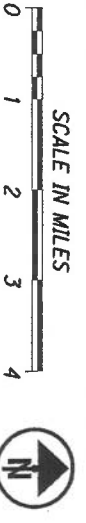


LOCATION MAP
 LATITUDE: N40°38'20" LONGITUDE: W81°21'20"



PORTION TO BE IMPROVED
 INTERSTATE & DIVIDED HIGHWAY _____
 UNDIVIDED STATE & FEDERAL ROUTES _____
 OTHER ROADS _____

DESIGN DESIGNATION
 CURRENT ADT (2008) _____ 5500
 DESIGN YEAR ADT (2028) _____ 6600
 DESIGN HOURLY VOLUME (2028) _____ 660
 DIRECTIONAL DISTRIBUTION _____ 55%
 TRUCKS (24 HOUR B&C) _____ 6%
 DESIGN SPEED _____ 55 MPH
 LEGAL SPEED _____ 55 MPH
 DESIGN FUNCTIONAL CLASSIFICATION:
 RURAL COLLECTOR _____
 NHS PROJECT _____ NO

DESIGN EXCEPTIONS
 NONE

UNDERGROUND UTILITIES
 CONTACT BOTH SERVICES
 CALL TWO WORKING DAYS
 BEFORE YOU DIG

CALL
1-800-362-2764
 (TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE
 NON-MEMBERS
 MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE
 SERVICE CALL: **1-800-929-0988**

PLAN PREPARED BY:
 O.D.O.T.
 DISTRICT II
 NEW PHILADELPHIA, OHIO

STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION
TUS-800-33.91
 SANDY TOWNSHIP
 TUSCARAWAS COUNTY

INDEX OF SHEETS:

TITLE SHEET	1
TRAFFIC SIGNAL PLAN	2-7

PROJECT DESCRIPTION
 THE REPLACEMENT OF AN EXISTING FLASHING BEACON WITH AN ACTUATED 2 PHASE TRAFFIC SIGNAL UTILIZING THE EXISTING STRAIN POLES AT THE INTERSECTION OF S.R. 800 AND S.R. 183.

PROJECT EARTH DISTURBED AREA: N/A (MAINTENANCE PROJECT)
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: N/A (MAINTENANCE PROJECT)
 NOTICE OF INTENT EARTH DISTURBED AREA: N/A (MAINTENANCE PROJECT)

2005 SPECIFICATIONS
 THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	
DM-4.3	7/19/02	TC-84.20	1/19/07	800	1/18/08
DM-4.4	7/19/02	TC-84.21	1/19/07	832	4/25/06
MT-97.10	9/05/06				
MT-105.10	10/18/02				
MT-105.11	10/18/02				
MT-120.00	3/01/00				
TC-21.20	1/19/07				
TC-41.20	1/19/01				
TC-42.20	7/18/04				
TC-52.10	1/19/07				
TC-52.20	1/19/07				
TC-81.10	5/01/00				
TC-83.10	1/19/07				
TC-83.20	1/19/07				

ENGINEERS SEAL:

SIGNED: _____
 DATE: _____

APPROVED _____
 DATE _____
 DISTRICT DEPUTY DIRECTOR

APPROVED _____
 DATE _____
 DIRECTOR, DEPARTMENT OF TRANSPORTATION

TUS-800-33.91	RAILROAD INVOLVEMENT NONE	CONSTRUCTION PROJECT NO.	PID NO. 77009	FEDERAL PROJECT NO. NON-FEDERAL
---------------	-------------------------------------	--------------------------	-------------------------	---

Final Plans 05 of 5-13-08

POWER SUPPLY FOR TRAFFIC SIGNALS

ELECTRIC POWER SHALL BE OBTAINED FROM THE LOCATION INDICATED ON THE PLANS. POWER SUPPLIED SHALL BE 120 VOLTS.

632, VEHICULAR SIGNAL HEAD, BY TYPE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS ITEM 632 AND CMS 732, THE FOLLOWING REQUIREMENTS SHALL APPLY:

1. ALL UPPER SIGNAL SUPPORT HARDWARE AND PIPING UP TO AND INCLUDING THE WIRE INLET FITTING SHALL BE FERROUS METAL FOR SIGNAL DISPLAYS OF TWO OR MORE SECTIONS.
2. GLASS LENSES SHALL BE USED.
3. THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SERATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.

633 CONTROLLER UNIT, TYPE T06, WITH CABINET, TYPE 336, AS PER PLAN

THE 412C PROM MODULE FOR THE LOCAL CONTROLLER SHALL BE SUPPLIED WITHOUT CONTROLLER SOFTWARE TO THE ODOT DISTRICT OFFICE 14 DAYS IN ADVANCE OF WHEN THE SOFTWARE IS NEEDED. THE PROM MODULES SHALL BE CONFIGURED FOR WAPITI SOFTWARE AND INCLUDE A BLANK EPROM FOR PROGRAM INSTALLATION. ODOT WILL INSTALL THE LOCAL CONTROLLER SOFTWARE PROGRAM. THE CONTRACTOR SHALL PICK UP THE PROM MODULES WITH THE INSTALLED SOFTWARE FROM DISTRICT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO USE THE RETURNED PROM MODULES TO PROGRAM THE SIGNAL CONTROLLERS PER THE PLANS.

THE CONTRACTOR SHALL NOT REASSIGN THE DETECTOR INPUTS IN ORDER TO REDUCE THE NUMBER OF 2-CHANNEL DETECTOR UNITS SUPPLIED, BUT SHALL USE THE STANDARD CALTRANS INPUT FILE DESIGNATIONS.

632, POWER SERVICE, AS PER PLAN

POWER SERVICE SHALL BE AS PER CMS ITEM 632 AND SCD TC-83.10 WITH THE FOLLOWING EXCEPTIONS:

1. THE METER BASE MOUNTING HEIGHT SHALL BE NO MORE THAN 5 FEET HIGH TO THE CENTER OF THE METER BASE FROM THE GROUND.
2. THE CONTRACTOR SHALL SUPPLY THE NECESSARY METER BASES.
3. ALL POWER SERVICES SHALL BE METERED. THE METER SHALL HAVE A LEVER OPERATED BYPASS

DISCONNECT SWITCH ENCLOSURES FURNISHED IN ACCORDANCE WITH CMS ITEM 632, POWER SERVICE, AS PER PLAN, SHALL INCLUDE A PADLOCK EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNON 680, WITH LOCK BODY OF BRONZE OR BRASS AND KEYING SHALL BE TO THE STATE MASTER.

THE CONTRACTOR SHALL CONTACT THE METER SECTION OF THE POWER COMPANY FOR INFORMATION REGARDING THE METER BASE INSTALLATION PRIOR TO ORDERING POLES. THE CONTRACTOR WILL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS THE POWER COMPANY MAY REQUIRE FOR THE POWER SERVICE HOOK UP. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT THE POWER COMPANY FOR THE ELECTRICAL SERVICE CONNECTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPICE POWER CABLE INTO THE POWER COMPANY'S CIRCUITS. THE VOLTAGE SUPPLIED SHALL BE NOMINALLY 120 VOLTS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND THE PAYING OF ALL FEES. THE CONTRACTOR SHALL PAY ALL POWER CHARGES UNTIL THE SIGNAL IS ACCEPTED BY THE MAINTAINING AGENCY.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 90 DAYS FOLLOWING COMPLETION OF THE 10-DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY. EQUIPMENT, MATERIAL AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLERS AND ASSOCIATED EQUIPMENT, DETECTOR UNITS, INTERCONNECTION ITEMS AND MASTER CONTROL EQUIPMENT.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE STATE OR THE MAINTAINING AGENCY FOLLOWING ACCEPTANCE OF THE EQUIPMENT. THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

UNDERDRAINS FOR PULL BOXES

INSTALL UNDERDRAINS FOR PULL BOXES AS DIRECTED BY THE ENGINEER. PROVIDE UNDERDRAINS WHEN THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 40 FEET.

ITEM 603 - 4" CONDUIT, TYPE E, AS PER PLAN

THIS ITEM SHALL CONSIST OF INSTALLING A 4 INCH CONDUIT TYPE E UNDERDRAIN AT NEW PULL BOXES, AS CALLED FOR IN THIS PLAN. REFERENCE IS MADE TO HL-30.11 FOR DETAILS OF DRAINING PULL BOXES.

PAYMENT WILL BE AT THE CONTRACT UNIT PRICE PER FOOT.

632, REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN

TRAFFIC SIGNAL INSTALLATIONS, INCLUDING SIGNAL HEADS, CABLE, MESSENGER WIRE, CABINET, CONTROLLER, ETC., SHALL BE REMOVED IN ACCORDANCE WITH CMS 632.26 AND AS INDICATED ON THE PLANS.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

AEP OHIO POWER COMPANY
ATTN: RAY ZITNEY
P. O. BOX 24400
CANTON, OHIO 44701
330-438-7718

ART OHIO
ATTN: JIM BUETEL
50 WEST BOWERY STREET
AKRON, OHIO 44308
330-384-8057

COLUMBIA GAS OF OHIO, INC
ATTN: JIM BURCHFIELD
7080 FRY ROAD
MIDDLEBURG HEIGHTS, OHIO 44130
440-891-2433

TUSCARAWAS COUNTY
METROPOLITAN SEWER DISTRICT
ATTN: CHARLES REGULA
9944 WILKSHIRE BOULEVARD NE
BOLIVAR, OHIO 44612
330-874-3262

TIME WARNER CABLE
ATTN: MARK SEXTON
617 TUSCARAWAS AVENUE
P.O. BOX 506
NEW PHILADELPHIA, OHIO 44663
330-343-5823

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

ITEM 614 - MAINTAINING TRAFFIC

IN ADDITION TO ITEM 614 THE FOLLOWING SHALL APPLY: WHENEVER CONTRACTOR EQUIPMENT OR PERSONNEL ENCROACH ON ANY PORTION OF A TRAVELED LANE, THE ENTIRE LANE SHALL BE CLOSED TO TRAFFIC. WHEN IT IS NECESSARY TO CLOSE ONE LANE OF TRAFFIC ADJACENT TO THE WORK, THE CLOSURE SHALL BE ACCOMPLISHED BY THE APPLICATION OF TRAFFIC CONTROL DEVICES AS SPECIFIED BY STANDARD CONSTRUCTION DRAWING MT-97.10. ALL ADVANCE WARNING SIGNS FOR ANY CONDITION THAT RESTRICTS TRAFFIC SHALL BE ERRECTED BEFORE ANY SUCH RESTRICTION IS PUT INTO EFFECT. ALL SUCH SIGNS SHALL BE COVERED OR REMOVED FROM VIEW OF TRAFFIC WHEN NOT APPLICABLE, AS DETERMINED BY THE ENGINEER. FOR WORK WHICH IS CONFINED TO THE SHOULDER, TRAFFIC CONTROL APPLICATION SHALL BE AS SHOWN IN THE OMITTED. THE CONTRACTOR'S FAILURE TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS AND THE OMITTED WHICH RESULTS IN A CONDITION AT THE WORK SITE THAT IS UNSAFE FOR TRAFFIC SHALL BE CAUSE FOR THE ENGINEER TO SUSPEND WORK UNTIL THE CONTRACTOR COMPLEES WITH THE NECESSARY REQUIREMENTS.

PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

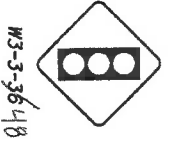
ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON AN ASSUMED DATUM.

CALCULATED
SKW
CHECKED
RPT

TRAFFIC SIGNAL NOTES

TUS-800-33.91



W3-3-3648

To be placed on #3 posts of the following minimum distances from the stop bar on all four approaches:
 West Approach (C.R. 108) = 673'
 East Approach (S.R. 183) = 818'
 South Approach (S.R. 800) = 670'
 North Approach (S.R. 800) = 873'

I think Betty Taylor just put them all 150' from the stop sign's like NT-120.00 to be for the temporary signs.

Item 642 - Stop Line, Type 1

- S1 Sta. 140+30 - 14 ft.
 - S2 Sta. 0+80 - 13 ft.
 - S3 Sta. 141+55 - 16 ft.
 - S4 Sta. 9+00 - 11 ft.
- Total = 54 ft.

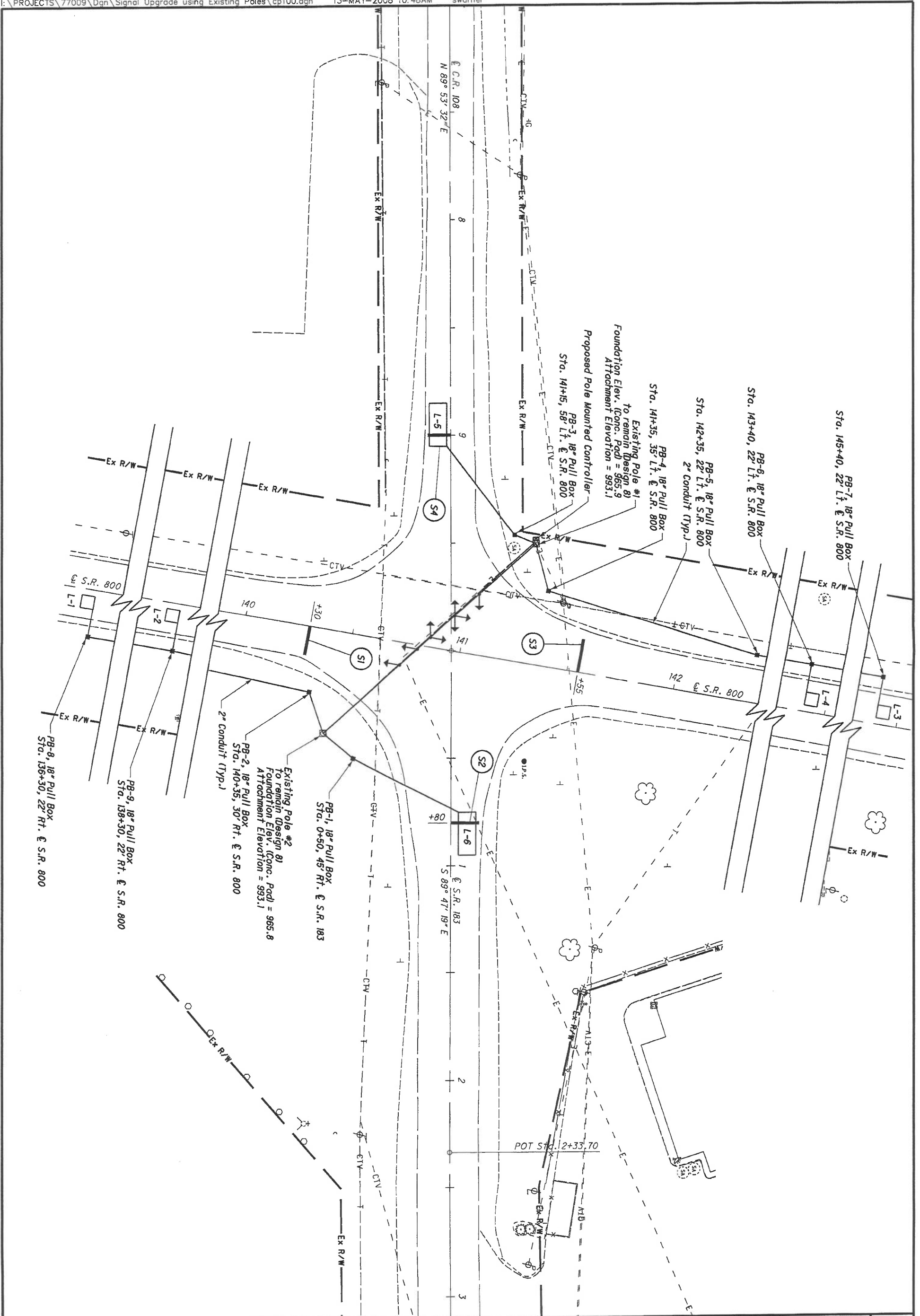
TRAFFIC SIGNAL SUMMARY

ITEM	ITEM EXT.	QTY.	UNITS	DESCRIPTION
603	00401	180	FT	4" CONDUIT, TYPE E, AS PER PLAN
625	25400	886	FT	CONDUIT, 2", 725-04
625	29000	886	FT	TRENCH
625	30700	9	EACH	PULL BOX, 725-08, 18"
625	32000	1	EACH	GROUND ROD
630	03100	62	FT	GROUND MOUNTED SUPPORT, NO. 3 POST
630	80100	36	SQ FT	SIGN, FLAT SHEET
632	00301	3	EACH	VEHICULAR SIGNAL HEAD, 3 SECTION, 12" LENS, 1-WAY, AS PER PLAN
632	01101	1	EACH	VEHICULAR SIGNAL HEAD, 3 SECTION, 12" LENS, 2-WAY, AS PER PLAN
632	02201	1	EACH	VEHICULAR SIGNAL HEAD, 3 SECTION, 12" LENS, 3-WAY, AS PER PLAN
632	25000	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD
632	26500	6	EACH	DETECTOR LOOP
632	30200	139	FT	MESSSENGER WIRE, 7-STRAND, 3/8" DIAMETER WITH ACCESSORIES
632	40500	459	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG
632	65300	2002	FT	LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR, NO. 14 AWG
632	68300	38	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG
632	69800	41	FT	SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG
632	70001	1	EACH	POWER SERVICE, AS PER PLAN
632	90101	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN
633	01651	1	EACH	CONTROLLER UNIT, TYPE 170E, WITH CABINET, TYPE 336, AS PER PLAN
633	61200	1	EACH	CONTROLLER WORK PAD
642	00500	54	FT	STOP LINE, TYPE 1

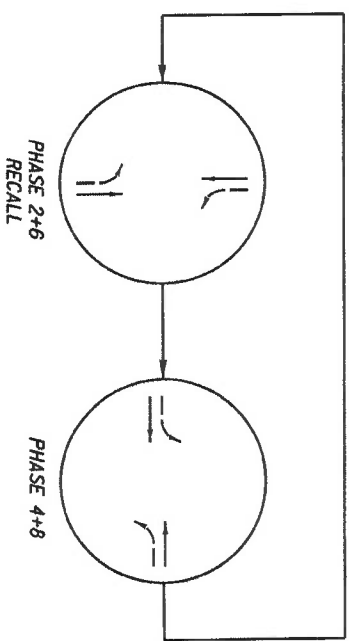
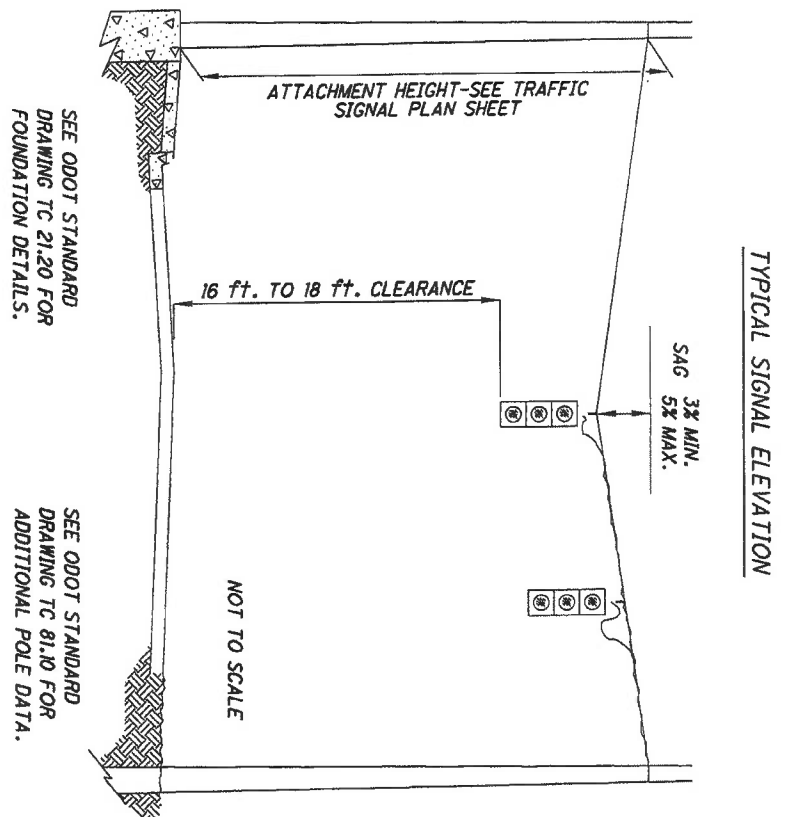
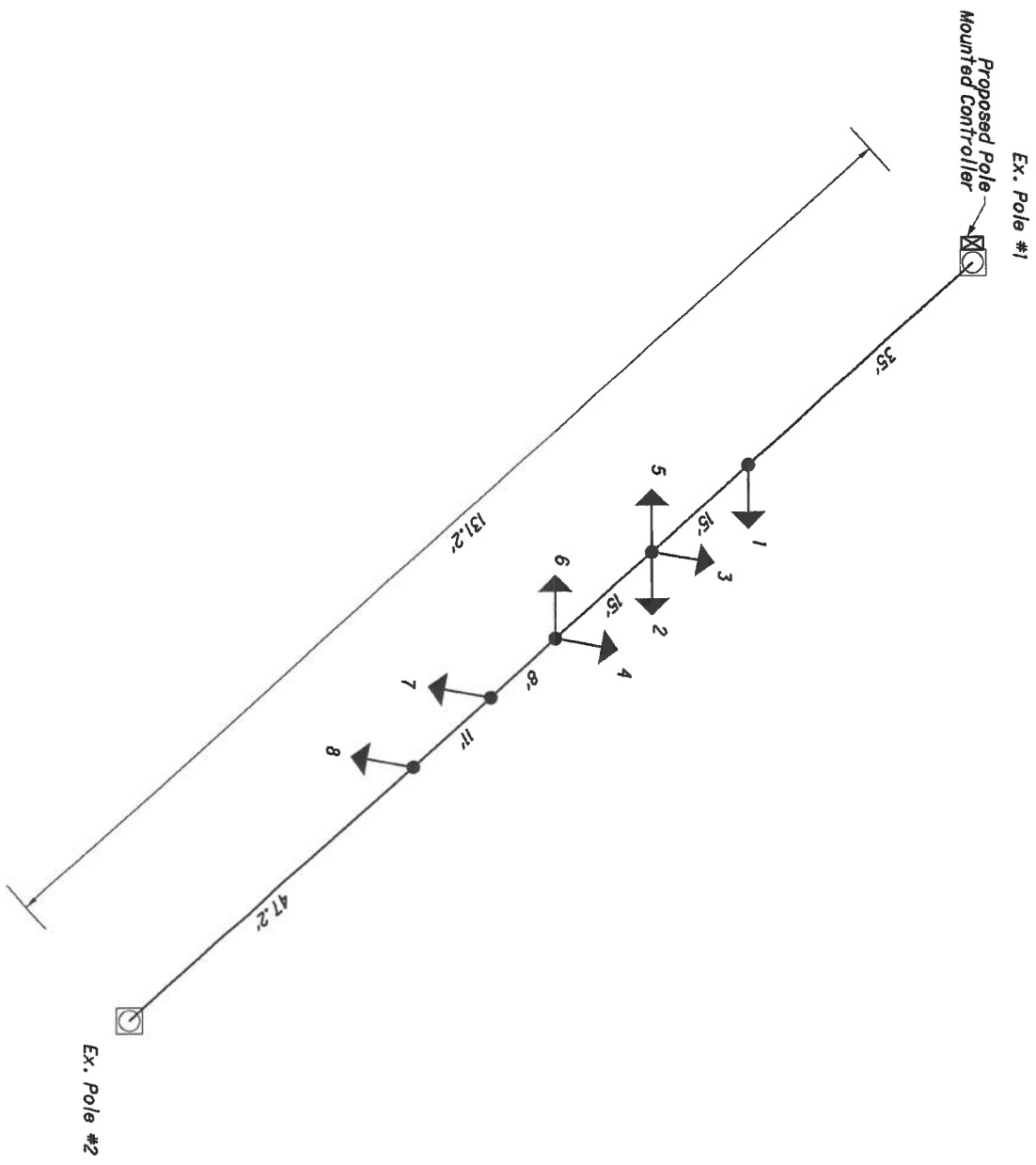
CALCULATED
SKW
CHECKED
RPT

TRAFFIC SIGNAL QUANTITIES

TUS-800-33.91



SIGNAL LAYOUT DETAIL
(Not To Scale)



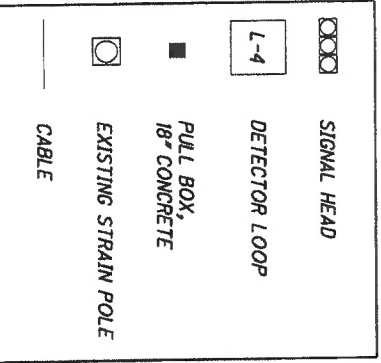
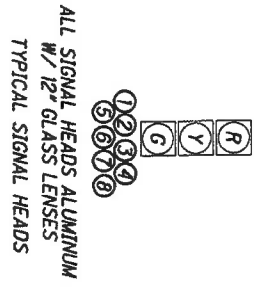
CALCULATED
SKW
CHECKED
RPT

TRAFFIC SIGNAL DETAILS

TUS-800-33.91

SIGNAL INDICATION CHART

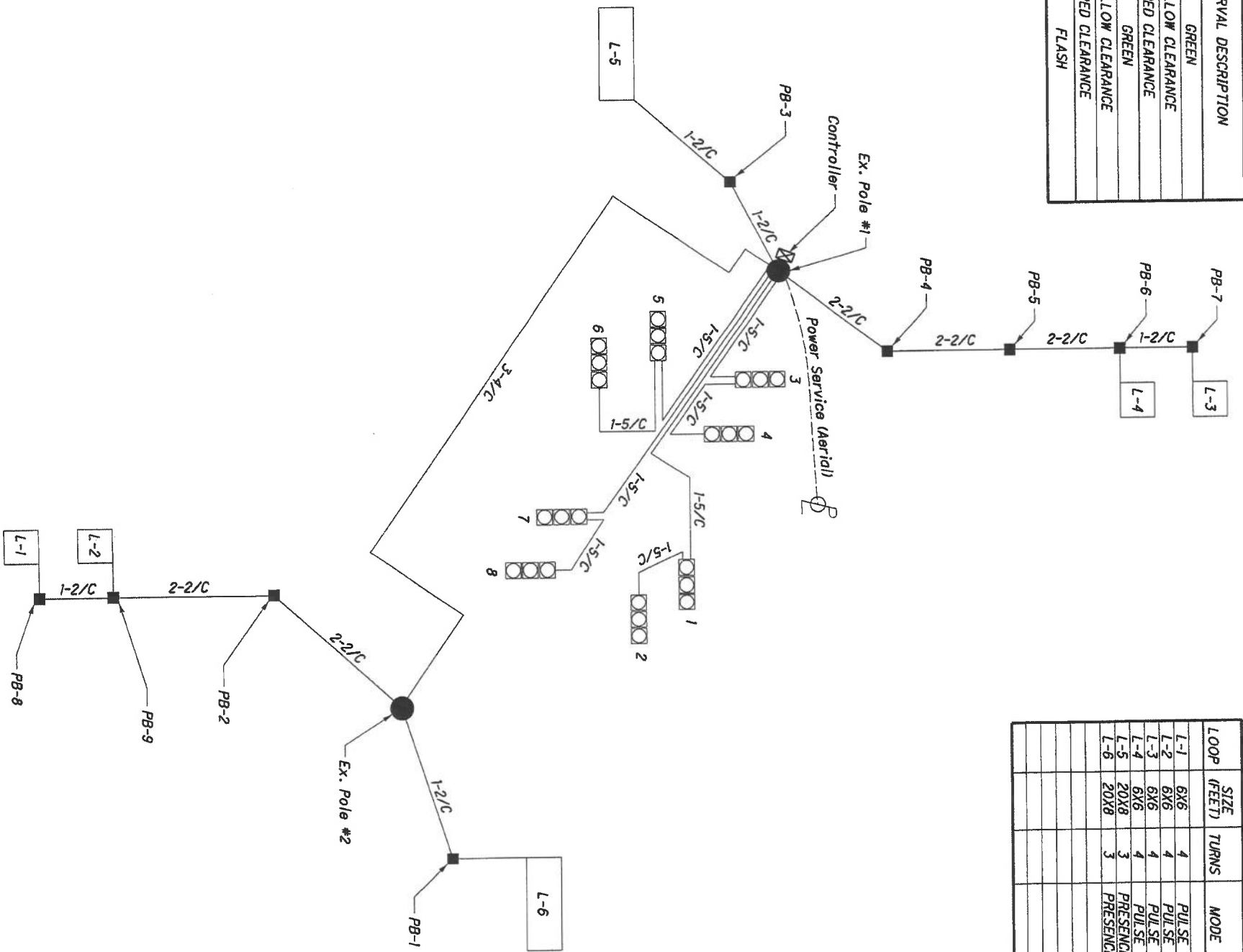
PHASE	SIGNAL NUMBER								INTERVAL DESCRIPTION
	1	2	3	4	5	6	7	8	
2+6	R	R	G	G	R	R	G	G	GREEN
	R	R	Y	Y	R	R	Y	Y	YELLOW CLEARANCE
	R	R	R	R	R	R	R	R	RED CLEARANCE
4+8	G	G	R	R	G	G	R	R	GREEN
	Y	Y	R	R	Y	Y	R	R	YELLOW CLEARANCE
	R	R	R	R	R	R	R	R	RED CLEARANCE
FLASH	R	R	Y	Y	R	R	Y	Y	FLASH



NOTE: ALL CONDUCTORS ARE # 14 AWG

LOOP DETECTOR CHART

LOOP	SIZE (FEET)	TURNS	MODE	DELAY SEC.	INPUT TERMINAL	PHASE	COMMENTS
L-1	6X6	4	PULSE		2 D/E	2	
L-2	6X6	4	PULSE		2 J/K	2	
L-3	6X6	4	PULSE		6 D/E	6	
L-4	6X6	4	PULSE		6 J/K	6	
L-5	20X8	3	PRESENCE		4 D/E	4	
L-6	20X8	3	PRESENCE		8 D/E	8	



WIRING SCHEMATIC

TRAFFIC SIGNAL DETAILS

TUS-800-33.91

TABLE 1 - PHASE FUNCTION, PHASE TIMING

FUNCTION	0 + Key								Phase + Key							
	K	L	M	N	O	P	Q	R	Y	Z	AA	AB	AC	AD	AE	AF
Vehicle Recall	1	2	3	4	5	6	7	8								
Ped. Recall	1	2	3	4	5	6	7	8								
Red Lock	1	2	3	4	5	6	7	8								
Yellow Lock	1	2	3	4	5	6	7	8								
Permit Phase	1	2	3	4	5	6	7	8								
Ped. Phase	1	2	3	4	5	6	7	8								
Lead Phase	1	2	3	4	5	6	7	8								
Double Entry	1	2	3	4	5	6	7	8								
Seq. Timing	1	2	3	4	5	6	7	8								
Start-Up Green	1	2	3	4	5	6	7	8								
Overlap A	1	2	3	4	5	6	7	8								
Overlap B	1	2	3	4	5	6	7	8								
Overlap C	1	2	3	4	5	6	7	8								
Overlap D	1	2	3	4	5	6	7	8								
Exclusive Phase	1	2	3	4	5	6	7	8								
Simultaneous Gap	1	2	3	4	5	6	7	8								

TABLE 2 - MISCELLANEOUS

FUNCTION	9 + Key	C + F + Key
Short Power Down	0	0
Long Power Down	1	0
EVA Delay Type	2	0
EVB Delay Type	3	0
EVC Delay Type	4	0
EVD Delay Type	5	0
RR Delay Type	6	0
Ped. Inhibit	7	0
OLA Green	8	0
OLA Yellow	9	0
OLB Green	A	0
OLB Yellow	B	0
OLC Green	C	0
OLC Yellow	D	0
OLD Green	E	0
OLD Yellow	F	0

TABLE 5 - TIME CLOCK CONTROL

EVENT NO.	A + CODE						
	S	M	T	W	T	F	S
1	2	3	4	5	6	7	8
2	3	4	5	6	7	8	9
3	4	5	6	7	8	9	0
4	5	6	7	8	9	0	1
5	6	7	8	9	0	1	2
6	7	8	9	0	1	2	3
7	8	9	0	1	2	3	4
8	9	0	1	2	3	4	5
9	0	1	2	3	4	5	6
10	1	2	3	4	5	6	7
11	2	3	4	5	6	7	8
12	3	4	5	6	7	8	9
13	4	5	6	7	8	9	0
14	5	6	7	8	9	0	1
15	6	7	8	9	0	1	2
16	7	8	9	0	1	2	3
17	8	9	0	1	2	3	4
18	9	0	1	2	3	4	5
19	0	1	2	3	4	5	6
20	1	2	3	4	5	6	7
21	2	3	4	5	6	7	8
22	3	4	5	6	7	8	9
23	4	5	6	7	8	9	0
24	5	6	7	8	9	0	1
25	6	7	8	9	0	1	2
26	7	8	9	0	1	2	3
27	8	9	0	1	2	3	4
28	9	0	1	2	3	4	5
29	0	1	2	3	4	5	6
30	1	2	3	4	5	6	7
31	2	3	4	5	6	7	8
32	3	4	5	6	7	8	9
33	4	5	6	7	8	9	0
34	5	6	7	8	9	0	1
35	6	7	8	9	0	1	2
36	7	8	9	0	1	2	3
37	8	9	0	1	2	3	4
38	9	0	1	2	3	4	5
39	0	1	2	3	4	5	6
40	1	2	3	4	5	6	7
41	2	3	4	5	6	7	8
42	3	4	5	6	7	8	9
43	4	5	6	7	8	9	0
44	5	6	7	8	9	0	1
45	6	7	8	9	0	1	2
46	7	8	9	0	1	2	3
47	8	9	0	1	2	3	4
48	9	0	1	2	3	4	5
49	0	1	2	3	4	5	6
50	1	2	3	4	5	6	7
51	2	3	4	5	6	7	8
52	3	4	5	6	7	8	9
53	4	5	6	7	8	9	0
54	5	6	7	8	9	0	1
55	6	7	8	9	0	1	2
56	7	8	9	0	1	2	3
57	8	9	0	1	2	3	4
58	9	0	1	2	3	4	5
59	0	1	2	3	4	5	6
60	1	2	3	4	5	6	7
61	2	3	4	5	6	7	8
62	3	4	5	6	7	8	9
63	4	5	6	7	8	9	0
64	5	6	7	8	9	0	1
65	6	7	8	9	0	1	2
66	7	8	9	0	1	2	3
67	8	9	0	1	2	3	4
68	9	0	1	2	3	4	5
69	0	1	2	3	4	5	6
70	1	2	3	4	5	6	7
71	2	3	4	5	6	7	8
72	3	4	5	6	7	8	9
73	4	5	6	7	8	9	0
74	5	6	7	8	9	0	1
75	6	7	8	9	0	1	2
76	7	8	9	0	1	2	3
77	8	9	0	1	2	3	4
78	9	0	1	2	3	4	5
79	0	1	2	3	4	5	6
80	1	2	3	4	5	6	7
81	2	3	4	5	6	7	8
82	3	4	5	6	7	8	9
83	4	5	6	7	8	9	0
84	5	6	7	8	9	0	1
85	6	7	8	9	0	1	2
86	7	8	9	0	1	2	3
87	8	9	0	1	2	3	4
88	9	0	1	2	3	4	5
89	0	1	2	3	4	5	6
90	1	2	3	4	5	6	7
91	2	3	4	5	6	7	8
92	3	4	5	6	7	8	9
93	4	5	6	7	8	9	0
94	5	6	7	8	9	0	1
95	6	7	8	9	0	1	2
96	7	8	9	0	1	2	3
97	8	9	0	1	2	3	4
98	9	0	1	2	3	4	5
99	0	1	2	3	4	5	6
100	1	2	3	4	5	6	7
101	2	3	4	5	6	7	8
102	3	4	5	6	7	8	9
103	4	5	6	7	8	9	0
104	5	6	7	8	9	0	1
105	6	7	8	9	0	1	2
106	7	8	9	0	1	2	3
107	8	9	0	1	2	3	4
108	9	0	1	2	3	4	5
109	0	1	2	3	4	5	6
110	1	2	3	4	5	6	7
111	2	3	4	5	6	7	8
112	3	4	5	6	7	8	9
113	4	5	6	7	8	9	0
114	5	6	7	8	9	0	1
115	6	7	8	9	0	1	2
116	7	8	9	0	1	2	3
117	8	9	0	1	2	3	4
118	9	0	1	2	3	4	5
119	0	1	2	3	4	5	6
120	1	2	3	4	5	6	7
121	2	3	4	5	6	7	8
122	3	4	5	6	7	8	9
123	4	5	6	7	8	9	0
124	5	6	7	8	9	0	1
125	6	7	8	9	0	1	2
126	7	8	9	0	1	2	3
127	8	9	0	1	2	3	4
128	9	0	1	2	3	4	5
129	0	1	2	3	4	5	6
130	1	2	3	4	5	6	7
131	2	3	4	5	6	7	8
132	3	4	5	6	7	8	9
133	4	5	6	7	8	9	0
134	5	6	7	8	9	0	1
135	6	7	8	9	0	1	2
136	7	8	9	0	1	2	3
137	8	9	0	1	2	3	4
138	9	0	1	2	3	4	5
139	0	1	2	3	4	5	6
140	1	2	3	4	5	6	7
141	2	3	4	5	6	7	8
142	3	4	5	6	7	8	9
143	4	5	6	7	8	9	0
144	5	6	7	8	9	0	1
145	6	7	8	9	0	1	2
146	7	8	9	0	1	2	3
147	8	9	0	1	2	3	4
148	9	0	1	2	3	4	5
149	0	1	2	3	4	5	6
150	1	2	3	4	5	6	7
151	2	3	4	5	6	7	8
152	3	4	5	6	7	8	9
153	4	5	6	7	8	9	0
154	5	6	7	8	9	0	1
155	6	7	8	9	0	1	2
156	7	8	9	0	1	2	3
157	8	9	0	1	2	3	4
158	9	0	1	2	3	4	5
159	0	1	2	3	4	5	6
160	1	2	3	4	5	6	7
161	2	3	4	5	6	7	8
162	3	4	5	6	7	8	9
163	4	5	6	7	8	9	0
164	5	6	7	8	9	0	1
165	6	7	8	9	0	1	2
166	7	8	9	0	1	2	3
167	8	9	0	1	2	3	4
168	9	0	1	2	3	4	5
169	0	1	2	3	4	5	6
170	1	2	3	4			