

DATE	SCALE	PROJECT NO.	SHEET NO.	TOTAL SHEETS

DATE	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS

APPROVED January 9, 1959
 STATE ENGINEER
 TRAFFIC ENGINEERING DIVISION

TO ACCOMPANY PLANS SHEET _____

INSTALLATION NOTES

CONDUIT

1. Unless otherwise indicated, service and detector pipe and conduit into sign structure foundations shall be 1 inch and all other conduit shall be 1 1/2 inch.
2. Conduit shall be installed 18" minimum below curb grade in sidewalk areas and 36" minimum below grade in other areas. Conduit shall be installed in a trench that conduit installed within curbed dividing strips constructed on existing pavement may be laid on and secured to the pavement.
3. Conduit runs parallel to curbs shall be placed adjacent to back of curb, except where in conflict with existing facilities.
4. Existing underground conduit to be incorporated into new systems shall be cleaned with a hose and blown out with compressed air.
5. Conduit terminating in standards and pedestals shall extend 2" max above finished top of foundation and shall slope toward the handhole.
6. Conduit entering controller cabinets shall be sealed with paraffin or other approved sealing compound.
7. Service risers shall be terminated with a service head or shall be sealed to prevent the entrance of water as approved by the serving utility.

PULL BOXES

1. Pull boxes shall be No. 5 except as indicated.
2. Pull boxes shown in the vicinity of curbs shall be placed adjacent to back of curb, except when in conflict with existing facilities.
3. Top of pull boxes shall be level with curb or sidewalk grade or 1" above surrounding ground when no finished grade is established.
4. Pull boxes shown adjacent to standards shall be installed against but not on roadway side of foundation.

CONDUCTORS AND WIRING

1. Signal neutral shall be a separate #10 AWG conductor.
2. Conductors between ballasts or transformers and luminaires shall be #14 AWG, 600 volt.
3. Conductors between series-to-multiple transformers and sign fixture ballasts shall be #10 AWG, 600 volt.
4. Number of conductors indicated in signal system conduit includes three #14 AWG spares.
5. Conductors shall be identified with bands.
6. Underground conductors to signals shall be run without splices, except that splices may be made where they are being made, signal conductors may be spliced where indicated.
7. Neutral conductors may be spliced in pull boxes.
8. Two feet of slack shall be provided in each conductor in each pull box.
9. A separate conductor other than neutral shall be run from each detector to controller cabinet.
10. Connection to each terminal of a pedestrian push button shall be by a single conductor. Splices shall be made in nearest pull box.
11. Color coding for wiring to pedestrian signals shall be as specified for corresponding vehicular green and red indications.
12. One side of secondary circuit of series-to-multiple transformers shall be grounded. On structures the grounding electrode shall be the conduit bottom of pull box.

EQUATIONS

1. Top of foundations for standards (where grouting) shall be level with top of curb in curbed areas or 6 inches above surrounding grade in other areas.
2. Except as indicated, standards shall be installed with 2' foot clearance to face of curb, edge of shoulder, back of dikes, and back of ditches.

SIGNAL EQUIPMENT

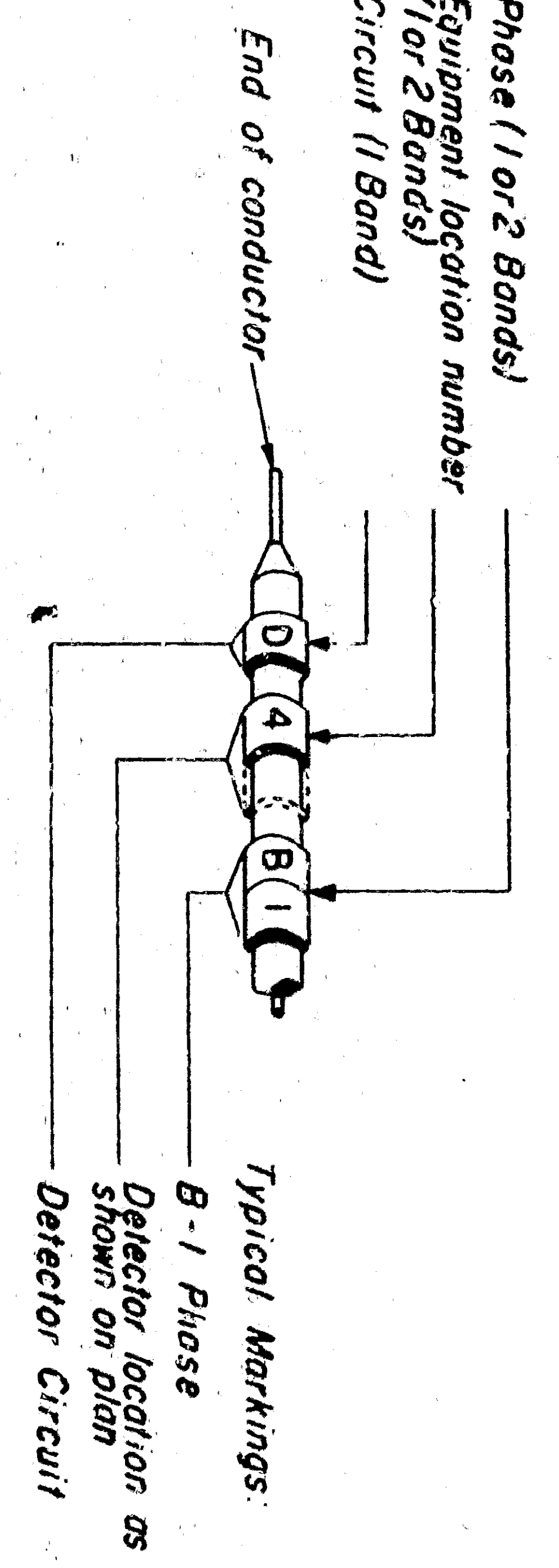
1. Pressure detectors shall be 6 feet long, non-directional, unless otherwise indicated.
2. Detector position dimensions refer to contact unit.
3. Top of detector foundation shall be level with pavement surface.
4. Detector contact unit surface shall be level with rim of frame, or no more than 1/8" inch higher. If low, unit shall be raised using one-piece galvanized sheet metal shims with dimensions the same as the bottom surface of the contact unit.
5. Vehicular and pedestrian signal mountings shall be oriented so as to provide maximum horizontal clearance to adjacent roadway.
6. All signal heads to be provided with backplates unless otherwise indicated.

ELECTROLERS

1. A Mercury-vapor lamp ballast shall be installed in a pull box adjacent to each electrolever, except as indicated.

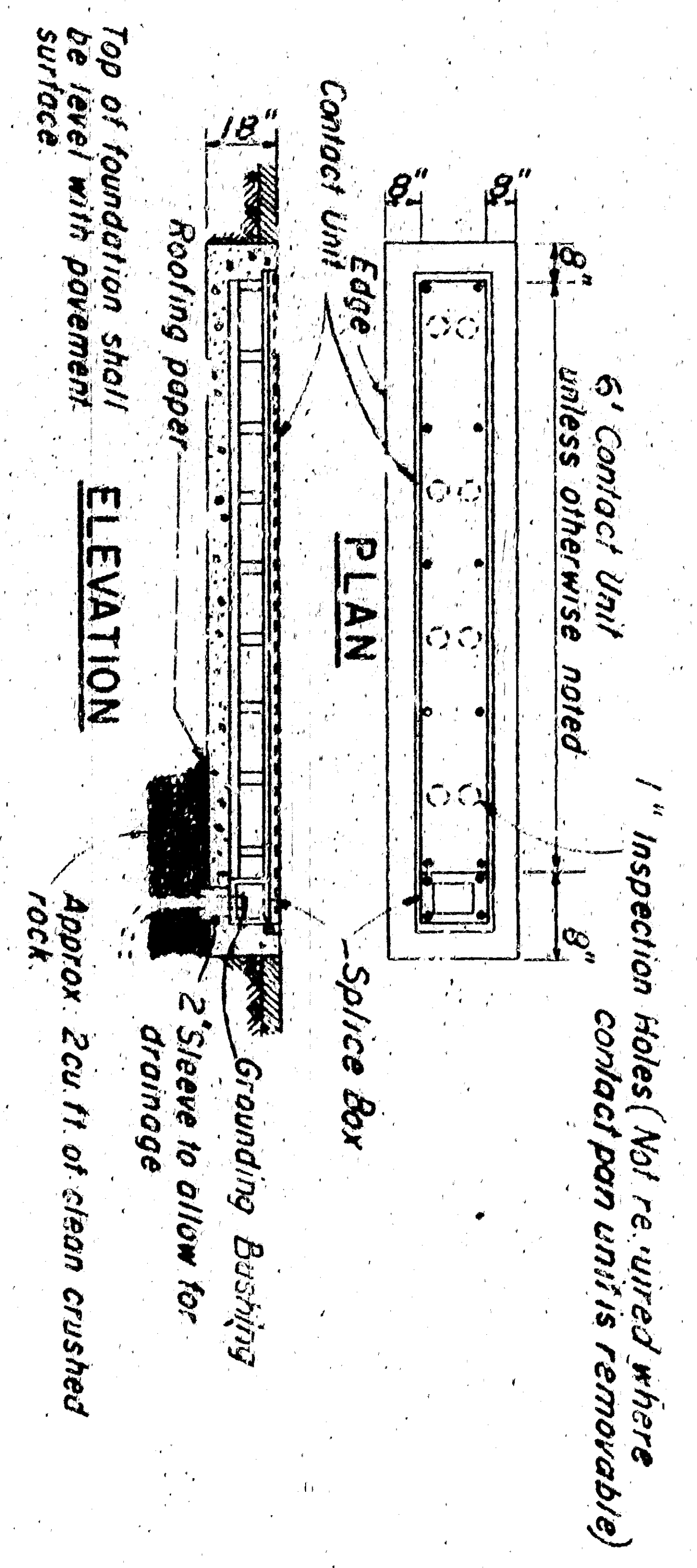
SYMBOLS

PROPOSED	EXISTING	DESCRIPTION
[Symbol]	[Symbol]	Signal conduit
[Symbol]	[Symbol]	Lighting conduit
[Symbol]	[Symbol]	Pull box
[Symbol]	[Symbol]	Non-directional pressure detector
[Symbol]	[Symbol]	Directional magnetic detector
[Symbol]	[Symbol]	Directional pressure detector
[Symbol]	[Symbol]	Controller
[Symbol]	[Symbol]	Traffic signal each arm one-way three color (on Type I-A standard unless otherwise specified)
[Symbol]	[Symbol]	Traffic signal one-way three-color with backplate (on Type I-A standard unless otherwise specified)
[Symbol]	[Symbol]	Traffic signal one-way three-color with green arrow (on Type I standard unless otherwise specified)
[Symbol]	[Symbol]	Walk-way pedestrian signal (Type I standard unless otherwise specified)
[Symbol]	[Symbol]	Pedestrian signal, 2-color (on Type I standard unless otherwise specified)
[Symbol]	[Symbol]	Most arm traffic signal with backplate (on Type I standard)
[Symbol]	[Symbol]	Electroler, most arm type with most arm traffic signal with backplate (Type II standard)
[Symbol]	[Symbol]	Electroler, upright type
[Symbol]	[Symbol]	Pedestrian push button on post
[Symbol]	[Symbol]	Telephone pole
[Symbol]	[Symbol]	Fire hydrant
[Symbol]	[Symbol]	Traffic signal with all colors lowered
[Symbol]	[Symbol]	Overhead conductor



TYPICAL BANDING OF CONDUCTOR ENDS

NO SCALE



PRESSURE DETECTOR

NO SCALE

STATE OF CALIFORNIA
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAYS

STANDARD DETAILS NO. 4
 TRAFFIC SIGNAL AND
 HIGHWAY LIGHTING
 INSTALLATIONS

SCALE AS NOTED
 REV. DATE: 6-17-58
 DRAWING NO. E _____