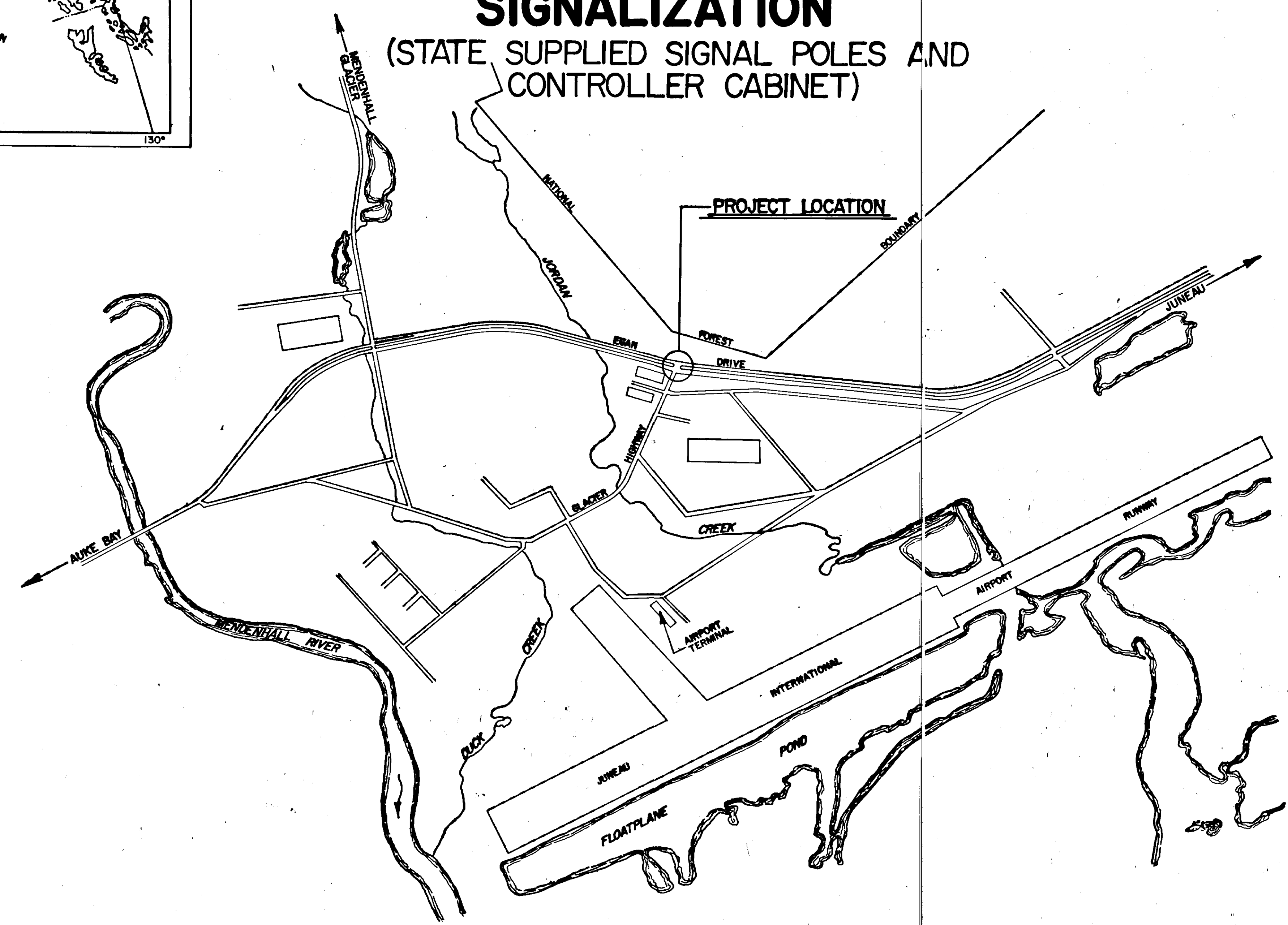


**STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES**

**PLAN AND PROFILE
PROPOSED HIGHWAY PROJECT
FG-0932 (12) (A-38572)
EGAN DRIVE MILEPOST 8.7
INTERSECTION WITH GLACIER HIGHWAY
SIGNALIZATION**

(STATE SUPPLIED SIGNAL POLES AND
CONTROLLER CABINET)



DESIGN DESIGNATION

| | | | |
|---------------------|-----------|--|--------|
| GLACIER HIGHWAY | | | |
| 1982 | AADT | | |
| 3019 | 2105 | | |
| 4714 ← | | | → 2492 |
| 5317 ← | | | → 6546 |
| EGAN DRIVE | | | |
| 1992 | DHV (12%) | | |
| 590 | 412 | | |
| 922 ← | | | → 487 |
| 1039 ← | | | → 1280 |
| (Growth Rate=5%/yr) | | | |

| | | | |
|--------|-------------|-----------|--------------|
| STATE | PROJECT | SHEET NO. | TOTAL SHEETS |
| ALASKA | FG-0932(12) | 1 | 4 |

| INDEX OF SHEETS | |
|-----------------|--|
| SHEET NO. | DESCRIPTION |
| 1 | TITLE SHEET |
| 2 | ESTIMATE OF QUANTITIES & MISC. SUMMARIES |
| 3 | SIGNAL, SIGNING & STRIPING PLAN |
| 4 | SIGNAL POLE DETAILS |
| | |
| | |
| | |

The following standard drawings shall apply to this project: A-1, C-00.00, C-10.01, C-11.01, F-01.00, F-03.00, G-04.00S, G-04.00W, G-14.00S, G-14.00W, G-18.00, S-00.00, S-05.00, S-20.00, S-21.00, S-30.00, T-20.00, T-21.00, T-22.00, T-30.00, T-31.00, T-32.00, T-33.00, T-34.00, & T-52.00

"AS BUILT PLAN"

SERVICE ELECTRIC CO. - PRIME CONTRACTOR
GLACIER BEAR FENCE CO. - SUBCONTRACTOR
PHIL SPEER - PROJECT ENGINEER
BEGIN WORK - AUGUST 8, 1983
COMPLETE WORK - OCTOBER 25, 1983

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

APPROVED
Wallace K. Williams DATE 4-20-83
Southeastern Region Design/Construction Engineer

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

APPROVED
Charles J. ... Date 4-21-83
Director, Highway Design/Construction

SIGNING SUMMARY

| NO. | STATION | OFFSET | | CODE NO. | LEGEND | SIGN PANEL | | POST | | | FACING TRAFFIC | REMARKS | |
|-----|------------|--------|-------|----------|---------------------------|------------|-----------|-----------|---------|------|----------------|--|-------------------------------------|
| | | LEFT | RIGHT | | | SIZE | AREA S.F. | NO. POSTS | TYPE | SIZE | | | LENGTH |
| 1 | "L" 362+90 | | 57' | DI-2 | ← Juneau Auke Bay → | | | 2 | | | E.B. | Relocate Exist. Sign From 362+64 | |
| 2 | "L" 363+48 | 82' | | R1-2 | Yield | 48" x 48" | 6.9 | 1 | P.S.T.* | 2" | 14' | S.B. | |
| 3 | "C" 3+26 | | 37' | R3-2 | No Left Turn | 36" x 36" | 9.0 | 1 | P.S.T.* | 2" | 16' | N.B. | See Special Detail For Sign Design |
| 4 | | | | | 4:30 P.M. To 6:30 P.M. | 36" x 30" | 7.5 | | | | | | |
| 5 | "C" 3+66 | 88' | | R3-2 | No Left Turn | 36" x 36" | 9.0 | 1 | P.S.T.* | 2" | 16' | N.B. | See Special Detail For Sign Design. |
| 6 | | | | | 4:30 P.M. To 6:30 P.M. | 36" x 30" | 7.5 | | | | | | |
| 7 | "L" 363+51 | | 15' | R10-12 | Left Turn Must Yield on O | 36" x 30" | 7.5 | | | | N.B. | FRONT ON MAST ARM. SEE DETAIL ON SHEET #. SHALL BE TYPE II INSULATING LENS SHEETING. | |
| 8 | "L" 362+83 | 60' | | | Stop | | | | | | | Remove | |

*P.S.T. = Perforated Square Tube

DETECTOR SUMMARY

| NO. | STATION | OFFSET | TYPE | PHASE | SIZE | REMARKS |
|-----|------------|---------------|--------------------|-----------------|----------|---------------------|
| 1 | "L" 358+47 | 25' 4 37' Rt. | MAGNETOMETER PROBE | 1 | | |
| 2 | "L" 360+47 | 25' 4 37' Rt. | MAGNETOMETER PROBE | 1 | | Separate from No. 1 |
| 3 | "L" 361+50 | 10' Rt. | LOOP | TRAFFIC COUNTER | 6' x 15' | 3 Turns Regular |
| 4 | "L" 362+33 | 10' Rt. | Loop | 5 | 6' x 30' | Quadrupole-2 Turns |
| 5 | "L" 365+49 | 25' 4 37' Lt. | MAGNETOMETER PROBE | 6 | | |
| 6 | "L" 367+49 | 25' 4 37' Lt. | MAGNETOMETER PROBE | 6 | | Separate from No. 5 |
| 7 | "C" 0+65 | £ | Loop | 3 | 6' x 30' | Quadrupole-2 Turns |
| 8 | "C" 1+15 | £ | Loop | 3 | 6' x 15' | Quadrupole-2 Turns |

OPTICOM DETECTOR SUMMARY

| NO. | PHASE | MOUNTED ON | FACING | REMARKS |
|-----|-------|---------------------|------------|-------------------------|
| 1 | 6 | Mast Arm Pole #3 | Southbound | One-Way |
| 2 | 3 | Mast Arm Pole #1 | Eastbound | One-Way |
| 3 | 1-5 | Mast Arm Pole #2 | Northbound | One-Way |
| 4 | 3 | Pole At Load Center | Northbound | Arm Down Old Dairy Road |

OPTICOM NOTES:

1. Opticom system shall be high priority modulation.
2. Detector Home Run Cable shall be Opticom brand.

JUNCTION BOX SUMMARY

| NO. | STATION | OFFSET | TYPE | REMARKS |
|-----|------------|---------|------|--------------------|
| 1 | "L" 358+32 | 52' Rt. | I | |
| 2 | "L" 360+47 | 53' Rt. | I | |
| 3 | "L" 361+50 | £ | I | |
| 4 | "L" 362+32 | 2' Lt. | II | |
| 5 | "L" 362+32 | 68' Lt. | II | |
| 6 | "L" 362+37 | 57' Rt. | II | |
| 7 | "L" 363+08 | 60' Rt. | III | |
| 8 | "C" 3+23 | 45' Rt. | I | *9" C x 85 85' Rt. |
| 9 | "L" 363+65 | 7' Lt. | II | |
| 10 | "L" 363+65 | 7' Lt. | II | |
| 11 | "L" 363+58 | 60' Rt. | II | |
| 12 | "L" 365+49 | 10' Lt. | I | |
| 13 | "L" 367+49 | 10' Lt. | I | |

REMOVAL OF STRUCTURES & OBSTRUCTIONS

| STATION | OFFSET | | ITEM | REMARKS |
|------------|--------|-------|---------------------|---------|
| | LEFT | RIGHT | | |
| "L" 361+95 | 70' | | Electroliner & Base | |
| "L" 363+67 | | 55' | Electroliner & Base | |

ESTIMATE OF THERMOPLASTIC QUANTITIES

| ITEM | WHITE | | YELLOW | |
|---------------------------------|-------|-----|--------|-----|
| | 4" | 24" | 4" | 18" |
| Thermoplastic Pavement Markings | 40' | 81' | 463' | 39' |

STRIPING NOTES:

1. The removal of existing thermoplastic shall be considered incidental to the installation of new thermoplastic & no separate payment shall be made therefore.

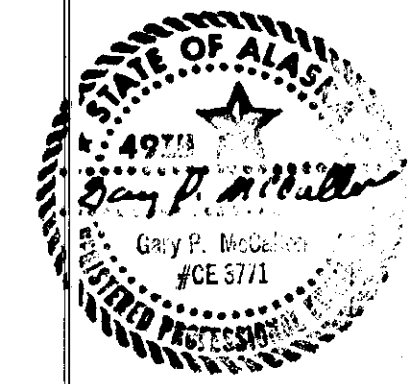
SIGNAL HEAD SUMMARY

| SIGNAL HEAD NO. | POLE NO. | INDICATION | LENS SIZE | MOUNTING TYPE | PHASE | HEIGHT | REMARKS |
|-----------------|----------|-------------|-----------|---------------|-------|-----------|-------------------|
| 1 | 1 | R-Y-G | 12" | S-1 | 3 | 10' | |
| 2 | 1 | R-Y-G | 12" | Plumbizer | 3 | 16'6"-19' | |
| 3 | 2 | R-Y-G | 12" | S-1 | 1 | 10' | |
| 4 | 2 | R-Y-G | 12" | Plumbizer | 1 | 16'6"-19' | |
| 5 | 2 | R-Y-G-LG+LY | 12" | Plumbizer | 1 & 5 | 16'6"-19' | Bi-Metal, LG+LY |
| 6 | 3 | R-Y-G | 12" | S-1 | 6 | 10' | Programmable Head |
| 7 | 3 | R-Y-G | 12" | Plumbizer | 6 | 16'6"-19' | |
| 8 | 3 | R-Y-G | 12" | Plumbizer | 6 | 16'6"-19' | |

POLE* AND BASE* SUMMARY

| POLE NO. | STATION | OFFSET TO FACE OF POLE | MAST ARM TYPE | MAST ARM | | | FOOTING TYPE |
|----------|------------|------------------------|---------------|----------|-----|-----|-----------------|
| | | | | K | M | N | |
| 1 | "L" 362+66 | 56' Rt. | Regular | 12' | | 12' | Optional |
| 2 | "L" 363+52 | 56' Rt. | Regular | 42' | 12' | 26' | Optional |
| 3 | "L" 362+32 | 72' Lt. | Regular | 40' | 29' | 12' | Optional |
| | "L" 363+09 | 75' Rt. | | | | | Controller Base |

*Poles & anchor bolts shall be supplied by the state except anchor bolts for controller shall be supplied by the contractor.



MISC. SUMMARIES & NOTES

GENERAL SIGNALIZATION NOTES

1. All conduit shall be drilled & jacked under all existing pavement.
2. Each signal head shall have its own "home run" cable.
3. All conduit shall be sloped to drain.
4. All conduit shall be Rigid Metal Conduit (R.M.C.) of a size as shown on the plans.
5. Flash shall be yellow to Egan Drive North & South bound movements. All other signals shall flash red, except arrows, which shall be black.
6. All traffic signal equipment, including, but not limited to, controller, cabinet, signal heads, detectors, & amplifiers shall conform to N.E.M.A. Standards Publication No. T.S.1 - 1976 "Traffic Control Systems".
7. All locations are approximate only & are subject to minor revisions by the project engineer.
8. Each loop detector shall have its own lead-in cable (4).
9. Magnetometer probes shall be factory wired in pairs, each pair shall have its own lead-in cable.
10. The electroliners to be removed shall be taken to the D.O.T. & P.F. Maintenance Yard at 7 1/2 mile Glacier Highway.
11. The luminaires from the electroliners to be removed shall be reused on signal poles #2 & #3 as shown in the details on sheet 4. Rewiring & installation of the luminaires shall be considered incidental to item 660(1), Traffic Signal System, Complete.
12. The signal shall be equipped with a 3M brand Opticom Emergency Vehicle Pre-emptor, which shall be compatible with the existing system at other inter-sections. All Opticom detection equipment shall be supplied by the contractor. Detectors shall be field mounted on the state supplied mast arms. Equipment shall be field wired into state supplied controller cabinet.
13. The state shall supply to the contractor the following equipment:
 - A. Poles 1, 2, & 3 with mast arms & anchor bolts.
 - B. Controller cabinet type P-1. (No anchor bolts supplied). The cabinet shall be wired for & shall include the controller, fail-safe, relays, flasher, detector amplifiers, load switches, Opticom phase selectors, quad coupler, etc.
14. The contractor shall supply the anchor bolts for the controller cabinet.
15. The Controller Base shall have an apron as shown on Alaska Standard Plan T-31.00.
16. The existing lighting shall be kept operational at all times.
17. All work along the roadway shall require CW21-5 "SHOULDER WORK" construction signing, 1500 ft. in advance of a 660 ft. length taper of channelizing devices (cones). All work within the roadway shall require construction signing as shown in the Alaska Traffic Manual Figure 6-9, page 68-11.
18. All areas of excavation, or where the existing grass is disturbed, shall be seeded with the dry method. This work is incidental to 660(1).
19. Pole No. 2 shall not be installed until temporary or permanent guardrail is installed.
20. No field office is required for the state project engineer.

GENERAL SIGNING NOTES

1. Sign locations are approximate only and are subject to revisions.
2. All existing signs and posts requiring removal shall be salvaged and delivered to the Department of Transportation and Public Facilities maintenance yard. Payment for this item of work shall be considered incidental to item 615(1) Standard Sign, and no separate payment will be made therefore.
3. All sign posts shall be telescoping perforated galvanized steel, the 2" size shall be used above ground and the 2 1/4" shall be used below ground.
4. Sign post length includes the one foot telescope inside the base. Lengths are for estimating only. Actual lengths may vary.
5. Relocation of existing sign and installation of new post shall be considered incidental.

ESTIMATE OF QUANTITIES

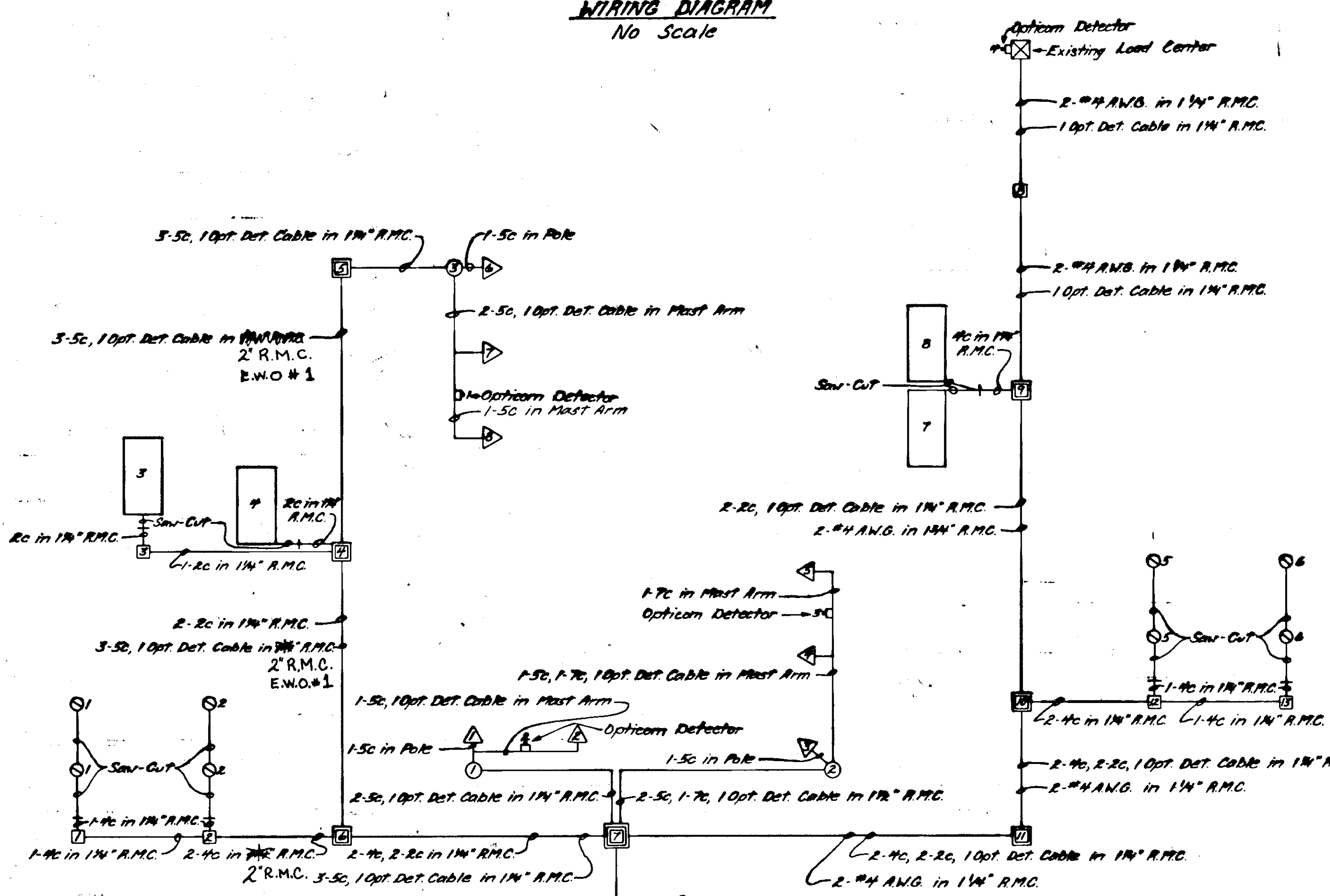
| ITEM NO. | ITEM | UNIT | QUANTITY |
|-----------|--|----------|-------------------|
| 110(1) | Mobilization | L.S. | All Required |
| 115(1) | Traffic Maintenance | L.S. | All Required |
| 115(2) | Construction Signaling | L.S. | All Required |
| 119(1) | Construction Surveying by the Contractor | L.S. | All Required |
| 606(1) | Beam Type Guardrail, Type I Post | L.F. | 162.5 |
| 606(6) | End Anchorages | Each | 2 |
| 607(6) | Walk Gate | Each | 1 |
| 615(1) | Standard Signs | S.F. | 47.4 |
| 660(1)(A) | Traffic Signal System, Complete | E.W.O. 1 | L.S. All Required |
| 670(6)(A) | Thermoplastic Pavement Markings | E.W.O. 2 | L.S. All Required |

E.W.O. 1 - changed to 660(1A) \$250 increase
E.W.O. 2 - Change 1 1/4" to 2" R.M.C. - one run

| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|---------------------|------|-----------|--------------|
| ALASKA | FG-0932 (12) | 1983 | 3 | 4 |

SIGNAL, SIGNING & STRIPING PLAN

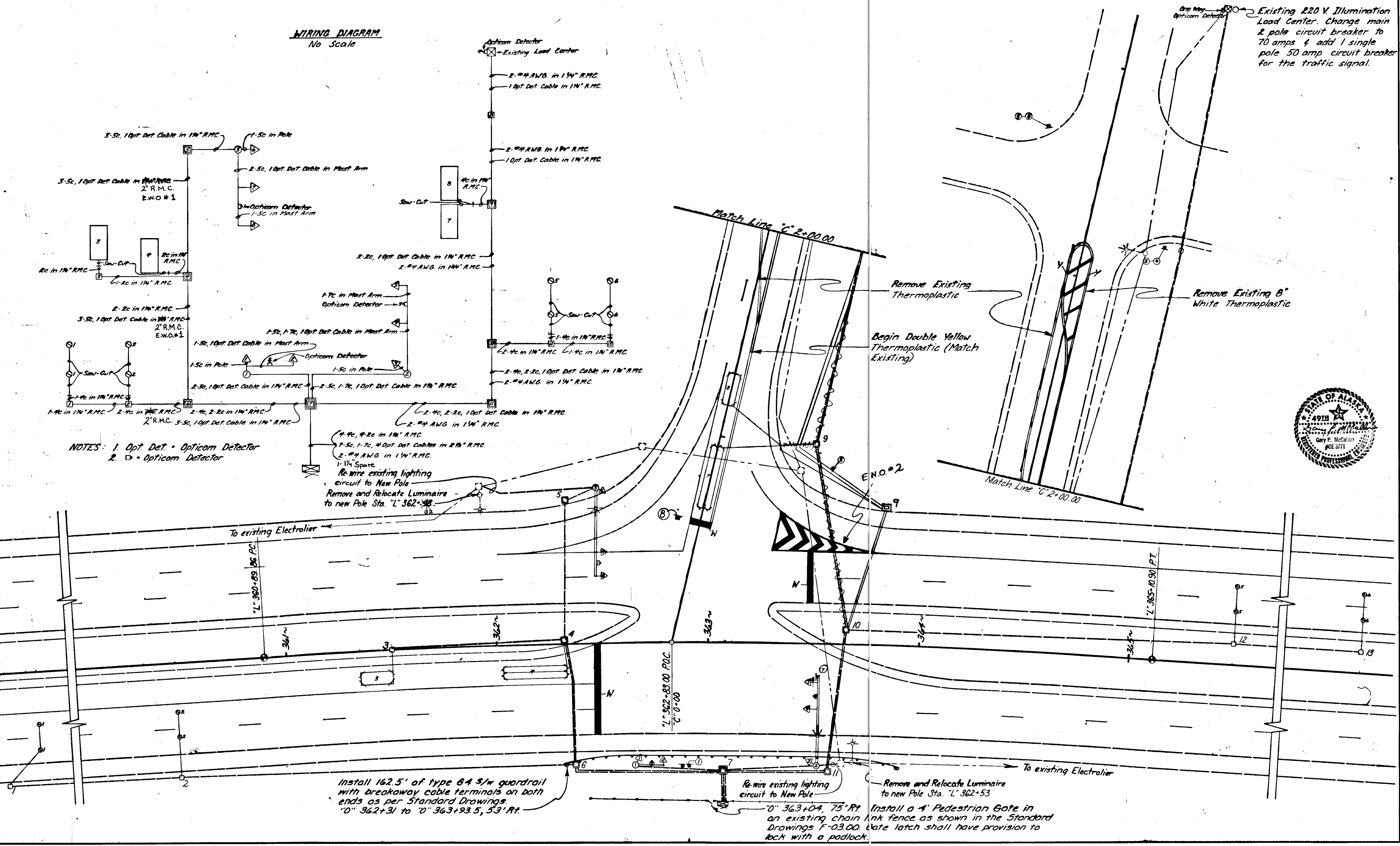
WIRING DIAGRAM
No Scale



NOTES: 1. Opt. Det. = Opticom Detector
2. □ = Opticom Detector

Re-wire existing lighting circuit to New Pole
Remove and Relocate Luminaire to new Pole Sta. "L" 362+48

Existing 220 V. Illumination Load Center. Change main 2 pole circuit breaker to 70 amps & add 1 single pole 50 amp circuit breaker for the traffic signal.

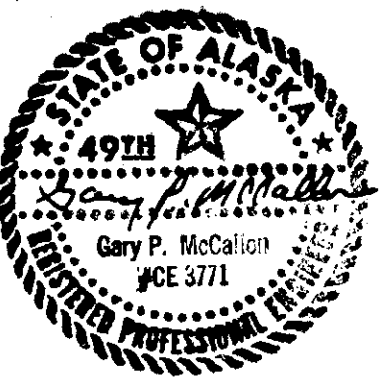


Install 162.5' of type 64 S/W guardrail with breakaway cable terminals on both ends as per Standard Drawings.
"0" 362+31 to "0" 363+93.5, 53' RT.

Re-wire existing lighting circuit to New Pole

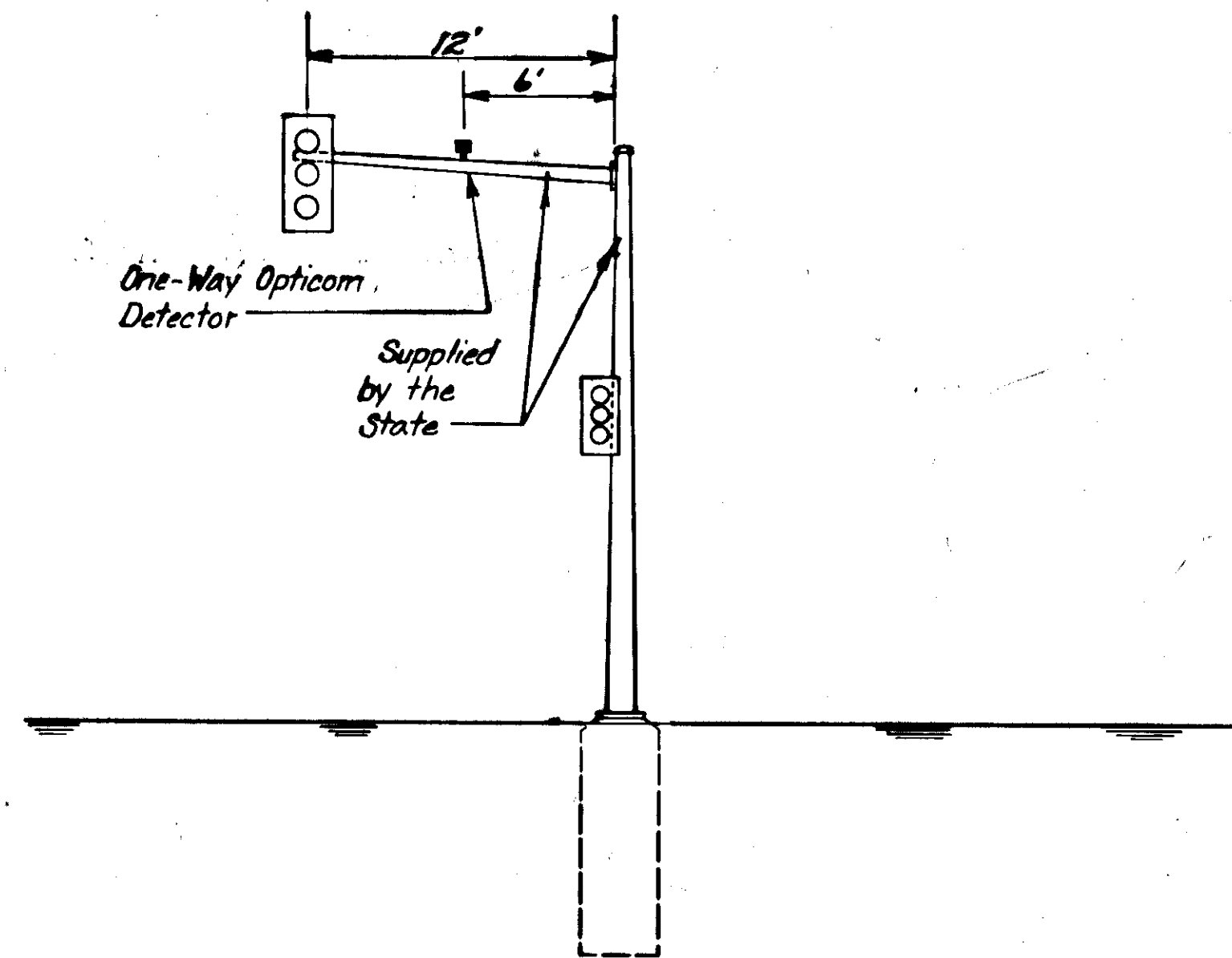
Remove and Relocate Luminaire to new Pole Sta. "L" 362+53

Install a 4' Pedestrian Gate in an existing chain link fence as shown in the Standard Drawings F-03.00. Gate latch shall have provision to lock with a padlock.

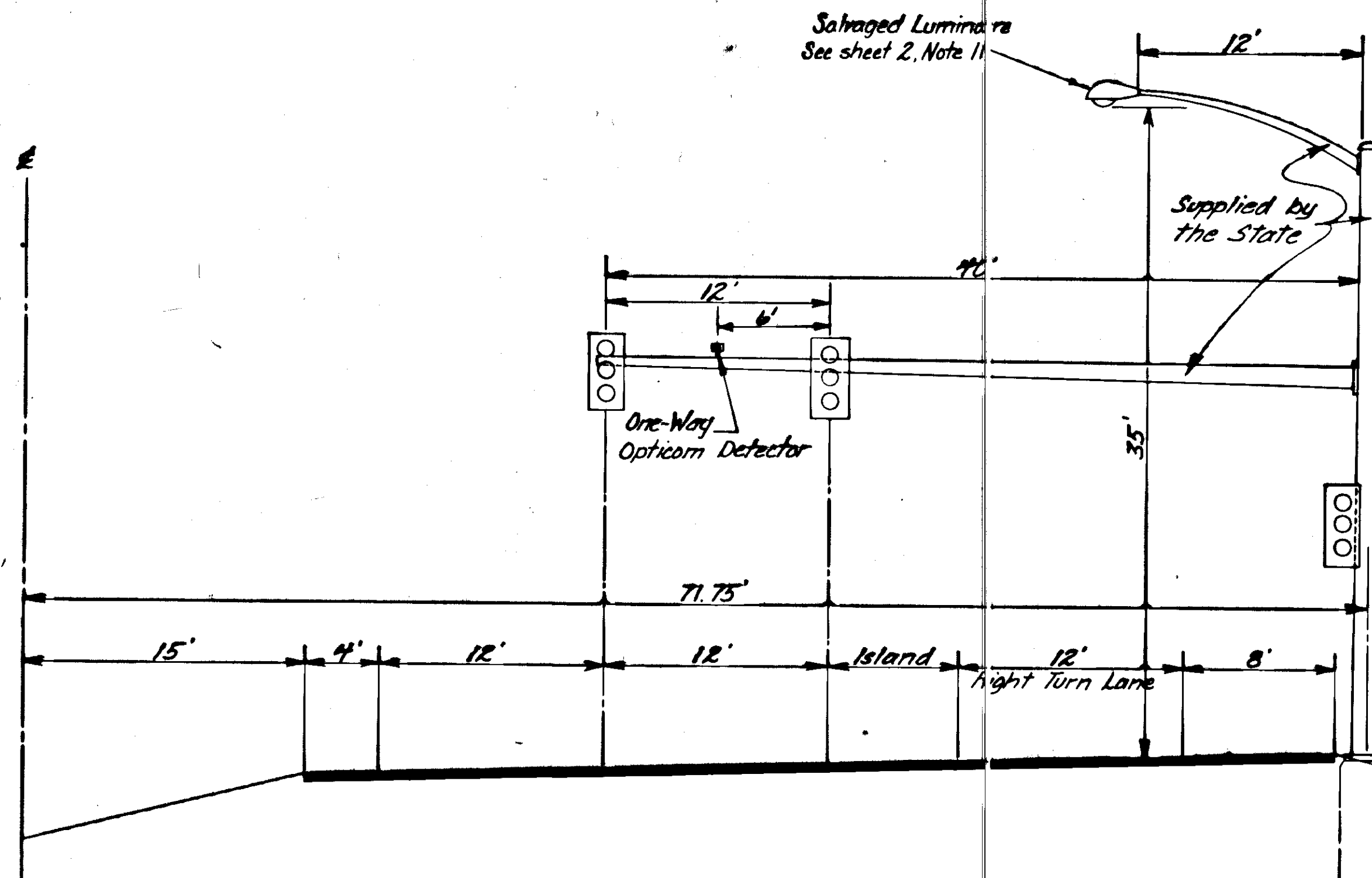


| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|---------------------|------|-----------|--------------|
| ALASKA | FG-0932 (12) | 1983 | 4 | 4 |

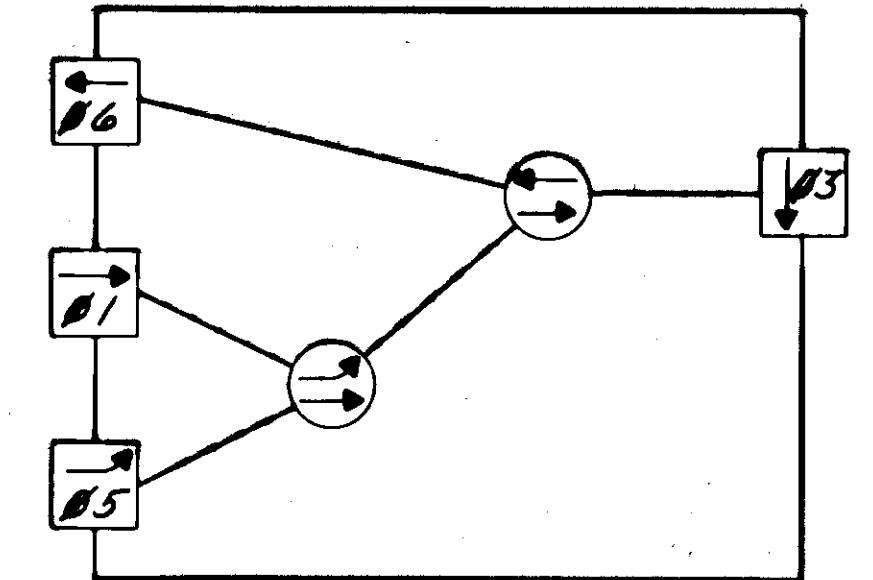
SIGNAL POLE DETAILS



SIGNAL POLE #1
L' 362+66, 56' RT.
EASTBOUND



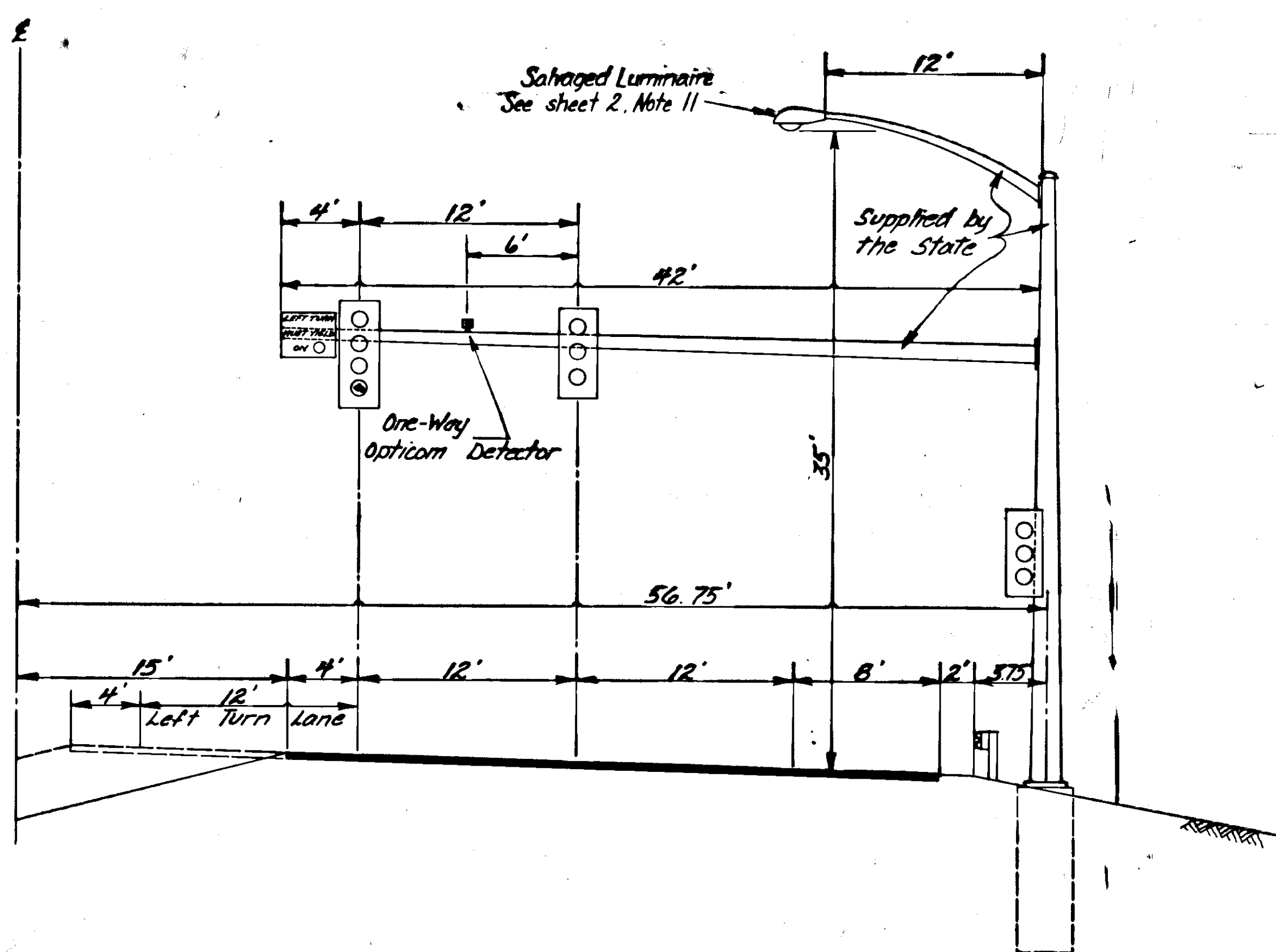
SIGNAL POLE #3
L' 362+48, 72' RT.
SOUTHBOUND



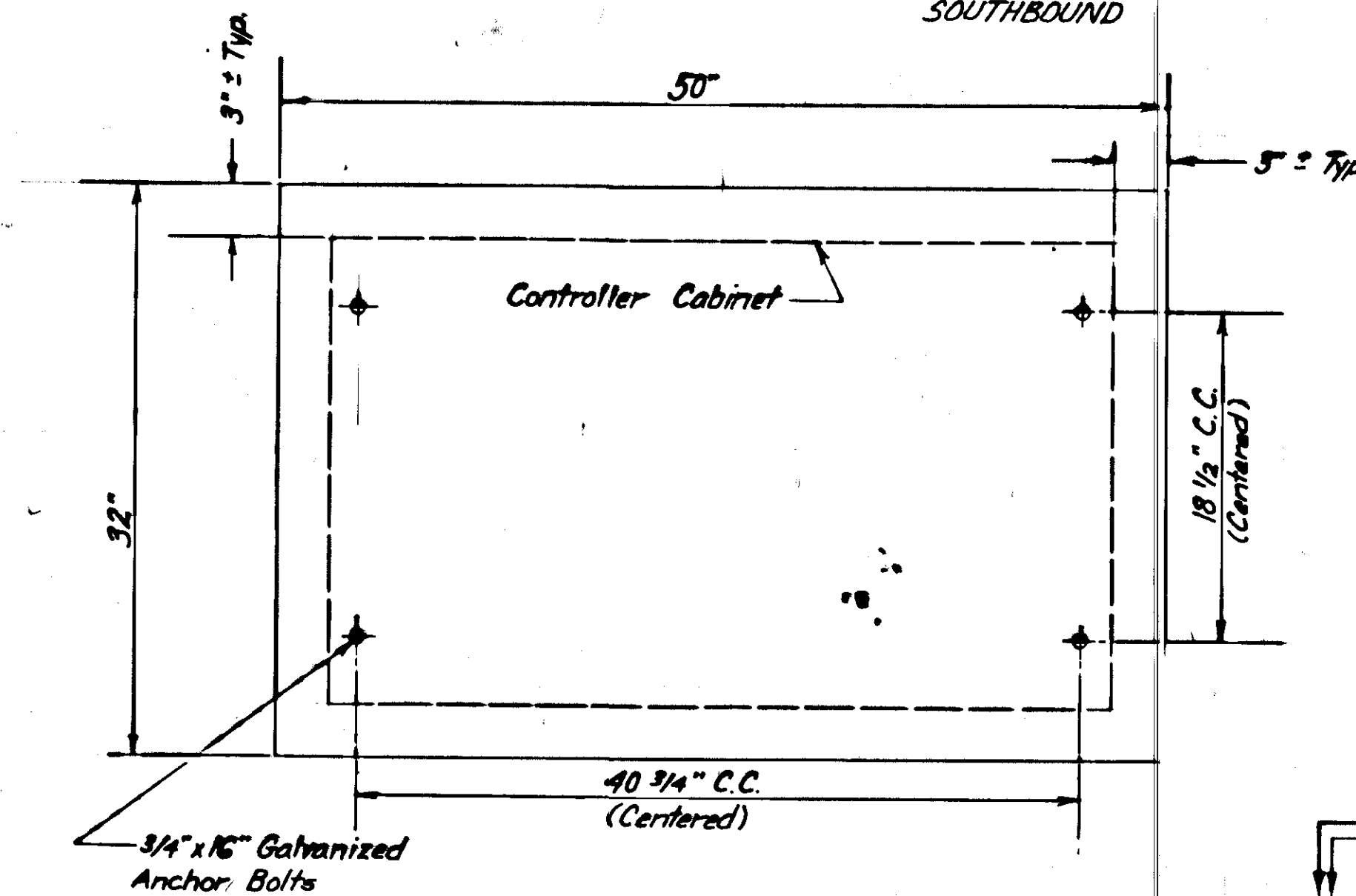
PHASE DIAGRAM

- NOTES: 1. #5 & #3 shall be traffic actuated.
2. #1 & #6 shall have modified density.

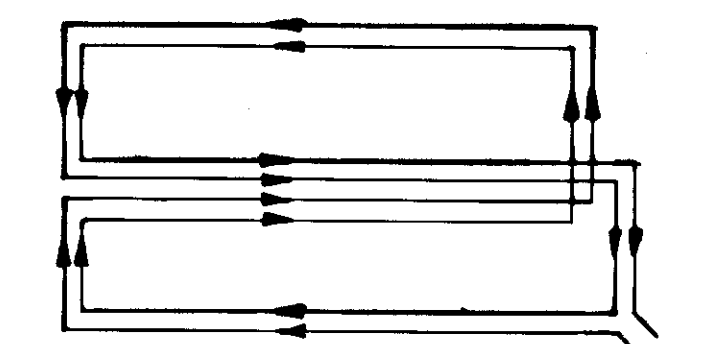
Note: Pole #3 C.I.D.R. Footing shall be 11 feet deep or Spread Footing Stem shall be 5 feet deep.



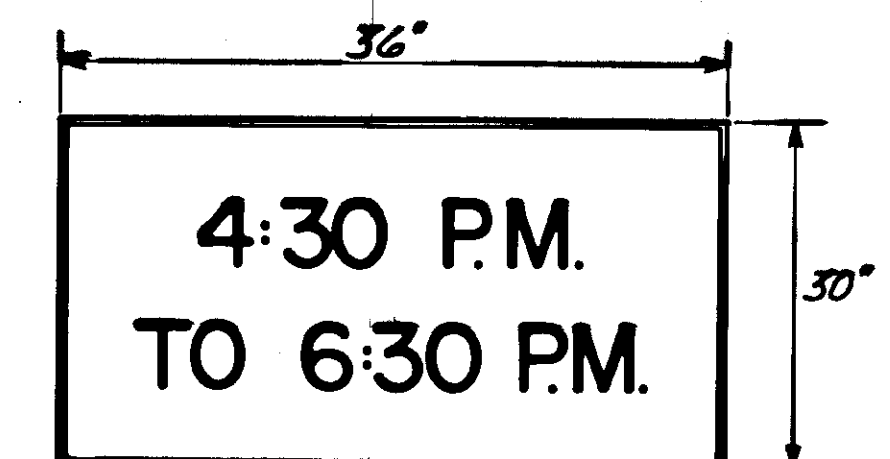
SIGNAL POLE #2
L' 363+52, 56' RT.
NORTHBOUND



CONTROLLER BASE TYPE "D" DETAIL
1/8" Scale



QUADRAPOLE WIRING DETAIL



SPECIAL SIGN DETAIL NO SCALE

- NOTES: 1. Letters shall be 5" tall series "B" letters.
2. Letters shall be black on a white background.

