
- ~ RADIO CONNECTION
- NOT TO SCALE



PLAN SYMBOL	SERIES	SIZE	SIGN TABULATION
	D3-4	84"x16"	STREET SIGN "Cloverleaf Rd"
	D3-4	84"x16"	STREET SIGN "Schwanger Rd"
	R10-3BR	9"x12"	EDUCATIONAL PUSH BUTTON SIGN
	R10-3BL	9"x12"	EDUCATIONAL PUSH BUTTON SIGN →
	R3-8A(L-SR)	30"x30"	LANE USE CONTROL SIGN
	R9-3A	18"x18"	NO PEDESTRIAN CROSSING SIGN



SIGNALS TO BE EQUIPPED WITH TUNNEL VISORS AND LOUVERS. SIGNALS TO BE EQUIPPED WITH BACKPLATES.



LEGEND	
MAST ARM/ IDENTIFYING LENGTH	25' MA 
SIGNAL HEAD/ IDENTIFYING NUMBER	 
PEDESTRIAN SIGNAL HEAD W/ IDENTIFYING NUMBER	 
PEDESTRIAN PUSHBUTTON	 
SIGN/ IDENTIFYING LETTER	 
LOOP SENSOR/SIZE	 6' X 20'
EMERGENCY PRE-EMPTION BEACON	 
EMERGENCY PRE-EMPTION DETECTOR	 
CURB RAMP	
CONTROLLER CABINET	
DEPRESSED CURB	DC
4" WID / DOUBLE YELLOW LINE	4" WID
6" WID / SOLID WHITE LINE	6" WID
24" WID / SOLID WHITE LINE	24" WID
PHASE NUMBER	
UTILITY POLE	
LUMINAIRE	
FENCE	X

COUNTY: LANCASTER COUNTY
MUNICIPALITY: MOUNT JOY TOWNSHIP
INTERSECTION: CLOVERLEAF ROAD (SR 4025)
AND
SCHWANGER ROAD (T-843)
REVIEWED: *[Signature]*
MUNICIPAL DATE 5/15/08
APPROVED: *[Signature]*
DIST TRAFFIC ENGR 05/21/08

INSTALLATION, OPERATION, AND MAINTENANCE OF THIS TRAFFIC SIGNAL TO BE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION REGULATIONS ON OFFICIAL TRAFFIC CONTROL DEVICES. NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN WRITING, BY THE DEPARTMENT. FULL MAINTENANCE NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS, INCLUDING TRIMMING TREES, IS THE RESPONSIBILITY OF THE PERMITTEE. ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND ARE TO BE INSTALLED AND MAINTAINED BY THE PERMITTEE, UNLESS OTHERWISE INDICATED. EXCEPT THE LONGITUDINAL PAVEMENT MARKINGS ON STATE HIGHWAYS WHICH WILL BE MAINTAINED BY THE DEPARTMENT. INSTALL POST MOUNTED SIGNALS WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF THE OVERHEAD SIGNALS WILL HAVE A MINIMUM HORIZONTAL CLEARANCE OF 2 FEET. THE BOTTOM OF SIGNAL HEADS AND SIGNS ERECTED OVER THE ROADWAY ARE NOT TO BE LESS THAN 15 FEET OVER MORE THAN 19 FEET ABOVE THE ROADWAY. THE BOTTOM OF POST MOUNTED SIGNAL HEADS ARE NOT TO BE LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK OR PAVEMENT GRADE. MEASURED AT RIGHT ANGLES TO THE APPROACH IS TO BE 8 FEET. PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR EMBANKMENT REMOVAL, CURBING AND/OR SIDEWALK DRAINAGE STRUCTURES, CHANGES IN HIGHWAY GEOMETRY, PAVEMENT WIDENING, OR INSTALLATION OF ADDITIONAL LANES. CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-7800 SERIES. THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLES WITH THE PROVISIONS OF ACT 199, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES. EFFECTIVE NOVEMBER 30, 2004 PRIOR TO CONSTRUCTION CONSULT WITH UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES. THE DEPARTMENT WILL BE PLACED IN ACCORDANCE WITH PAVEMENT MARKINGS WILL BE PLACED IN ACCORDANCE WITH HANDBOOK. PERMITTEE IS RESPONSIBLE FOR OBTAINING APPROVAL FOR INSTALLATION OF TRAFFIC SIGNAL DEVICES LOCATED OUTSIDE HIGHWAY RIGHT-OF-WAY. TRAFFIC SIGNALS INSTALLED USING LIQUID FUELS TAX FUNDS MUST CONFORM TO DEPARTMENT SPECIFICATIONS AS SET FORTH IN CURRENT PUBLICATION 408, SUPPLEMENTS AND STANDARD DRAWINGS.

GENERAL NOTES

T-273

PERMIT NUMBER: 87-260 SHEET 2 OF 3
DATE ISSUED: 01 MAY 07
DATE REVISED:

T-273

MOVEMENT, SEQUENCE, AND TIMING DIAGRAM

PHASE		2+6				4+8				PRE-EMP PHASE A				PRE-EMP PHASE B				PRE-EMP PHASE C				PRE-EMP PHASE D				EMERGENCY FLASHING
INTERVAL		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
1,2		G	G	Y	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	Y
3,4		G	G	Y	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	Y
5,6,7		R	R	R	R	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R
8,9,10		R	R	R	R	G	G	Y	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R
11,12		M	FH	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	OFF
13,14		H	H	H	H	M	FH	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	OFF
FAIL-SAFE LAMP		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
FIXED				4.5	2				4	2																
MINIMUM		12							3																	
SEC / ACT		3																								
MAXIMUM INITIAL		28																								
PASSAGE		6							3																	
TIME BEFORE REDUCTION		14																								
TIME TO REDUCTION		14																								
MINIMUM GAP		3																								
MAXIMUM 1		56							23																	
MAXIMUM 2																										
PEDESTRIAN		②	14	16					11	12																
MEMORY			MIN-RECALL						NON-LOCK																	

▲ FOR DURATION OF PRE-EMPTION

- THIS SIGNAL TO BE COORDINATED WITH THE FOLLOWING SIGNALS ALONG CLOVERLEAF ROAD (S.R. 4025) AT: ANDREW AVENUE AND ROUTE 230 VIA GPS TIME CLOCKS

PRE-EMPTION OPERATION NOTES

- ① SIGNAL TO INDICATE G WHEN RETURNING TO NORMAL OPERATION

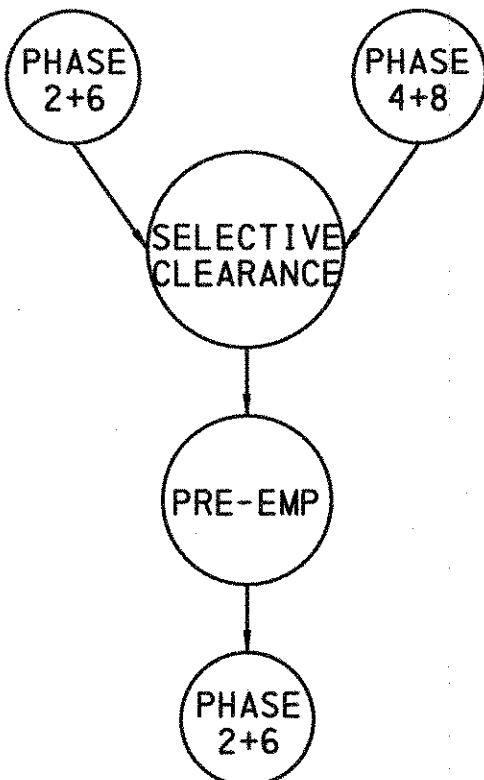
OPERATION NOTES

- ② UPON PEDESTRIAN ACTUATION ONLY

DETECTOR NOTES

DETECTOR 10 AND 11 CALL PED SIGNALS FOR PHASE 2+6
DETECTOR 9 AND 12 CALL PED SIGNALS FOR PHASE 4+8
DETECTOR 4a, 4b, 8a AND 8b CALL AND EXTEND PHASE 4+8 PRESENCE
DETECTOR 2 AND 6 CALL AND EXTEND PHASE 2+6 PRESENCE

EMERGENCY PRE-EMPTION



EMERGENCY PRE-EMPTION NOTES:

CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION EQUIPMENT FOR BOTH THE NORTHBOUND AND SOUTHBOUND APPROACHES OF CLOVERLEAF ROAD (SR 4025) AND THE EASTBOUND AND WESTBOUND APPROACHES OF SCHWANGER ROAD WHICH SHALL PROVIDE A SELECTIVE YELLOW INTERVAL, A GREEN INDICATION WILL BE GIVEN TO THE PRE-EMPTED APPROACH AND A RED INDICATION ON ALL OTHER APPROACHES.

EMERGENCY PREEMPTION MAY OCCUR DURING ANY INTERVAL OF THE NORMAL CONTROLLER OPERATIONS. DEPENDING ON THE DIRECTION OF TRAVEL OF THE EMERGENCY VEHICLE, ONE OF THE FOLLOWING PHASES SHALL BE CALLED: EMERGENCY PREEMPTION PHASE A, PHASE B, PHASE C, OR PHASE D. THE SYSTEM SHALL PROVIDE SERVICE ON A FIRST-COME, FIRST-SERVE BASIS. ONCE THE FIRST PRIORITY VEHICLE CALLS THE SYSTEM, IT SHALL PREVENT OTHER PREEMPTIVE VEHICLES FROM ENTERING CALLS UNTIL THE FIRST EMERGENCY VEHICLE RELEASES CONTROL AND CLEARS THE INTERSECTION.

IF THE CONTROLLER OPERATION IS IN THE GREEN INTERVAL OF A NON-PREEMPTIVE VEHICLE PHASE, UPON ACTIVATION BY AN EMERGENCY VEHICLE, THE CONTROLLER SHALL TERMINATE THE INTERVAL IMMEDIATELY AND PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS BEFORE PROCEEDING TO THE PREEMPTIVE PHASE.

IF THE CONTROLLER OPERATION IS IN THE GREEN INTERVAL OF A PREEMPTIVE PHASE, UPON ACTIVATION BY AN EMERGENCY VEHICLE, THE CONTROLLER SHALL REMAIN IN THAT INTERVAL.

IF THE CONTROLLER OPERATION IS IN THE YELLOW, YELLOW ARROW, OR ALL RED INTERVAL OF ANY VEHICLE PHASE, UPON ACTIVATION BY AN EMERGENCY VEHICLE, THE CONTROLLER SHALL TIME OUT OF THOSE INTERVALS NORMALLY AND PROCEED TO THE PREEMPTION PHASE.

THE GREEN INTERVAL SHALL EXTEND FOR THE LENGTH OF THE PREEMPTION ACTUATION BUT SHALL BE A MAXIMUM OF 30 SECONDS FOR EACH EMERGENCY PREEMPTION PHASE. UPON TERMINATION OF THE PREEMPTION PHASE, THE CONTROLLER SHALL PROCEED NORMALLY THROUGH THE YELLOW, YELLOW ARROW, AND ALL RED INTERVALS TO THE PRE-DESIGNATED POST PREEMPTION PHASE, THEN TO NORMAL "PHASE NEXT" OPERATION.

GENERAL NOTES

INSTALLATION, OPERATION, AND MAINTENANCE OF THIS TRAFFIC SIGNAL TO BE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION REGULATIONS ON OFFICIAL TRAFFIC CONTROL DEVICES.

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN WRITING, BY THE DEPARTMENT.

ALL MAINTENANCE NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS, INCLUDING TRIMMING TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND ARE TO BE INSTALLED AND MAINTAINED BY THE PERMITTEE, UNLESS OTHERWISE INDICATED. EXCEPT THE LONGITUDINAL PAVEMENT MARKINGS ON STATE HIGHWAYS WHICH WILL BE MAINTAINED BY THE DEPARTMENT.

INSTALL POST MOUNTED SIGNALS WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF THE CURB OR EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS WILL HAVE A MINIMUM HORIZONTAL CLEARANCE OF 2 FEET.

THE BOTTOM OF SIGNAL HEADS AND SIGNS ERECTED OVER THE ROADWAY ARE NOT TO BE LESS THAN 15 FEET NOR MORE THAN 19 FEET ABOVE THE ROADWAY. THE BOTTOM OF POST MOUNTED SIGNAL HEADS ARE NOT TO BE LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK OR PAVEMENT GRADE.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNAL HEADS MEASURED AT RIGHT ANGLES TO THE APPROACH IS TO BE 8 FEET.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR EMBANKMENT REMOVAL, CURBING AND/OR SIDEWALK, DRAINAGE STRUCTURES, CHANGES IN HIGHWAY GEOMETRY, PAVEMENT WIDENING, OR INSTALLATION OF ADDITIONAL LANES.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-7800 SERIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF ACT 199, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, EFFECTIVE NOVEMBER 30, 2004 PRIOR TO CONSTRUCTION CONSULT WITH UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

PAVEMENT MARKINGS WILL BE PLACED IN ACCORDANCE WITH THE DEPARTMENT OF TRANSPORTATION PAVEMENT MARKING HANDBOOK.

PERMITTEE IS RESPONSIBLE FOR OBTAINING APPROVAL FOR INSTALLATION OF TRAFFIC SIGNAL DEVICES LOCATED OUTSIDE HIGHWAY RIGHT-OF-WAY.

TRAFFIC SIGNALS INSTALLED USING LIQUID FUELS TAX FUNDS MUST CONFORM TO DEPARTMENT SPECIFICATIONS AS SET FORTH IN CURRENT PUBLICATION 408, SUPPLEMENTS AND STANDARD DRAWINGS.

LEGEND

- 25' MA MAST ARM/ IDENTIFYING LENGTH
- 4 SIGNAL HEAD/ IDENTIFYING NUMBER
- 4 PEDESTRIAN SIGNAL HEAD W/ IDENTIFYING NUMBER
- 4 PEDESTRIAN PUSHBUTTON
- 4 SIGN/ IDENTIFYING LETTER
- 4 6' X 20' LOOP SENSOR/ SIZE
- 4 EMERGENCY PRE-EMPTION BEACON
- 4 EMERGENCY PRE-EMPTION DETECTOR
- 4 CURB RAMP
- 4 CONTROLLER CABINET
- DC DEPRESSED CURB
- 4" / DY 4" WIDTH / DOUBLE YELLOW LINE
- 6" / W 6" WIDTH / SOLID WHITE LINE
- 24" / W 24" WIDTH / SOLID WHITE LINE
- Ø4 PHASE NUMBER
- UTILITY POLE
- LUMINAIRE
- FENCE
- GUIDE RAIL

25' 0' 25' 50'
SCALE IN FEET

COUNTY: LANCASTER COUNTY
MUNICIPALITY: MOUNT JOY TOWNSHIP
INTERSECTION: CLOVERLEAF ROAD (SR 4025) AND SCHWANGER ROAD (T-843)
REVIEWED: Robert Nantz 5/15/08
APPROVED: Jason C. Berley 05/21/08
DIST TRAFFIC ENGR DATE