DH 1766 I-79
Form Use:
- Typical Section
- Plan Sheet
- Structure &
- Special Drawings

FEDERAL ROAD REGION NO.	STATE	FEDERAL AID PROJECT NO.	TOTAL SHEETS	SHEET NO.
10	IDAHO	MG-7254(001)	127	77

18TH STREET & IDAHO STREET
QUANTITIES

No.		
1.	1 each	8-PHASE TRAFFIC SIGNAL CONTROLLER SOLID STATE, TRAFFIC ACTUATED, WITH 4 EMERGENCY VEHICLE PRE-EMPTION PHASES IN TYPE P CABINET. CONTROLLER AND SERVICE CABINET TO BE PLACED ON A COMBINED TYPE P SIGNAL CONTROLLER CABINET AND SERVICE FOUNDATION. SIGNAL CONTROLLER AND CABINET SHALL MEET CITY OF LEWISTON STANDARD SPECIFICATIONS.
2.	2 each	POLE, STEEL COMBINATION SIGNAL AND LIGHTING, HOT DIPPED GALVANIZED WITH BOLTED LUMINAIRE EXTENSION PER IDAHO TRANSPORTATION DEPARTMENT SPECIFICATION, ID-I-30-Y-3015. POLE A AND C ON PLANS.
3.	2 each	POLE, STEEL COMBINATION SIGNAL AND LIGHTING, HOT DIPPED GALVANIZED WITH BOLTED LUMINAIRE EXTENSION PER IDAHO TRANSPORTATION DEPARTMENT SPECIFICATION, ID-II-45-Y-3015. POLE B AND D ON PLANS.
4.	6 each	TRAFFIC SIGNAL, 12-INCH, ONE-WAY, THREE COLOR (RED, YELLOW, GREEN) ASTRO BRACKET MODEL NO. AB-116 FOR MAST ARM MOUNTING, 12-INCH TUNNEL VISOR, 5-INCH BACKPLATES, GLASS LENSES, TO BE TRAFFIC CONTROL TECHNOLOGIES CATALOG NO. HSF83C300G OR APPROVED EQUAL. SIGNAL HEADS 1,4,5,7,10, AND 11.
5.	4 each	TRAFFIC SIGNAL, 12-INCH, ONE-WAY, THREE COLOR (RED, YELLOW, GREEN), STANDARD TERMINAL COMPARTMENT FOR SIDE POLE MOUNTING, AUTOMATIC SIGNAL CATALOG NO. A-802051B OR APPROVED EQUAL, 12-INCH TUNNEL VISOR, 5-INCH BACKPLATE, GLASS LENS. TO BE TRAFFIC CONTROL TECHNOLOGIES CATALOG NO. HSF83C300G OR APPROVED EQUAL. SIGNAL HEADS 2,6,8, AND 12.
6.	2 each	TRAFFIC SIGNAL, 12-INCH, ONE-WAY, THREE COLOR (RED, YELLOW LEFT ARROW, GREEN LEFT ARROW), ASTRO BRACKET MODEL NO. AB-116 FOR MAST ARM MOUNTING, 12-INCH TUNNEL VISOR, 5-INCH BACKPLATES, GLASS LENS TO BE TRAFFIC CONTROL TECHNOLOGIES, CATALOG NO. HSF83C311G OR APPROVED EQUAL. SIGNAL HEADS 3 AND 9.
7.	4 each	PEDESTRIAN SIGNAL, MAN/HAND (INTERNATIONAL SYMBOLIC), ONE-WAY, CLAM SHELL MOUNTED, SINGLE SECTION TO BE INDICATOR CONTROLS COMPANY CATALOG NO. 7092-11C-PHOG-OC3PLM-OSL069. SIGNAL HEADS 14,16,18, AND 20.
8.	4 each	PEDESTRIAN SIGNAL, MAN/HAND (INTERNATIONAL SYMBOLIC), ONE-WAY, CLAM SHELL MOUNTED, SINGLE SECTION TO BE INDICATOR CONTROLS COMPANY CATALOG NO. 7092-11C-PHOG-OC3PRM-OSL069. SIGNAL HEADS 13,15,17, AND 19.
9.	4 each	EMERGENCY VEHICLE PRE-EMPTION INDICATOR, SIGNAL HEAD TO BE 12-INCH PEDESTRIAN SIGNAL SINGLE SECTION LUNAR WHITE GLASS LENS, TO BE SIMILAR TO A SINGLE VERTICAL SECTION OF AN ECONOLITE CATALOG NO. 54365G1G, TO BE MOUNTED ON A MODIFIED ASTRO BRACKET MODEL AB-116 FOR MAST ARM MOUNTING. SIGNAL HEADS 21,22,23, AND 24.
10.	4 each	TYPE D FOUNDATION, ANCHOR BOLTS INCLUDED. POLES A, B, C, AND D.
11.	8 each	PEDESTRIAN PUSH BUTTONS. TO BE DICK CAMPBELL STYLE "H" ASSEMBLY WITH REES MODEL 1372-412 BUTTON SWITCH PER IDAHO TRANSPORTATION DEPARTMENT STANDARD DRAWING I-6-B.
12.	10 each	DETECTOR SOLID STATE SINGLE CHANNEL SHELF MOUNTED UNIT, WITH SERIAL CONNECTOR, SARASOTA CATALOG NO. 535 BMS.
13.	4 each	LUMINAIRES WITH INDIVIDUAL PHOTO ELECTRIC CELL, GE M-400A2 CUTOFF POWER/DOOR LUMINAIRE 120-VOLT, ~~250~~ 255 WATT LU, INCLUDING LAMP, CATALOG NO. M4AC2NS1GMC32, M-C-III TYPE DISTRIBUTION.
14.	1 each	JUNCTION BOX, PRE-CAST CONCRETE, 32 INCH X 36 INCH X 28 INCH, REINFORCED, TYPE D.
15.	22 each	JUNCTION BOX, PRE-CAST CONCRETE, 18 INCH X 13 INCH X 15 INCH, REINFORCED, TYPE C.
16.	1 each	CLASS B SERVICE, TO BE MEYERS ELECTRIC PRODUCTS, INC. PEDESTAL CATALOG NO. MEUGL-M100 ~~C/SS ITD MOD~~ OR EQUAL. (SHEETS 96 AND 97).
17.	1 each	LOOP DETECTOR INTERFACE CARD, SHELF MOUNTED, WITH SERIAL CONNECTOR, SARASOTA CATALOG NO. SC1.
18.	8 each	FUSED CONNECTORS, TO BE BUSSMAN MANUFACTURING CATALOG NO. HEB-JW-RLC-J.
19.	—	MISCELLANEOUS ITEMS TO INCLUDE WIRE, CABLE, CONDUIT, AND MISCELLANEOUS HARDWARE.

REGISTERED PROFESSIONAL ENGINEER
1881
STATE OF IDAHO
STANTON S. NUFFER
12/2/87

REGISTERED PROFESSIONAL ENGINEER
5334
STATE OF IDAHO
BRUCE FREDERICK SCHAFER
3/4/92

ORIGINAL WORK PREPARED DECEMBER 1987 UNDER THE DIRECTION OF STANTON S. NUFFER, P.E. NO. 1881, DECEASED JULY 1991. MODIFICATIONS BY BRUCE F. SCHAFER, P.E. NO. 5334.

As Constructed By DRL 2-13-95

FEDERAL ROAD REGION NO.	STATE	FEDERAL AID PROJECT NO.	TOTAL SHEETS	SHEET NO.
10	IDAHO	MG-7254(001)	127	78

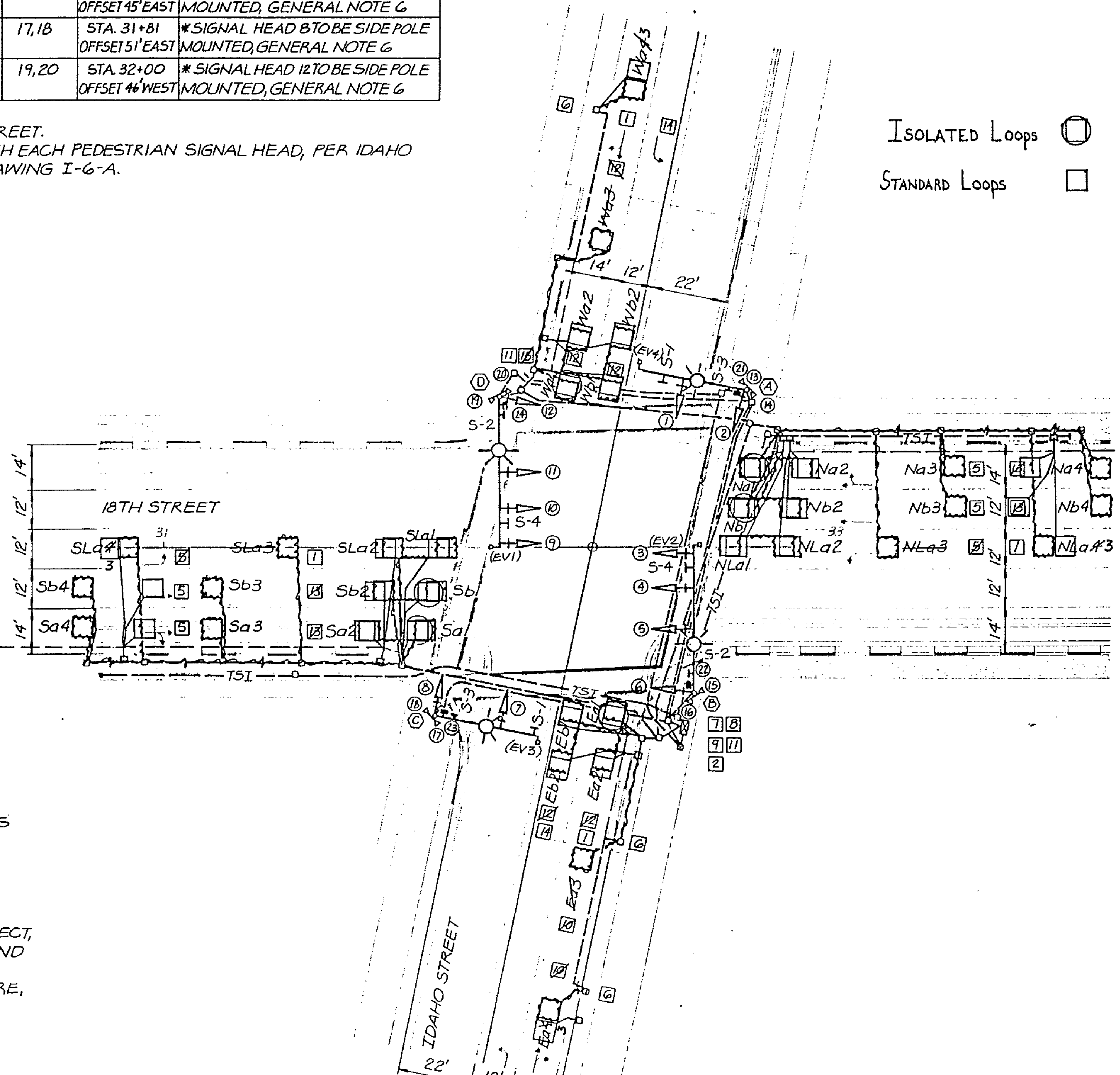
18TH STREET & IDAHO STREET SIGNAL PLAN

SCALE: 1" = 20'-0"

POLE SCHEDULE

POLE	TYPE	FOUNDATION	MAST ARM	LUMINAIRE ARM	SIGNAL HEADS	PED HEADS	LOCATION **	NOTES
Ⓐ	ID-I-30-Y-3015	D	30'	15'	1, 2	13, 14	STA. 32+73 OFFSET 18' WEST	*SIGNAL HEAD 2 TO BE SIDE POLE MOUNTED, GENERAL NOTE 6
Ⓑ	ID-II-45-Y-3015	D	45'	15'	3, 4, 5, 6	15, 16	STA. 32+58 OFFSET 45' EAST	*SIGNAL HEAD 6 TO BE SIDE POLE MOUNTED, GENERAL NOTE 6
Ⓒ	ID-I-30-Y-3015	D	30'	15'	7, 8	17, 18	STA. 31+81 OFFSET 51' EAST	*SIGNAL HEAD 8 TO BE SIDE POLE MOUNTED, GENERAL NOTE 6
Ⓓ	ID-II-45-Y-3015	D	45'	15'	9, 10, 11, 12	19, 20	STA. 32+00 OFFSET 46' WEST	*SIGNAL HEAD 12 TO BE SIDE POLE MOUNTED, GENERAL NOTE 6

** STATIONING PER CONSTRUCTION CENTERLINE, 18TH STREET.
* INSTALL PEDESTRIAN PUSHBUTTON "H" ASSEMBLY WITH EACH PEDESTRIAN SIGNAL HEAD, PER IDAHO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING I-6-A.



ISOLATED LOOPS ◯

STANDARD LOOPS □

LEGEND:

- [1] CONSTRUCTION NOTE
- TSI TRAFFIC SIGNAL COMMUNICATION SYSTEM CABLE IN CONDUIT WITH ADVANCED VEHICLE PRE-EMPTION DETECTOR CABLE AND PRE-EMPTION INTERCONNECT INCLUDED IN PORTIONS OF INTERCONNECT CONDUIT. SEE SHEET 94.
- Ⓐ SIGNAL POLE
- ⑤ SIGNAL HEAD, VEHICULAR, PEDESTRIAN, PRE-EMPTION INDICATOR
- 5 TRAFFIC SIGN (SEE SHEET 81.
- (EVI) EMERGENCY VEHICLE PRE-EMPTION DETECTOR, (EVI) PHASE, AIMED AWAY FROM INTERSECTION TOWARD ADJACENT APPROACH INTO INTERSECTION.
- ⊠ SIGNAL CONTROLLER
- ◙ SERVICE CABINET (PEDESTAL)

CONSTRUCTION NOTES:

1. INSTALL 6' x 6' DETECTOR LOOPS PER LOOP SPACING PLAN B, IDAHO DEPARTMENT OF TRANSPORTATION STANDARD DWG. ~~I-5.~~ TD-20
2. ~~INSTALL TYPE P SIGNAL~~ CONTROLLER CABINET AND CLASS B SERVICE CABINET ON COMBINED FOUNDATION.
3. MOUNT MODEL 205 EMERGENCY VEHICLE PRE-EMPTION DETECTOR ON MAST ARM PER DETAIL 1, SHEET 95
4. INSTALL TYPE D JUNCTION BOX AS LAST JUNCTION BOX FOR SIGNAL CONTROL BEFORE SIGNAL CONTROLLER.
5. ALL DETECTOR LOOPS INSTALLED IN THIS LANE SHALL BE INSTALLED IN CONFORMANCE TO IDAHO TRANSPORTATION DEPARTMENT STANDARD DRAWING ~~I-5,~~ TD-20 METHOD C.
6. THIS JUNCTION BOX SHALL BE INSTALLED IN AN ENTIRELY NEW SEGMENT, OR SQUARE OF SIDEWALK.
7. 4" DEEP CONCRETE SIDEWALK, THE WIDTH OF COMBINED CONTROLLER - SERVICE FOUNDATION, PER CITY OF LEWISTON SPECIFICATIONS, SHALL BE BUILT FROM COMBINED CONTROLLER - SERVICE FOUNDATION TO BACK OF SIDEWALK.
8. LIGHTING CIRCUITS 1 (POLES A & C) & 2 (POLES B & D) SHALL BE UNMETERED. EACH LIGHT CIRCUIT BREAKER SHALL BE 15 AMP.
9. ALL EMERGENCY PRE-EMPTION INDICATION WIRING SHALL BE A 2C NO. 14 THW SIGNAL CABLE.
10. ~~THIS DETECTOR LOOP SHALL BE INSTALLED IN A RECONSTRUCTED ROADWAY PER DETAIL 4, SHEET 95~~
11. INSTALL CONDUIT WITH 1/4" NYLON PULL ROPE FROM SERVICE CABINET, FOR NEW SERVICE, TO NEW SERVICE POINT AT SOUTHWEST CORNER. SERVICE POINT INSTALLATION TO CONFORM TO SERVICE REQUIREMENTS OF WASHINGTON WATER POWER COMPANY.
12. ~~THIS LOOP DETECTOR SHALL BE INSTALLED IN CONFORMANCE TO IDAHO TRANSPORTATION DEPARTMENT STD. DRAWING I-5, METHOD C.~~
13. ~~INSTALL 6' x 6' DETECTOR LOOPS PER LOOP SPACING PLAN C, IDAHO DEPARTMENT OF TRANSPORTATION STANDARD DWG I-5.~~
14. INSTALL 6' x 6' DETECTOR LOOPS PER LOOP SPACING PLAN A, IDAHO DEPARTMENT OF TRANSPORTATION STANDARD DWG. ~~I-5.~~ TD-20
15. ~~USE WASHINGTON WATER POWER COMPANY APPROVED HANDHOLE ONLY ON SERVICE CONDUIT FOR JUNCTION BOX ON NORTHWEST CORNER. SEE PROJECT SPECIAL PROVISIONS, SECTION IV, "WASHINGTON WATER POWER COMPANY HANDHOLE", FOR APPROVED HANDHOLE.~~

GENERAL NOTES:

1. ALL JUNCTION BOXES SHALL BE TYPE C UNLESS OTHERWISE NOTED.
2. SEE SHEET 81 FOR SIGN TABLE.
3. ALL LUMINAIRES TO BE 200 WATT, 120 VOLT, HIGH PRESSURE SODIUM WITH INDIVIDUAL PHOTO-ELECTRIC CELL, AND CLEAR FLAT GLASS LENSE.
4. EMERGENCY VEHICLE PRE-EMPTION INDICATOR HEAD TO BE A SINGLE PEDESTRIAN TYPE HEAD, INCANDESCENT, WITH LUNAR WHITE LENSE AND MOUNTED ON A VEPED ASTRO BRACKET.
5. THE EXISTING FLASHER HEADS, WIRING, SERVICE, AND POLES SHALL BE SALVAGED TO CITY OF LEWISTON SHOPS OR OTHER SUITABLE LOCATIONS AS DIRECTED BY CITY OF LEWISTON. ALL HOLES LEFT BY REMOVAL OF POLES OR OTHER FACILITIES SHALL BE BACKFILLED AND COMPACTED WITH MATERIAL SIMILAR TO ADJACENT SURFACE MATERIAL AND GRADED TO DRAIN.
6. SEE SHEET 94 FOR TRAFFIC SIGNAL INTERCONNECT, ADVANCED EMERGENCY VEHICLE PRE-EMPTION, AND EMERGENCY VEHICLE INTERCONNECT.
7. 2 NO. 8 THW WIRE SHALL BE RUN TO EACH LUMINAIRE, FROM SERVICE CABINET.

ROADWAY DESIGN SPEED
18TH STREET — 35 MPH
IDAHO STREET — 25 MPH

ORIGINAL WORK PREPARED DECEMBER 1987 UNDER THE DIRECTION OF STANTON S. NUFFER, P.E. NO. 1881, DECEASED JULY 1991. MODIFICATIONS BY BRUCE F. SCHAFER, P.E. NO 5334

5334

2/11/92

OVERLAY IDENTIFICATION	COMPOSITE	T-8	18th & Idaho
PROJ NO.	OVERLAY	T-8	18th & Idaho
CONTRACT	SCREEN		S

FEDERAL ROAD REGION NO	STATE	FEDERAL AID PROJECT NO	TOTAL SHEETS	SHEET NO
10	IDAHO	MG-7254(001)	127	79

18TH STREET & IDAHO STREET
CONDUIT, WIRING, & UTILITIES

LEGEND:

- SANITARY SEWER
- STORM SEWER
- GAS
- WATER
- VALVE OR RISER
- PROPOSED CATCH BASIN OR INLET
- EXISTING CATCH BASIN OR INLET
- MANHOLE
- TRAFFIC SIGNAL CONDUIT
- UNDERGROUND POWER
- FLASHER CABLE (EXISTING TO BE SALVAGED)
- TRAFFIC SIGNAL JUNCTION BOX
- (A) SIGNAL POLE
- SIGNAL CONTROLLER CABINET
- SIGNAL SERVICE CABINET
- FLASHER HEAD (EXISTING TO BE SALVAGED)
- RPC — RIGID PLASTIC CONDUIT
- OPC — OPTICOM PRE-EMPTION CABLE, 3M MODEL 138 CABLE
- 2CS — TWO CONDUCTOR, SHIELDED CABLE
- (PRE. IND.) — EMERG. VEHICLE PRE-EMPTION INDICATION 2C-14GA. SIG. CABLE
- 5C — FIVE CONDUCTOR, STRANDED 14 GAUGE SIGNAL CABLE
- SCC — SIGNAL CONTROLLER COMMUNICATION CABLE, 6 PR. STRANDED NO. 19 WIRE, PER IMSA 39-2
- (PRE. INT.) — ~~PRE-EMPTION INTERCONNECT CABLE TO BE~~ DETECTOR LOOP LEAD-IN CABLE PER SECTION 656.16

SCALE: 1" = 10'

1-2CS
1-2"RPC

1-(PRE. IND.)
4-5C
2-NO.8 (ILL.)
1-NO.6 BARE
2-2"RPC

1-OPC
2-2CS
1-2"RPC

1-OPC
1-2"RPC

3 1-1/4" NYLON PULL ROPE
1-2"RPC

1-OPC
1-2"RPC

1-(PRE. IND.)
3-5C
1-5C (SPARE)
2-NO.8 (ILL.)
1-NO.6 BARE
2-2"RPC

2-2CS
1-2"RPC

3-2CS
1-2"RPC

1-2"RPC
1-SCC, 2-(PRE. INT.)

5-2CS,
1-2"RPC, 2-OPC

4-5C
2-NO.8 (ILL.)
1-NO.6 BARE
2-2"RPC
2-(PRE. IND.)

3 1-1/4" NYLON PULL ROPE
1-2"RPC

18TH STREET

2-OPC
1-SCC
1-2"RPC 1

2-2CS
1-2"RPC

3-2CS
1-2"RPC

1-OPC
1-2"RPC
1-5C (SPARE)
1-NO.6 BARE
2-2"RPC
2-NO.8 (ILL)
1-(PRE. IND.)

1-OPC
3-2CS
1-2"RPC

IDAHO STREET

2-2CS
1-2"RPC

1-2CS
1-2"RPC

1-OPC
1-2"RPC

4-5C
2-NO.8 (ILL.) & 1-(PRE. IND.)
1-NO.6 BARE
2-2"RPC

10-5C
2-5C (SPARE)
3-(PRE. IND.)
1-NO.6 BARE
6-2"RPC
1-2"RPC (SPARE)

2-NO.6 THW
1-NO.6 BARE

8-NO.8 (ILL.)
1-2"RPC
1-NO.6 BARE

10-2CS, 2-SCC,
1-4"RPC, 3-OPC
2-(PRE. INT.)

NOTES:

1. SEE SHEET 94 FOR TRAFFIC SIGNAL COMMUNICATION SYSTEM ADVANCED EMERGENCY PRE-EMPTION DETECTION AND EMERGENCY VEHICLE PRE-EMPTION INTERCONNECT.
2. SPARE 5C CABLE TO BE INSTALLED TO END OF MAST ARM WITH 5 FEET OF EXTRA CABLE TUCKED BACK INTO MAST ARM FOR FUTURE LEFT TURN PHASE ON POLES (A) AND (C).
3. INSTALL 1/4" NYLON PULL ROPE TO BE USED AS A PULL ROPE BY WASHINGTON WATER POWER COMPANY FOR SERVICE INSTALLATION.
4. EXISTING STORM SEWER IN THE VICINITY OF (B) AND AND STORM SEWER MANHOLE IMMEDIATELY WEST OF (B) TO BE REMOVED. ALL MATERIAL DISTURBED DUE TO STORM SEWER FACILITY REMOVAL, & ADJACENT TO POLE (B) FOUNDATION (WITHIN 4'-0") SHALL BE COMPACTED IN LIFTS NOT TO EXCEED 6" IN HEIGHT FROM UNDISTURBED MATERIAL TO FINISHED GRADE ADJACENT TO POLE (B).

NOTES (CONTINUED):

5. SEE SHEET 96 FOR SIGNAL CABINET FOUNDATION CONSTRUCTION DETAIL.

ORIGINAL WORK PREPARED DECEMBER 1987 UNDER THE DIRECTION OF STANTON S. NUFFER, P.E. NO. 1881, DECEASED JULY 1991.
MODIFICATIONS BY BRUCE F. SCHAFER, P.E. NO. 5334

BRUCE F. SCHAFER 5334 REGISTERED PROFESSIONAL ENGINEER STATE OF IDAHO 3-11-92

98373

FEDERAL ROAD REGION NO.	STATE	FEDERAL AID PROJECT NO.	TOTAL SHEETS	SHEET NO.
10	IDAHO	MG-7254(001)	127	80

18TH STREET & IDAHO STREET – WIRING DIAGRAM

NOTES:

1. TWO SEPARATE ADVANCED PRE-EMPTION EV3 (Φ6) DETECTORS LOCATED ON STREET LIGHT POLES AT STA. 21+90 & 28+92. SEE SHEET 94.
2. PRE-EMPTION INTERCONNECT BETWEEN INTERSECTIONS OF 18TH STREET & IDAHO STREET AND 18TH STREET & G STREET, SEE SHEET 94.
3. INSTALL SPARE 5C CABLE TO END OF MAST ARM WITH 5 FEET OF EXTRA CABLE TUCKED BACK INTO MAST ARM FOR FUTURE LEFT TURN PHASE ON POLES (A) & (C).
4. NEATLY COIL SIX FEET OF SPARE 5C CABLE FOR EACH INDIVIDUAL CABLE AND TIE IN SIGNAL CONTROLLER CABINET.
5. INSTALL 1 #10 THWN GREEN LOOP TEST CONDUCTOR UNSPLICED FROM LAST JUNCTION BOX ON EACH APPROACH TO SIGNAL CONTROLLER CABINET.

TO SERVICE: N, L1 — AC-, AC+, GND — POWER

VEHICLE

R, ←Y, ←G, AC-	V1-1, V1-2, V1-3, V1-6	Φ1	HEAD 3
R, Y, G, AC-	V2-1, V2-2, V2-3, V2-6	Φ2	HEADS 10, 11, 12
R, ←Y, ←G, AC-	V3-1, V3-2, V3-3, V3-6	Φ3	FUTURE
R, Y, G, AC-	V4-1, V4-2, V4-3, V4-6	Φ4	HEADS 7, 8
R, ←Y, ←G, AC-	V5-1, V5-2, V5-3, V5-6	Φ5	HEAD 9
R, Y, G, AC-	V6-1, V6-2, V6-3, V6-6	Φ6	HEADS 4, 5, 6
R, ←Y, ←G, AC-	V7-1, V7-2, V7-3, V7-6	Φ7	FUTURE
R, Y, G, AC-	V8-1, V8-2, V8-3, V8-6	Φ8	HEADS 1, 2

PEDESTRIAN

DW, W, AC-, PB, LC	P2-1, P2-2, P2-6, P2-5, P2-4	Φ2	HEADS 13, 20
DW, W, AC-, PB, LC	P4-1, P4-2, P4-6, P4-5, P4-4	Φ4	HEADS 18, 19
DW, W, AC-, PB, LC	P6-1, P6-2, P6-6, P6-5, P6-4	Φ6	HEADS 16, 17
DW, W, AC-, PB, LC	P8-1, P8-2, P8-6, P8-5, P8-4	Φ8	HEADS 14, 15

LOOPS

D2-1, D2-2, D2-3, D2-4, D2-5, D2-6	Φ2	Na, Nb, NLa	
D4-1, D4-2, D4-3, D4-4	Φ4	Wa, LWa	
D6-1, D6-2, D6-3, D6-4, D6-5, D6-6	Φ6	Sa, Sb, SLa	
D8-1, D8-2, D8-3, D8-4	Φ8	Ea, LEa	

PUSHBUTTON: LC, PB, AC-, W, DW — P4-4, P4-5, P4-6, P4-2, P4-1 — Φ4, 19

DETECTOR LOOPS 5: D4-1, D4-2, D4-3, D4-4 — Φ4 — Wa, Wb

EV3 Φ8 PRE-EMPT INDICATOR: 21

EV4 Φ4: L3, L2, L1 — EV4-3, EV4-2, EV4-1

PUSHBUTTON: LC, PB, AC-, W, DW — P8-4, P8-5, P8-6, P8-2, P8-1 — 14, Φ8

AC-, G, Y, R — VB-6, VB-3, VB-2, VB-1 — 1, 2, Φ8

POLE A

PUSHBUTTON: Φ2, 13, DW, W, AC-, PB, LC — P2-1, P2-2, P2-3, P2-5, P2-4

DETECTOR LOOPS 5: D2-1, D2-2, D2-3, D2-4, D2-5, D2-6 — Φ2, Φ2, Φ2 — Na, Nb, NLa

POLE D

PUSHBUTTON: LC, PB, AC-, W, DW — P2-4, P2-5, P2-6, P2-2, P2-1 — Φ2, 20

EV2 Φ2 & Φ5 PRE-EMPT INDICATOR: 24

V2-1, V2-2, V2-3, V2-6 — Φ2 — R, Y, G, AC- — 12, 11, 10

V5-1, V5-2, V5-3, V5-6 — Φ5 — R, ←Y, ←G, AC- — 9

L3, L2, L1 — EV1-3, EV1-2, EV1-1 — Φ1 & Φ6 EV1 — Sa, Sb, SLa

DETECTOR LOOPS 5: D6-1, D6-2, D6-3, D6-4, D6-5, D6-6 — Φ6, Φ6, Φ6

POLE C

L-3, L-2, L-1 — EVI-1, EVI-2, EVI-3 — Φ1 & Φ6 EV-1 — 1

L3, L2, L1 — EV-1, EV-2, EV-3 — Φ1 & Φ6 EV-1 — 1

V4-6, V4-3, V4-2, V4-1 — AC-, G, Y, R — AC-, G, Y, R — Φ4, 8, 7

PUSHBUTTON: LC, PB, AC-, W, DW — P6-4, P6-5, P6-6, P6-2, P6-1 — Φ6, 17

Φ4, 18: P4-1 DW, P4-2 W, P4-6 AC-, P4-5 PB, P4-4 LC

EV4 Φ4 PRE-EMPT INDICATOR: 23

EV3-3, EV3-2, EV3-1 — L3, L2, L1 — Φ8 EV3

POLE B

Eg, Eb — Φ8 — DB-1, DB-2, DB-3, DB-4 — DETECTOR LOOPS 5

15, Φ8: DW, W, AC- — PB-1, PB-2, PB-3

PB, LC — PB-5, PB-4 — PUSHBUTTON

16, DW, W, AC- — P6-1, P6-2, P6-3 — Φ6 — PUSHBUTTON

PB, LC — P6-5, P6-4 — PUSHBUTTON

AC-, G, Y, R — V1-1, V1-3, V1-2, V1-1 — 3, Φ1

AC-, G, Y, R — 4

AC-, G, Y, R — 5

AC-, G, Y, R — V6-6, V6-3, V6-2, V6-1 — 6, Φ6

22 — EV1 Φ1 & Φ6 PRE-EMPT INDICATOR

EV2-3, EV2-2, EV2-1 — L3, L2, L1 — EV2 Φ2 & Φ5

PRE-EMPT INDICATOR HEADS

EV4, Φ4 HEAD 23	P8	3
EV3, Φ8 HEAD 21	P6	3
EV2, Φ2 & Φ5 HEAD 24	P4	3
EV1, Φ1 & Φ6 HEAD 22	P2	3

4 — 5C SPARES

PRE-EMPT

Φ4 EV4	EV4-3, EV4-2, EV4-1	L3, L2, L1
Φ8 EV3	EV3-3, EV3-2, EV3-1	L3, L2, L1
Φ2 & Φ5 EV2	EV2-3, EV2-2, EV2-1	L3, L2, L1
Φ1 & Φ6 EV1	EV1-3, EV1-2, EV1-1	L3, L2, L1

1 2

ORIGINAL WORK PREPARED DECEMBER 1987 UNDER THE DIRECTION OF STANTON S. NUFFER, P.E. NO. 1881, DECEASED JULY 1991. MODIFICATIONS BY BRUCE F. SCHAFER. P.E. NO. 5334

REGISTERED PROFESSIONAL ENGINEER 1881 STATE OF IDAHO STANTON S. NUFFER

REGISTERED PROFESSIONAL ENGINEER 5334 STATE OF IDAHO BRUCE FREDERICK SCHAFER

12/2/87

2/4/92

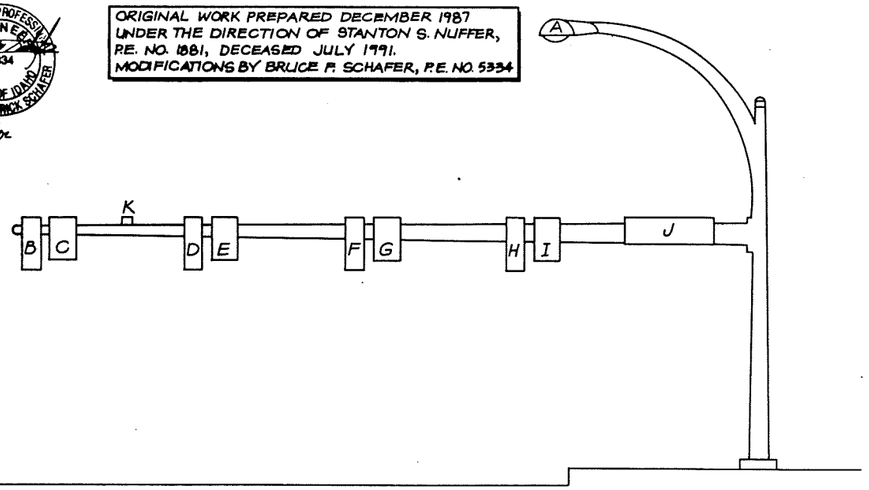
FEDERAL ROAD REGION NO.	STATE	FEDERAL AID PROJECT NO.	TOTAL SHEETS	SHEET NO.
10	IDAHO	MG-7254(001)	127	81

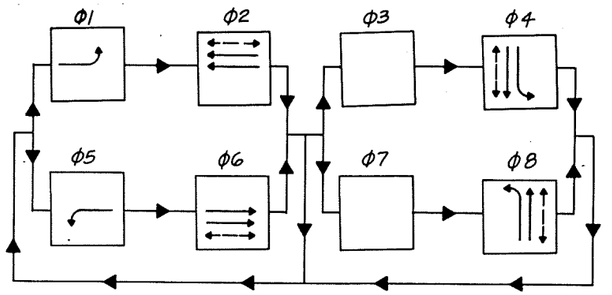
18TH STREET & IDAHO STREET
PHASING

REGISTERED PROFESSIONAL ENGINEER 5334 STATE OF IDAHO BRUCE FREDERICK SCHAFER

7/14/92

ORIGINAL WORK PREPARED DECEMBER 1987 UNDER THE DIRECTION OF STANTON S. NUFFER, P.E. NO. 1881, DECEASED JULY 1991. MODIFICATIONS BY BRUCE F. SCHAFER, P.E. NO. 5334





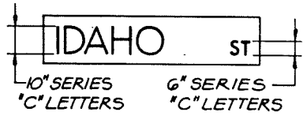
PHASING OF SIGNAL

MAST ARM LOADING CHART Φ

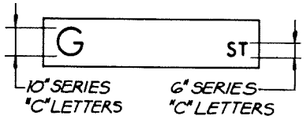
POLE	MAST ARM	LUMINAIRE ARM A	SIGNAL HEAD B	30"x36" SIGN C	SIGNAL HEAD D	30"x36" SIGN E	SIGNAL HEAD F	30"x36" SIGN G	SIGNAL HEAD H	PRE-EMPT INDICATOR HEAD*	STREET NAME SIGN J	PRE-EMPT DETECTOR K
A	30'	15'	—	27'-6"	19'-6"	—	—	—	—	1'-3"	5'-0"	**
B	45'	15'	41'-6"	38'-6"	31'-0"	—	19'-0"	—	—	1'-3"	5'-0"	**
C	30'	15'	—	27'-6"	19'-0"	—	—	—	—	1'-3"	5'-0"	**
D	45'	15'	44'-0"	41'-0"	34'-0"	—	21'-6"	—	—	1'-3"	5'-0"	**

SIGN TABLE △

NUMBER	QUANTITY	DESIGNATION	SIGN SIZE	NOTES
S-1	2	R3-5L	30" x 36"	↰ ONLY
S-2	2	STREET NAME	16" x 72"	IDAHO ST
S-3	2	STREET NAME	16" x 72"	G ST
S-4	2	R-10-10L	30" x 36"	LEFT TURN SIGNAL



S-2



S-3

SIGN BLANKS TO BE AFFIXED TO MAST ARM THROUGH THE USE OF STAINLESS STEEL BAND-IT MATERIAL AND BRACKETS.

△ ALL SIGNS TO BE TYPE "B" PER SECTION 616 IDAHO TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS.

MAST ARM LOADING CHART NOTES:

* SEE GENERAL NOTE 6, SHEET 78.
** ON MAST ARM. SEE DETAIL 1, 95.
LOCATION OF SIGNS, SIGNALS, PRE-EMPTION INDICATOR AND DETECTOR, MEASURED FROM MAST ARM POLE ATTACHMENT TO CENTER OF UNIT ATTACHED.

SIGNAL SEQUENCE CHART

PHASE	HEAD NUMBER 1,2	3	4,5,6	7,8	9	10,11,12	13,20	14,15	16,17	18,19	21	22	23	24
Φ1 →	R	← G	R	R	R	R	DW	DW	DW	DW	OFF	OFF	OFF	OFF
	R	← Y	R	R	R	R	DW	DW	DW	DW	OFF	OFF	OFF	OFF
Φ2 ←→ ←	R	R	R	R	R	G	W	DW	DW	DW	OFF	OFF	OFF	OFF
	R	R	R	R	R	G	FDW	DW	DW	DW	OFF	OFF	OFF	OFF
	R	R	R	R	R	Y	DW	DW	DW	DW	OFF	OFF	OFF	OFF
Φ4 ↓→	R	R	R	G	R	R	DW	DW	DW	W	OFF	OFF	OFF	OFF
	R	R	R	G	R	R	DW	DW	DW	FDW	OFF	OFF	OFF	OFF
	R	R	R	Y	R	R	DW	DW	DW	DW	OFF	OFF	OFF	OFF
Φ5 ↓	R	R	R	R	← G	R	DW	DW	DW	DW	OFF	OFF	OFF	OFF
	R	R	R	R	← Y	R	DW	DW	DW	DW	OFF	OFF	OFF	OFF
Φ6 ↑↓	R	R	G	R	R	R	DW	DW	W	DW	OFF	OFF	OFF	OFF
	R	R	G	R	R	R	DW	DW	FDW	DW	OFF	OFF	OFF	OFF
	R	R	Y	R	R	R	DW	DW	DW	DW	OFF	OFF	OFF	OFF
Φ8 ↰↑↓	G	R	R	R	R	R	DW	W	DW	DW	OFF	OFF	OFF	OFF
	G	R	R	R	R	R	DW	FDW	DW	DW	OFF	OFF	OFF	OFF
	Y	R	R	R	R	R	DW	DW	DW	DW	OFF	OFF	OFF	OFF
FLASHING	R	R	Y	R	R	Y	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
EV1 Φ1&Φ6 → →	R	← G	G	R	R	R	DW	DW	DW	DW	OFF	ON	OFF	OFF
	R	← Y	Y	R	R	R	DW	DW	DW	DW	OFF	OFF	OFF	OFF
EV2 Φ2&Φ5 ← ←	R	R	R	R	← G	G	DW	DW	DW	DW	OFF	OFF	OFF	ON
	R	R	R	R	← Y	Y	DW	DW	DW	DW	OFF	OFF	OFF	OFF
EV3 Φ8 ↰↑	G	R	R	R	R	R	DW	DW	DW	DW	ON	OFF	OFF	OFF
	Y	R	R	R	R	R	DW	DW	DW	DW	OFF	OFF	OFF	OFF
EV4 Φ4 ↓	R	R	R	G	R	R	DW	DW	DW	DW	OFF	OFF	ON	OFF
	R	R	R	Y	R	R	DW	DW	DW	DW	OFF	OFF	OFF	OFF

G = GREEN
R = RED
Y = YELLOW
←G = GREEN ARROW (LEFT TURN)
←Y = YELLOW ARROW (LEFT TURN)
W = WALK (WALKING MAN, INT'L SYMBOL)
FDW = FLASHING DON'T WALK (FLASHING HAND, INT'L SYMBOL)
DW = DON'T WALK (SOLID HAND, INT'L SYMBOL)
EV = EMERGENCY VEHICLE PRE-EMPT