



**HIGHWAY FACTORS GROUP CHAIRMAN'S  
FACTUAL REPORT ATTACHMENT**

**Attachment 3 – Signal Construction Plan**

**Philadelphia, PA**

**DCA17FR003**

**(2 pages)**

**MOVEMENT, SEQUENCE, AND TIMING DIAGRAM**

PHASE	4 + 8	2			EMERGENCY FLASH
SIGNALS	1 2 3	4 5 6			Y
1,2,3	O Y R	R R R			Y
4,5,6	O Y R	R R R			Y
7,8,9,10,11	R R R	G Y R			R
PROGRAM 1	29 3 2	21 3 2			
PROGRAM 2	28 3 2	22 3 2			
PROGRAM 3	27 3 2	23 3 2			
PED MIN.	23	17			

**OFFSETS**

PROGRAM NUMBER	SPR/MAW/ST	LANCASTER AVE	LANCASTER AVE	63RD ST
1	17	145	29	13
2	43	43	20	15
3	39	43	20	15

MASTER CONTROLLER IS LOCATED AT THE INTERSECTION OF 36TH ST/LANCASTER AVE.  
 OFFSETS REFERENCED FROM BEGINNING OF YELLOW, PHASE 4+8 AT MASTER LOCATION TO BEGINNING OF YELLOW, PHASE 4+8 AT EACH INTERSECTION.  
 PROGRAM 1 RUNS FROM 7:00 AM TO 2:00 PM  
 PROGRAM 2 RUNS FROM 2:00 PM TO 10:00 PM  
 PROGRAM 3 RUNS FROM 10:00 PM TO 7:00 AM

**PREEMPTION DETECTOR PARAMETERS**

INTERSECTION NAME	38-LANCASTER
MAX CALL TIME	120
MAX EXTENSION OF GREEN	10
CALL DELAY TIME	5
RELATIVE PRIORITY	TRANSIT
DETECTION RANGE	MIN.

COUNTY	ROUTE	SECT	SHEET
PHILADELPHIA			
CITY OF PHILADELPHIA			
REVISION NUMBER	REVISIONS	DATE	BY
		12/18/05	
APPROVED	TRAFFIC ENGINEER DIVISION		

**MATERIAL LIST**

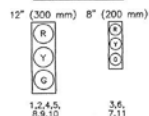
QUANTITY	UNIT	DESCRIPTION
1	EA	TRAFFIC SIGNAL CONTROLLER ASSEMBLY
2	EA	PREEMPTION DETECTOR
300 (91)	LF (m)	PREEMPTION DETECTOR CABLE
1	EA	PREEMPTION PHASE SELECTOR, 4 PHASE

**UTILITY INFORMATION TO CONTRACTOR**

CAUTION: HIGH VOLTAGE LINES ARE WITHIN THE PROJECT LIMITS. ALL WORK IS TO BE PERFORMED IN CONFORMITY WITH ALL STATE, FEDERAL, UTILITY, AND CONTRACT REQUIREMENTS. URBAN ENGINEERS, INC. HAS NO CONTROL OVER THE MEANS, METHODS, CHOICE OF EQUIPMENT, SEQUENCING OF WORK, AND SAFETY PRACTICES USED, OR NOT USED IN, ON, OR AROUND HIGH VOLTAGE LINES OR OTHER UTILITY STRUCTURES, AS THESE ITEMS ARE THE RESPONSIBILITY OF THE PARTIES PHYSICALLY PERFORMING OR CONTROLLING THE PERFORMANCE OF THE WORK.

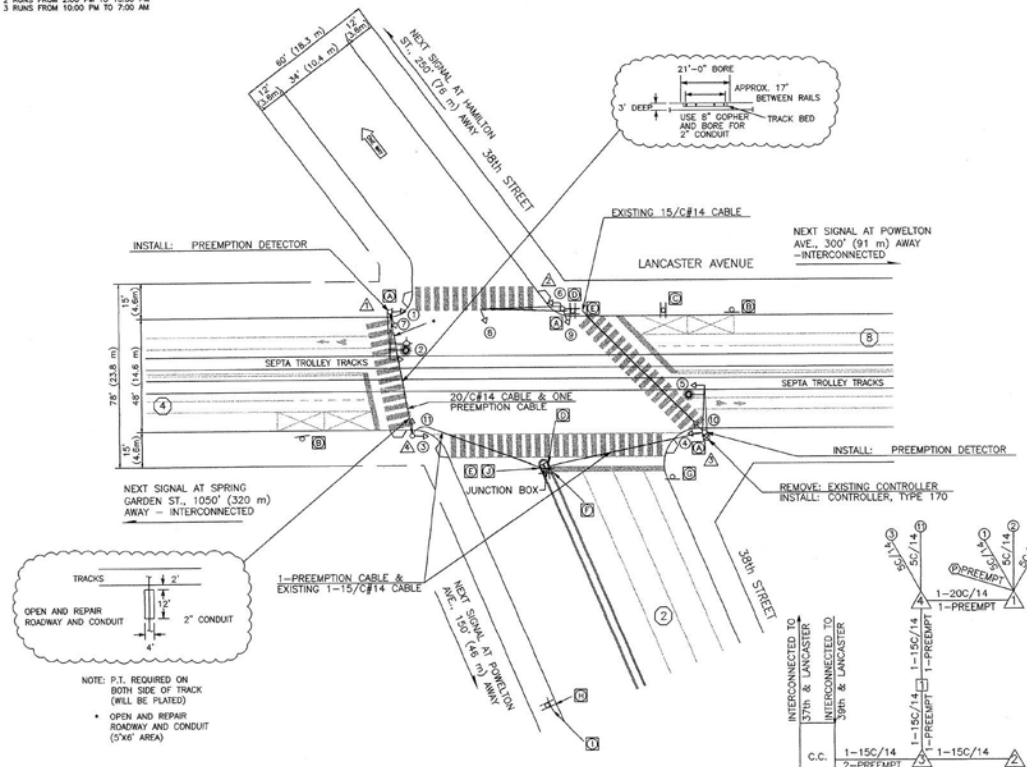
EXCEPT WHERE ELECTRICAL DISTRIBUTION AND TRANSMISSION LINES HAVE BEEN DE-ENERGIZED AND VISIBLY GROUNDING AT THE POINT OF WORK, ASSUME THAT ALL SUCH LINES ARE ENERGIZED AND CONFORM OPERATIONS TO, INTER ALIA, TITLE 29 OF THE CODE OF FEDERAL REGULATIONS, SECTION 1926.550 (a)(19).

**SIGNAL INDICATIONS**



**NOTES**

1. RECONNECT EXISTING TRAFFIC SIGNAL CABLE TO NEW CONTROLLER.
2. UTILIZE EXISTING CONDUIT TO CONNECT PREEMPTION DETECTORS TO TRAFFIC SIGNAL CONTROLLER. PREEMPTION DETECTOR CABLE SHALL BE COMPLIANT WITH PREEMPTION MANUFACTURER REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY EXISTING CONDUIT RUNS TO DETERMINE THE CONDUIT CONDITION. CONTRACTOR SHALL REPAIR ANY SEGMENTS OF CONDUIT DETERMINED TO BE UNSATISFACTORY BY THE ENGINEER. ANY REPAIR OF CONDUIT SHALL BE DONE ACCORDING TO THE CONDUIT SPECIFICATION AND BID ITEM.
4. CONTRACTOR SHALL TEST ALL EXISTING SIGNAL WIRES BY MEANS OF AN INSULATION RESISTANCE TEST (MIGGERS) TO CHECK FOR POSSIBLE WIRE DEFICIENCIES. ALL WIRES DEEMED DEFICIENT BY THE ENGINEER SHALL BE REPLACED ACCORDING TO CITY OF PHILADELPHIA STANDARDS. ALL SPLICES SHALL BE COMPLETELY REMOVED, CLEANED AND REPLACED IN ACCORDANCE WITH CITY OF PHILADELPHIA STANDARD SPLICES.
5. CONTRACTOR WILL PERFORM TREE PRUNING AS NEEDED TO MAXIMIZE THE DETECTION PARAMETERS AND EFFECTIVENESS FOR THE PREEMPTION DETECTORS AS DIRECTED BY THE ENGINEER.
6. PREEMPTION DETECTOR LOCATION SHALL BE DETERMINED BY THE ENGINEER PRIOR TO THE FINAL INSTALLATION.
7. A POLICE OFFICER SHALL BE USED TO DIRECT TRAFFIC AT THE INTERSECTION DURING THE TRAFFIC CONTROLLER CHANGE-OVER.
8. GENERAL PREEMPTION NOTES THAT APPLY TO ALL INTERSECTIONS ARE CONTAINED ON SHEET 004 - GENERAL NOTES.
9. INTERSECTION GEOMETRY DEVELOPED FROM EXISTING BASE PLANS PROVIDED BY THE CITY OF PHILADELPHIA, DEPARTMENT OF STREETS AND UPDATED BY URBAN ENGINEERS, INC. THROUGH FIELD VISITS. URBAN ENGINEERS, INC. DID NOT PERFORM A LEGAL SURVEY UNDER THE GUIDANCE OF A STATE LICENSED SURVEYOR. CONTRACTOR TO VERIFY ALL DIMENSIONS IN THE FIELD.



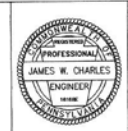
**LEGEND**

○	EXISTING MAST ARM, LENGTH	ØW/4" 4" BROKEN WHITE LINE
○	NEW MAST ARM, LENGTH	W/4" 4" WHITE LINE
○	EXISTING C-POST	W/24" 24" WHITE LINE
○	NEW C-POST	Ø7/4" 4" DOUBLE YELLOW LINE
○	EXISTING SIGNAL HEAD AND NUMBER	Ø7/24" 24" YELLOW LINE
○	NEW SIGNAL HEAD AND NUMBER	NEW CURB RAMP
○	EXISTING PED. SIGNAL AND NUMBER	EXISTING CURB RAMP
○	NEW PED. SIGNAL AND NUMBER	EXISTING GRATE INLET
○	EXISTING CONDUIT AND SIZE	EXISTING INLET
○	NEW CONDUIT AND SIZE	NEW STREET LIGHT
○	EXISTING GAS LINE	EXISTING FIRE HYDRANT
○	EXISTING WATER LINE	EXISTING MAIL BOX
○	EXISTING STORMWATER SEWER LINE	EXISTING SIGN/SYMBOL
○	EXISTING SANITARY SEWER LINE	NEW SIGN/SYMBOL
○	EXISTING TELEPHONE LINE	NEW PUSHBUTTON
○	PREEMPTION DETECTOR	NEW SIGNAL STRUCTURE
○	MASTER CONTROLLER	NEW LOOP DETECTOR
○		NEW JUNCTION BOX

**SIGN TABULATION**

QUAN	SYM	SERIES	SIZE	LEGEND
EXISTING	Ø	R10-11		NO TURN ON RED
EXISTING	Ø	SPECIAL		NO STOPPING TROLLEY STOP
EXISTING	Ø	SPECIAL		STREET SIGN (36TH STREET)
EXISTING	Ø	SPECIAL		STREET SIGN (LANCASTER AVE)
EXISTING	Ø	R3-7L		LEFT LANE MUST TURN LEFT
EXISTING	Ø	R3-7R		RIGHT LANE MUST TURN RIGHT
EXISTING	Ø	SPECIAL		STREET NAME (PEARL STREET)
EXISTING	Ø	R6-7L		ONE WAY
EXISTING	Ø	R6-7R		KEEP RIGHT

DATE	APRIL 27, 2001
DESIGNED	JTE
DRAWN	JTE
CHECKED	JAB
SCALE	1" = 25'



**URBAN ENGINEERS, INC.**  
 530 WALNUT STREET  
 14th FLOOR  
 PHILADELPHIA, PA 19106-3685

**Southeastern Pennsylvania Transportation Authority**  
 Capital Design and Construction Division  
 1234 Market Street, Philadelphia, PA 19107-3780

**ROUTE 10 TROLLEY TRAFFIC SIGNALS**  
**TRAFFIC SIGNAL PLAN**  
**38TH STREET AND LANCASTER AVENUE**

RECORD NUMBER	548329
SHEET NUMBER	10 OF 54
DRAWING NUMBER	SG04