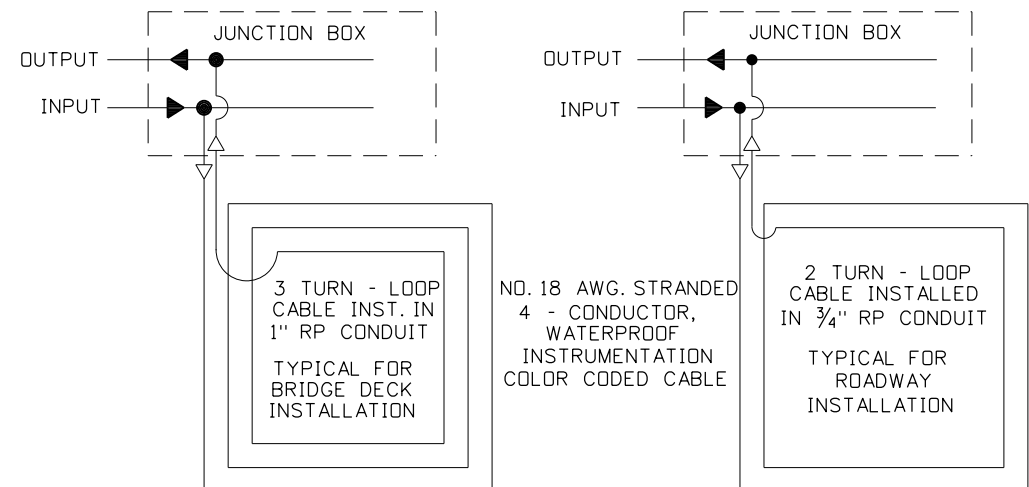
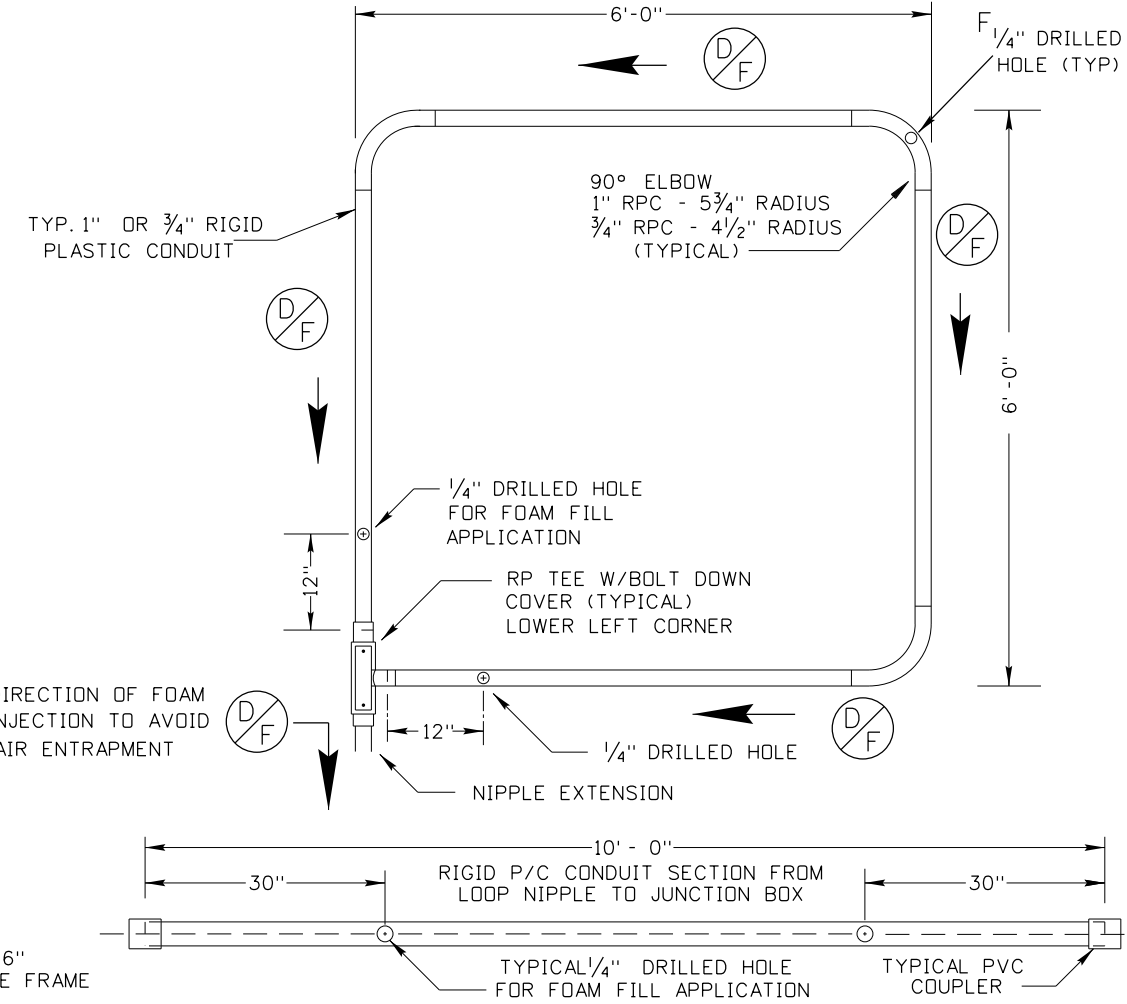


PRE-FORMED SIGNAL DETECTION LOOP WOOD TEMPLATE DETAIL



TYPICAL PRE-FORMED DETECTION LOOP CABLE



PRE-FORMED DETECTION LOOP DETAIL GENERAL NOTES

1. THE RIGID PLASTIC CONDUIT FURNISHED PRE-FORM LOOPS SHALL BE REASONABLY STRAIGHT AND TRUE - SCHEDULE 40. THE CONTRACTOR/FABRICATOR MAY HAVE THE OPTION OF FABRICATING THE PRE-FORMED LOOP BY EXCLUDING 90° ELBOWS. HEATED BENDS SHALL CONFORM TO ALLOWABLE RAD. AND INSIDE DIA. SHALL NOT BE REDUCED.
2. LOOP CABLE SHALL BE INSTALLED IN THE LOOP CONDUITS IN THE SAME DIRECTION, EITHER CLOCK OR COUNTER CLOCKWISE (TYPICAL TO ALL PRE-FORMED LOOPS) REF. 656.23 STANDARD SPECIFICATIONS.
3. REFER TO THE BRIDGE ELECTRICAL DETAIL SHEET AND ROADWAY DETECTION PLAN SHEETS. FOR DETERMINING NEEDED LENGTHS OF LOOP CABLE AND CONDUIT TO JUNCTION BOXES. ALLOW 18" TO 24" OF SLACK WIRE IN EACH JUNCTION BOX AFTER SPLICES ARE MADE.
4. THE POLYURETHANE FOAM FILL SYSTEM UTILIZED BY THE FABRICATOR SHALL BE "DOW CHEMICAL FROTH-PAK KITS", OR EQUAL. THE CONTRACTOR SHALL PROVIDE 1.75 * DENSITY MATERIAL - MEDIUM SIZE MODEL 180 OR LARGE SIZE MODEL 600, WHICH INCLUDES TANKS AND VALVES FOR 2 PART COMPONENTS, HOSE, NOZZLES ETC.. DEPENDING ON TEMPERATURE AND THE SMALL DIAMETER OF CONDUIT BEING USED, THE ESTIMATING YIELDS FOR MODEL 180 MAY BE REDUCED TO 7.5 CF AND MODEL 600 TO 25 CF.

KNOWN SOURCE FOR "DOW CHEMICAL FROTH-PAK KITS":

MR. HARRY DUDUMAKE
SMALLEY & CO.
7801 W. LEMHI
BOISE, ID 83709
208-377-3425

1. FABRICATION PROCEDURES

UTILIZING NOTED TEMPLATE, CUT AND FORM 1 INCH AND 3/4" RIGID PLASTIC CONDUIT - SECURELY FASTEN 90° PLASTIC ELBOWS, PLASTIC TEE W/COVER AND 45° ELBOWS (WHEN APPLICABLE) TOGETHER BY SOLVENT CEMENT WELDING.

DRILL A MINIMUM OF THREE 1/4" FOAM APPLICATION HOLES AS NOTED. AFTER DRILLING HOLES AND PRIOR TO PULLING THE REQUIRED TURNS OF LOOP CABLE INTO CONDUIT, THE FABRICATOR SHALL CLEAN ALL DEBRIS AND ACCUMULATION OF MOISTURE FROM THE CONDUIT INTERIOR.

3 TURNS OF NO. 18 AWG. - 4C CABLE SHALL THEN BE INSTALLED IN THE 1 INCH CONDUIT (TYPICAL TO ALL LOOPS PLACED IN THE BRIDGE DECK) AND 2 TURNS OF NO. 18 AWG. - 4C CABLE SHALL BE INSTALLED IN 3/4" CONDUIT (WHICH IS TYPICAL FOR ALL LOOPS PLACED IN THE ROADWAY).

THE REMAINDER AND REQUIRED LENGTH OF LOOP CABLE FOR EACH RESPECTIVE JUNCTION BOX EITHER LOCATED IN THE TYPE IV PARAPET OF ADJACENT CURB/ROADWAY - SHALL BE COILED, TIED STORED IN A HEAVY PLASTIC BAG NEAR THE TEE CORNER UNTIL TRANSPORTED TO THE BRIDGE OR ROADWAY SITE FOR FURTHER FABRICATION AND INSTALLATION.

AFTER THE CABLE IS INSTALLED AND THE CONDUIT TEE COVER IS FASTENED IN PLACE THE PREFORMED DETECTION LOOP IS READY FOR THE POLYURETHANE INSTA-FOAM APPLICATION.

FOAM APPLICATION SHOULD START AT NOTED 1/4" PRE-DRILLED ELBOW HOLE MARKED (D/F) - APPLICATION SHOULD CONTINUE UNTIL THE FOAM MATERIAL CAN BE SEEN AT THE OTHER PRE-DRILLED HOLES NEAR THE CONDUIT TEE. THE FABRICATOR MAY HAVE TO DRILL ADDITIONAL HOLES IN THE LOOP CONFIGURATION CONDUIT - FOR ADDITIONAL FOAM APPLICATION TO ACHIEVE A COMPLETELY ENCAPSULATED CONDUIT INTERIOR.

THE AREA OF THE 1/4" APPLICATION HOLE SHALL BE WIPED CLEAN OF FOAM RESIDUE AND TAPED OFF WITH 1/2" WIDE, 7 MIL, PREMIUM GRADE VINYL PLASTIC ELECTRICAL TAPE, IMMEDIATELY AFTER THE APPLICATION OF INSTA-FOAM.

THE SINGLE CONDUIT SECTIONS SHALL CONTAIN THE INPUT AND OUTPUT LOOP CABLES TO EACH RESPECTIVE JUNCTION BOX, SHALL REQUIRE THE SAME POLYURETHANE INSTA-FOAM FILL PROCEDURE AS FOLLOWED FOR THE PRE-FORMED LOOPS. THE FABRICATION OF THESE SECTIONS ARE PROBABLY BEST DONE IN THE FIELD UNDER CLIMATIC RESTRAINTS. REFER TO "PRE-FORMED LOOP INSTALLATION DETAILS".

AFTER COMPLETE FABRICATION OF LOOPS IT SHALL BE THE CONTRACTOR/FABRICATORS RESPONSIBILITY TO SUITABLY STORE THE PRE-FORMED LOOPS INDOORS, IN SUCH A MANNER AS TO PROTECT THEM FROM DISTORTION UNTIL INSTALLED IN THE FIELD.

POLYURETHANE FOAM FILL ESTIMATING QUANTITIES				
TYPE	CONDUIT	CABLE FILL	NET	VOID
6' X 6' LOOP	1" PVC I.D. 1.049"	3 CABLES .00102265 CF/LF	.120	CF/LOOP
6' X 6' LOOP	3/4" PVC I.D. .824"	2 CABLES .00068176 CF/LF	.073	CF/LOOP
CONDUIT SECTION/LF	1" PVC I.D. 1.049"	2 CABLES .00068176 CF/LF	.005	CF/LF
CONDUIT SECTION/LF	3/4" PVC I.D. .824"	2 CABLES .00068176 CF/LF	.003	CF/LF

PRE-FORMED DETECTION LOOP DETAILS

REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY CADD FILE NAME td36a_0507.dgn DRAWING DATE:
NO.	DATE	BY	DESCRIPTION	DESIGN CHECKED	

IDAHO TRANSPORTATION DEPARTMENT

PROJECT NO.	td36a
PRE-FORMED DETECTION LOOPS	

English
COUNTY
KEY NUMBER
SHEET OF

NOT APPROVED
PRELIMINARY
FOR CONSTRUCTION