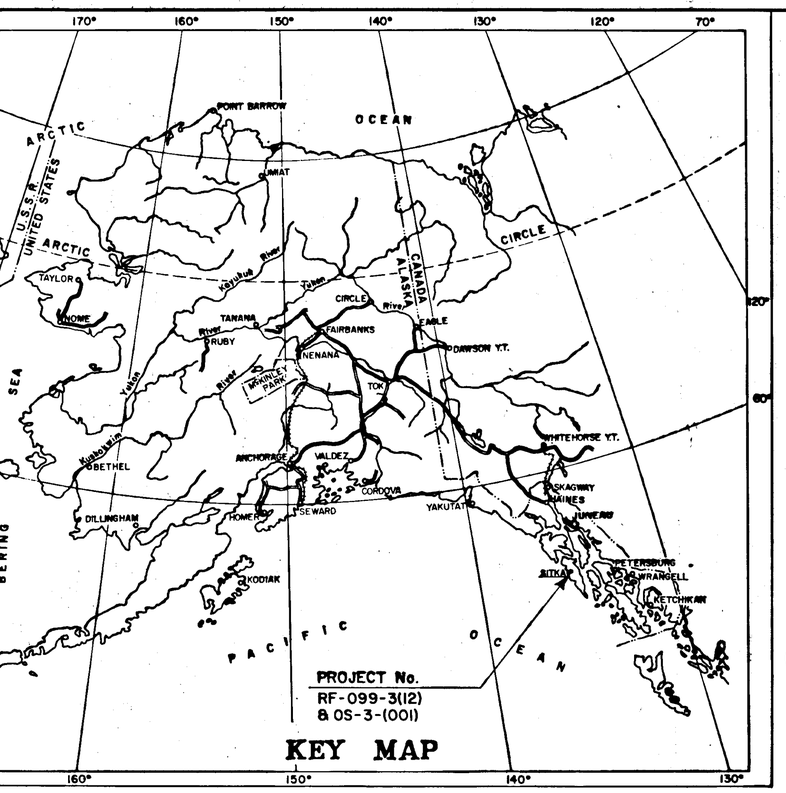
| STATE | PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| ALASKA | RF-099-3(12)<br>OS-3-(001) | 1 | 28 |

# STATE OF ALASKA
# DEPARTMENT OF HIGHWAYS

# PLAN AND PROFILE
# PROPOSED HIGHWAY PROJECT
# RF-099-3(12)
# HALIBUT POINT BLVD.,
# OS-3(001)
# BRADY ST., GAVAN ST. & CASCADE ST.
# GRADING, DRAINAGE, PAVING & UTILITIES




INDEX OF SHEETS

| SHEET NO. | DESCRIPTION |
|---|---|
| 1 | Title Sheet |
| 2 | Typical Section |
| 3 | Estimate of Quantities |
| 4 & 5 | Summary Tables |
| 6 | Water Line Details |
| 7-21 | Plan & Profile Sheets |
| 22-28 | Off-System Road Plans |
| | |
| | |
| | |
| | |

The following standard drawings apply to this project: A-1, C-00.01 C-10.00, C-11.01, D-02.01, D-20.10, D-23.01, D-24.11, D-26.00 G-04.31, G-10.11, I-20.01, I-80.00, M-16.03, U-03.00

AS BUILT

CONTRACTOR: CONSTRUCTORS - PAMCO 3600 Fremont Avenue North Seattle, Washington 98103 Thomas Opstad, Project Manager

PROJECT ENGINEER: JOHN EDWARDS

Notice to Proceed: October 29, 1976
Actual Completion Date: December 3, 1976

RF-099-3(12)
PROJECT SUMMARY

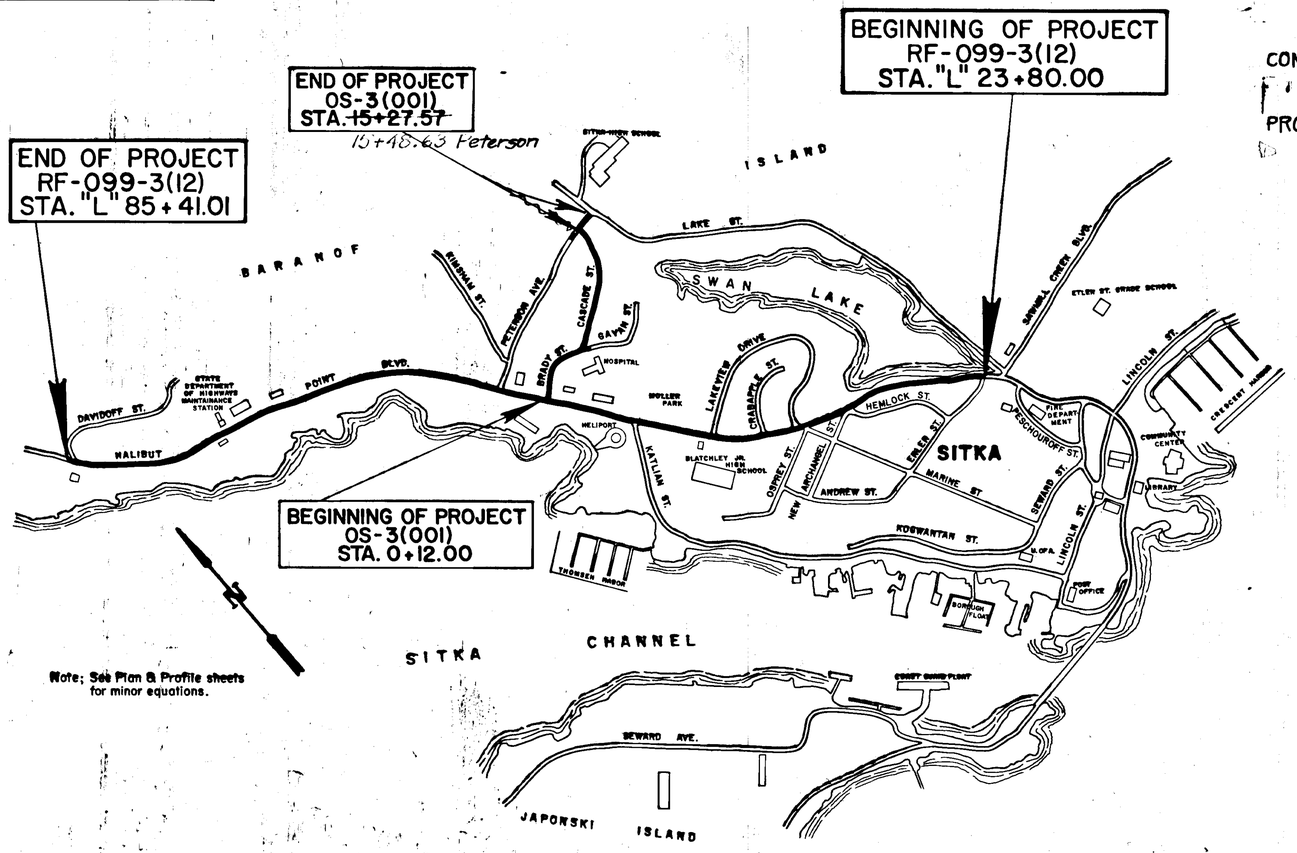
| | | |
|---|---|---|
| WIDTH of SUBGRADE | = | 30.5' |
| WIDTH of PAVEMENT | = | 30.5' |
| LENGTH of GRADING | = | 991.20 ~~1345.00~~ = 0.188 ~~0.255~~ Mi. |
| LENGTH of PAVING | = | 8288.57 ~~7414.58~~ = 1.570 ~~1.404~~ Mi. |
| LENGTH of PROJECT | = | 8288.57 ~~7414.58~~ = 1.570 ~~1.404~~ Mi. |

OS-3(001)
PROJECT SUMMARY

| | | |
|---|---|---|
| WIDTH of SUBGRADE | = | 54' |
| WIDTH of PAVEMENT | = | 38' |
| LENGTH of GRADING | = | 1741.70' ~~1512.57'~~ = 0.330 ~~0.287~~ mi. |
| LENGTH of PAVING | = | 1741.70' ~~1512.57'~~ = 0.330 ~~0.287~~ mi. |
| LENGTH of PROJECT | = | 1741.70' ~~1512.57'~~ = 0.330 ~~0.287~~ mi. |

RF-099-3(12)

| DESIGN | | DESIGNATION |
|---|---|---|
| ADT (1974) | = | 5700 |
| ADT (1995) | = | 8000 |
| DHV (12%) | = | 960 |
| D | = | 40-60 |
| T | = | 4% |
| V | = | 25 mph |



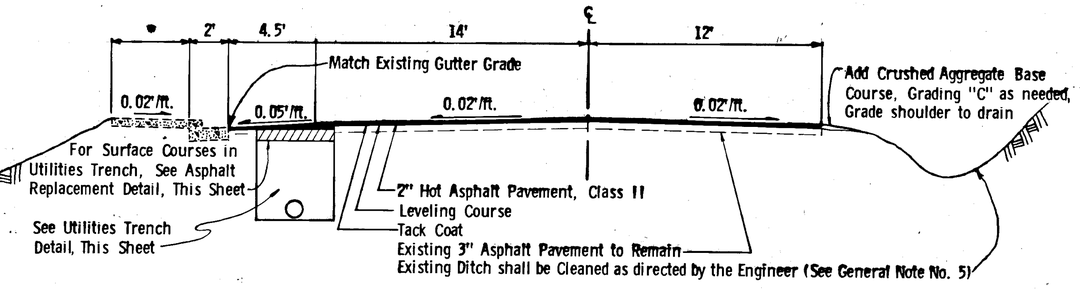

Note; See Plan & Profile sheets for minor equations.

STATE OF ALASKA
DEPARTMENT OF HIGHWAYS
APPROVED
Warren E. Wild Date 7/25/75
SOUTHEASTERN DISTRICT
HIGHWAY ENGINEER

STATE OF ALASKA
DEPARTMENT OF HIGHWAYS
APPROVED
Date 8/13/75
DEP. COMMISSIONER OF HIGHWAYS

| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | RF-099-3(12) | 1975 | 2 | 28 |

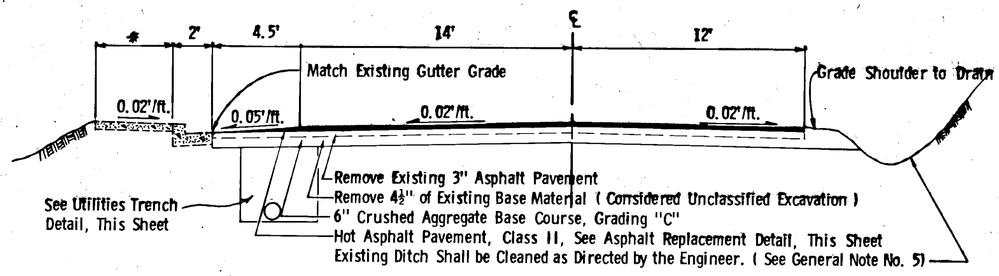
# TYPICAL SECTION OF IMPROVEMENT




## TYPICAL SECTION "A"

See Table "A" for Areas of Installation

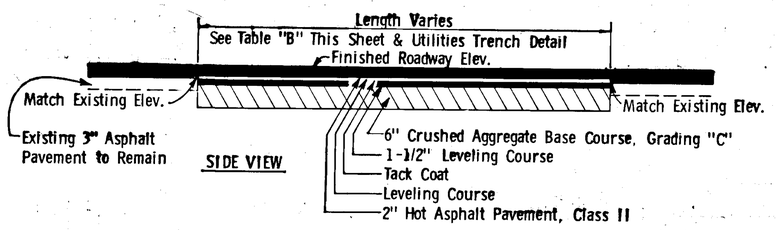
- "L" 23+80 B. O. P. to "L" 59+77 - Existing 6' Sidewalk, "L" 59+77 to "L" 85+41.01 E. O. P. - Existing 4' Sidewalk, Existing Curb, Gutter and Sidewalk See Plan and Profile Sheets and Sidewalk Removal and Replacement Detail for Areas of Removal and Replacement.



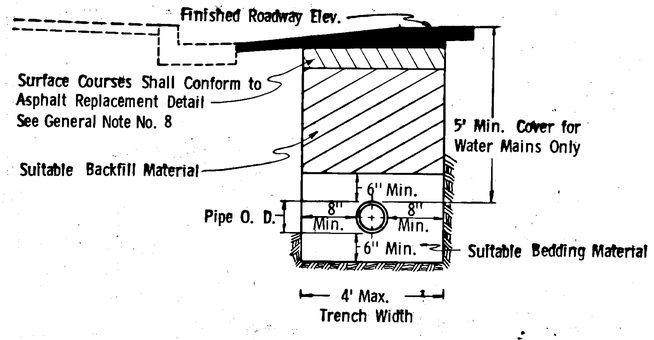

## TYPICAL SECTION "B"

See Table "B" for Areas of Installation

| BASIS OF ESTIMATE | |
|---|---|
| Item | Estimating Factor |
| 301(1) | 1.96 Tons per Cu. Yd. |
| 203(6B) | 1.87 Tons per Cu. Yd. |
| 401(1) | 112 lbs. per sq. Yd. inch depth |
| 401(2) | 7.4% of Item 401(1) |
| 402(2) | 0.1 gal./Sq. Yd., 253 gal./Ton |
| | |




## ASPHALT REPLACEMENT DETAIL

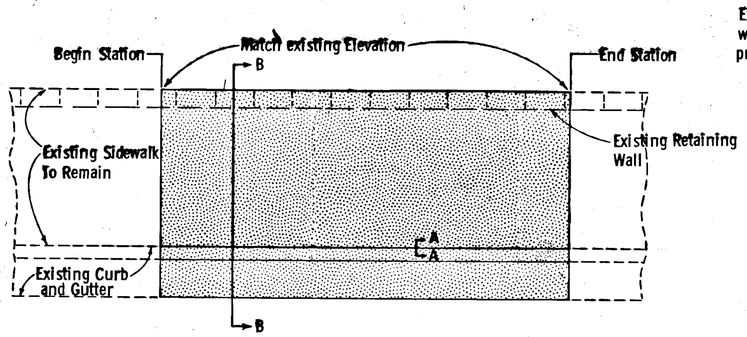


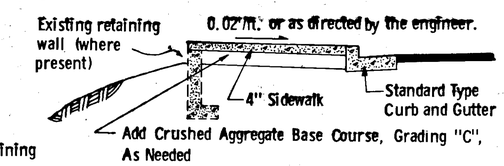

## UTILITIES TRENCH DETAIL

For Water Mains, Sewer Conduits for Water Main Crossings and Sewer Services

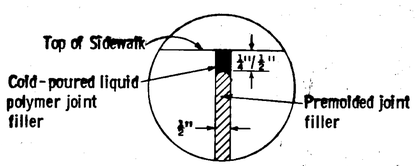
## GENERAL NOTES;

1. Alignment shown on these plans is subject to minor revisions.
2. Storm inlets and culvert location are subject to minor revisions.
3. Location of utilities as shown are approximate.
4. Superelevation shall be revolved about the inside shoulder, or as directed by the engineer. See Standard Drawing I-80.00.
5. After the existing ditch has been cleaned, extra material may be needed to restore the flowline of the ditch. This material may be obtained from unclassified excavation. The flowline of the ditch shall be as directed by the engineer. This work shall be considered incidental to pay item 203(3) "Unclassified Excavation" and no separate payment shall be made therefore.
6. Existing wood stave water mains and existing sewer mains noted as ( to be abandoned ), shall be abandoned in place except where new construction requires their removal.
7. Valve boxes on abandoned water mains shall be removed to a depth of 24" below finished grade. This work shall be considered incidental to pay item #203(3) " Unclassified Excavation " and no separate payment shall be made therefore.
8. Removal of existing asphalt pavement in the utility trench shall be a neat line as directed by the engineer. All trench excavation shall be wasted unless otherwise directed by the engineer.
9. Those existing approaches requiring regrading behind curb cuts shall be regraded with Crushed Aggregate Base Course, Grading "C" as directed by the engineer. This work shall be considered incidental to pay item #203(3) "Unclassified Excavation" and no separate payment shall be made therefore.




SECTION B-B




SECTION A-A

## SIDEWALK REMOVAL & REPLACEMENT DETAIL

Notes;

1. Indicates removal and replacement of curb, gutter and/or sidewalk. See Plan and Profile sheets for begin and end stations. Curb, gutter and sidewalk removal shall begin and end at the nearest dummy and/ or expansion joint, or as direct by the engineer.
2. Existing retaining walls in areas of sidewalk removal shall not be disturbed.
3. See sheet # 4 for curb cut replacement details.
4. Premolded expansion joint filler and liquid polymer joint sealer (see specification), shall be considered incidental to pay item #608 (1) "Concrete Sidewalk" and no separate payment shall be made therefore.
5. Existing expansion joints destroyed during sidewalk removal operation shall be replaced as detailed.
6. In areas where the existing sidewalk and curb & gutter are to remain in place, the existing cold-poured liquid polymer joint filler between them shall be removed and replaced. This work shall be considered incidental to pay item 608 (1) "Concrete Sidewalk" and no separate payment shall be made therefore.

| TABLE "A" | |
|---|---|
| STATION | |
| From | To |
| ~~"L" 23+80~~ | ~~"L" 26+03~~ |
| ~~"L" 23+80 B.O.P.~~ | ~~"L" 38+00~~ 37+97 |
| "L" 43+00 | "L" 58+00 52+70 |
| ~~"L" 53+00~~ | ~~"L" 58+19.8~~ |
| "L" 60+~~00~~ 02 | "L" 63+50 72+80 |
| ~~"L" 64+25~~ | ~~"L" 72+80~~ |
| "L" 75+25 | ~~"L" 80+60~~ 80 |
| ~~"L" 80+90~~ 81+10 | ~~"L" 81+75~~ 85+00 |
| ~~"L" 82+75~~ | ~~"L" 85+00~~ |
| "L" 85+~~75~~ 77 | ~~"L" 88+30~~ 7 |
| ~~"L" 89+50~~ | "L" 85+41 E.O.P. |

26+56

| TABLE "B" | |
|---|---|
| STATION | |
| From | To |
| ~~"L" 26+03~~ | ~~"L" 26+56~~ |
| ~~"L" 38+00~~ | "L" 43+00 |
| ~~"L" 53+00~~ | ~~"L" 53+00~~ |
| "L" 58+00 48.8 | "L" 60+00 02 |
| ~~"L" 63+50~~ | ~~"L" 64+25~~ |
| "L" 72+80 | "L" 75+25 |
| "L" 80+~~60~~ 80 | "L" ~~80+90~~ 81+10 |
| ~~"L" 81+75~~ | ~~"L" 82+75~~ |
| "L" 85+00 | "L" 85+~~75~~ 77 |
| ~~"L" 88+30~~ | ~~"L" 89+50~~ |

37+97

# ESTIMATE OF QUANTITIES

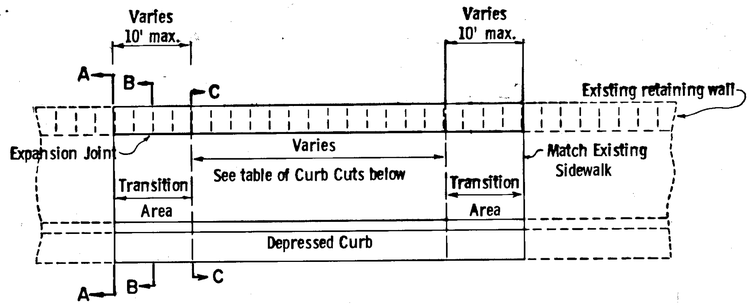
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | RF-099-3(12) OS-3-(001) | 1975 | 3 | 28 |

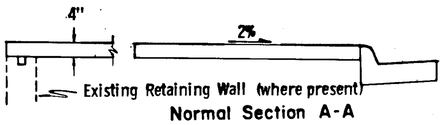
| ITEM No | ITEM | UNIT | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | Trooper Academy | RF-099-3(12) TOTAL | 24 | 25 | 26 | 27 | OS-3-(001) TOTAL | GRAND TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 110(1) | Mobilization | Lump Sum | | | | | | | | | | | | | | | | | | | | | | | |
| 111(1) | Temporary Erosion & Pollution Control | Cont Sum | | | | | | | | | | | | | | | | | All Req'd | | | | | All Req'd. | All Req'd |
| 112(1) | Training Program IAW. FHWA Order Interim 7-2(2) | Cont Sum | | | | | | | | | | | | | | | | | All Req'd | | | | | All Req'd. | All Req'd |
| 113(1) | Flagging | Man Hours | | | | | | | | | | | | | | | | | All Req'd | | | | | | All Req'd |
| 114(1) | Construction Engineering by the Contractor | Lump Sum | | | | | | | | | | | | | | | | | ~~604~~ 1806 | | | | | ~~256~~ 477 | ~~860~~ 2 |
| 202(2) | Removal of Pavement | Sq. Yd. | | | 684 | 1,017 | | | 678 | 254 | 746 | 186 | 593 | 407 | | | | | All Req'd | | | | | All Req'd. | All Req'd |
| 202(3) | Removal of Sidewalk | Sq. Yd. | 44 | 115 | 7 | 43 | 235 | 23 | 39 | 40 | 38 | 97 | 38 | 102 | 47 | | | | ~~4,565~~ 6709 | 144 | 550 | | | ~~894~~ 110 | ~~5,259~~ 6 |
| 202(4) | Removal and Disposal of Culvert Pipe | Linear Ft. | 40 | | | | | | 56 | | | | | | | | | | ~~868~~ 1073 | | | | | | ~~868~~ 1 |
| 202(8) | Removal of Curb and Gutter | Linear Ft. | 57 | 167 | | 50 | 333 | | 134 | 115 | 130 | 314 | 119 | 265 | 203 | | | | ~~96~~ 30 | | | | | 171 | ~~96~~ 2 |
| | | | | | | | | | | | | | | | | | | | ~~1,887~~ 2793 | | | | | | ~~1,887~~ 2 |
| 203(3) | Unclassified Excavation | Cu. Yd. | | | 98 | 146 | | | 97 | 36 | 107 | 27 | 85 | 58 | | | | | | | | | | ~~8758~~ | |
| 203(6B) | Selected Material | Ton | | | | | | | | | | | | | | | | | ~~654~~ 563 | 5,695 | 4,310 | | | ~~10,005~~ | ~~10,659~~ |
| | | | | | | | | | | | | | | | | | | | | 7,891 | 6,442 | | 17,779 | ~~14,333~~ | ~~14,333~~ 1 |
| 301(1) | Crushed Aggregate Base Course, Grading "C" | Ton | 74 | 101 | 365 | 453 | 162 | 163 | 408 | 238 | 439 | 220 | 436 | 232 | 104 | 96 | 31 | 301 | ~~3522~~ 4890 | 1,774 | 1,068 | | | 1786 ~~2,872~~ | ~~6,364~~ 6 |
| 401(1) | Hot Asphalt Pavement | Ton | 205 | 291 | 398 | 340 | 316 | 342 | 374 | 341 | 400 | 336 | 412 | 320 | 252 | 16 | 7 | 341.86 | ~~4,350~~ 6240.86 | 729 | 470 | | | 1300.72 ~~1,199~~ | ~~5,549~~ 75 |
| 401(2) | ~~AR-10~~ Asphalt Cement AC-5 | Ton | 15.2 | 21.5 | 29.5 | 25.2 | 23.4 | 25.3 | 27.7 | 25.2 | 29.6 | 24.9 | 30.5 | 23.7 | 18.6 | 1.2 | 0.5 | 19.05 | ~~322~~ 360.05 | 54 | 34.8 | | 77.8 | ~~38.8~~ | ~~410.8~~ 4 |
| 402(2) | ~~CRS-1~~ Cationic Emulsified Asphalt for Tack Coat CSS-1 | Ton | 0.60 | 0.80 | 0.90 | 0.70 | 0.80 | 0.90 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.70 | 0.10 | 0.04 | | ~~10.34~~ 12.90 | | | | | 0.17 | ~~10.34~~ 13 |
| 603(22C) | 12" Pipe Conduit | Linear Ft. | | | | | | | | | | | | | | | | | | | | | | | |
| 603(22E) | 18" Pipe Conduit | Linear Ft. | | | 30 | 66 | | | 156 | | | 42 | | | | | | | 85 | 250 | 122 | | | ~~372~~ 431 | ~~372~~ 5 |
| 603(22G) | 24" Pipe Conduit | Linear Ft. | | | | 8 | | | 312 | | | | | | | | | | ~~294~~ 292 | 532 | 76 | | | ~~608~~ 669 | ~~902~~ 9 |
| | | | | | | | | | | | | | | | | | | | ~~320~~ 326 | | | | | | ~~320~~ 3 |
| 604(1) | Storm Sewer Manhole | Each | | | | | | | 3 | | | | | | | | | | | | | | | | |
| 604(3) | Reconstruct Manhole | Each | | | | | | | | | | | | | | | | | 3 | 3 | | | | ~~3~~ 4 | ~~6~~ 7 |
| 604(4) | Adjust Existing Manhole | Each | 1 | 1 | 2 | 2 | 1 | | 3 | 1 | | | 1 | | | | | | 0 | 1 | 2 | | | ~~3~~ 2 | ~~3~~ 2 |
| 604(5) | Inlet, Type A | Each | | | | | | | 3 | | | | | | | | | | 12 | 2 | 1 | | | ~~3~~ 5 | ~~15~~ |
| 604(8) | Adjust Existing Cleanout | Each | | | | | | | | | | | | | | | | | ~~3~~ 4 | 6 | 4 | | | ~~10~~ 11 | ~~13~~ 1 |
| 605(2) | 8" Perforated Corrugated Aluminum Pipe for Underdrains | Linear Ft. | 44 | 524 | | | | | 236 | | | | | | | | | | | 2 | | | | 2 | 2 |
| 605(5) | Porous Backfill Material | Cu. Yd. | 8 | 102 | | | | | 38 | | | | | | | | | | ~~804~~ 812 | | | | | | ~~804~~ 8 |
| | | | | | | | | | | | | | | | | | | | ~~148~~ 158 | | | | | | ~~148~~ 1 |
| 606(2) | Beam Type Guardrail, Type I Post | Linear Ft. | | 62.5 | | | | | | | | | | | | | | | | | | | | | |
| 606(4) | Removal and Disposal of Guardrail | Linear Ft. | | 62.5 | | | | | | | | | | | | | | | 62.5 | | | | | | 62.5 |
| 607(4) | Removal and Reconstruction of Fence | Linear Ft. | | | | | | | | | | | | | | | | | 62.5 | | | | | | 62.5 |
| | | | | | | | | | | | | | | | | | | | | 40 | 60 | | | ~~100~~ 128 | ~~100~~ 12 |
| 608(1A) | Concrete Sidewalk, 4" Depth | Sq. Yd. | 34 | 115 | 7 | 43 | 155 | 23 | 15 | 23 | 10 | 23 | 24 | 29 | | | | | ~~501~~ 808.4 | 964 | 699 | | | ~~1663~~ 1797 | ~~2,164~~ 2 |
| 608(1B) | Concrete Sidewalk, 6" Depth | Sq. Yd. | 10 | | | | 80 | | 45 | 30 | 50 | 122 | 24 | 100 | 90 | | | | ~~551~~ 529 | | | | | | ~~551~~ 5 |
| 609(1) | Curb, Type 5 (Asphalt) | Linear Ft. | | 271 | | | | | | | | | | | | | | | ~~271~~ 288 | | | | | | ~~271~~ 2 |
| 609(2A) | Curb and Gutter, Type 1, (Standard) | Linear Ft. | 57 | 167 | | 50 | 333 | | 134 | 115 | 130 | 314 | 119 | 265 | 203 | | | | ~~1,887~~ 2833 | | | | | | ~~1,887~~ 2 |
| 609(2B) | Curb and Gutter, Type 1, (Rolled) | Linear Ft. | | | | | | | | | | | | | | | | | | 1,782 | 1,317 | | | 3362 ~~3049~~ | ~~3,099~~ 3 |
| 611(1) | Riprap, Class I | Cu. Yd. | | 4 | 17 | | | | 19 | | | | | | | | | | | | | | | | |
| 614(1) | Monuments | Each | | | | | | | | | | | | | | | | | ~~40~~ 37.1 | | | | | | ~~40~~ 37. |
| 614(2) | Monument Cases | Each | | | | | | | | | | | | | | | | | 9 | 4 | 1 | | | ~~5~~ 7 | ~~5~~ 1 |
| 614(3) | Adjust Existing Monuments and Cases | Each | | 2 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | | | | 9 | 4 | 1 | | | ~~5~~ 7 | ~~5~~ 1 |
| 625(1) | Pipe Handrail | Linear Ft. | | | | | | 181 | | | | 226 | | 72 | | | | | ~~17~~ 14 | | | | | | ~~17~~ 1 |
| | | | | | | | | | | | | | | | | | | | ~~479~~ 541 | | | | | | ~~479~~ 5 |
| 626(1A) | 6" Cast Iron Sewer Conduit | Linear Ft. | 86 | 160 | 20 | 74 | 64 | 68 | | 20 | | | | | | | | | ~~492~~ 352.3 | | | | | | ~~492~~ 3 |
| 626(1B) | 8" Cast Iron Sewer Conduit | Linear Ft. | | | 20 | | | | | | | | | | | | | | ~~20~~ 41.1 | | | | | 36 | ~~20~~ 8 |
| 626(1C) | 10" Cast Iron Sewer Conduit | Linear Ft. | | | 20 | 20 | 20 | 45 | | | | | | | | | | | ~~105~~ 20 | | | | | 43 | ~~105~~ 2 |
| 626(1D) | 14" Cast Iron Sewer Conduit | Linear Ft. | | | | | | | | | 20 | | | | | | | | ~~20~~ 0 | | | | | | ~~20~~ 0 |
| 628(2A) | 3" Ductile Iron Water Conduit, Class AWWA C-151 | Linear Ft. | | 14 | | | | | | | | | 56 | | | | 50 | | ~~120~~ 127.2 | | | | | | ~~120~~ 12 |
| 628(2B) | 4" Ductile Iron Water Conduit, Class AWWA C-151 | Linear Ft. | | | | 84 | 14 | | | | | | | | 35 | | | | ~~133~~ 176.5 | | | | | | ~~133~~ 17 |
| 628(2C) | 6" Ductile Iron Water Conduit, Class AWWA C-151 | Linear Ft. | | | 60 | | 98 | 58 | | | | | | | 66 | | | | ~~282~~ 298 | | | 201 | | ~~201~~ 243.7 | ~~483~~ 5 |
| 628(2D) | 8" Ductile Iron Water Conduit, Class AWWA C-151 | Linear Ft. | 412 | 590 | 605 | 604 | 145 | 56 | 64 | 594 | 594 | 600 | 600 | 608 | 558 | 600 | 218 | | ~~6,848~~ 6744 | | | 812 | 652 | ~~1464~~ 1460 | ~~8,312~~ 8 |
| 628(4) | Install Valve Box | Each | 1 | 1 | 3 | 2 | 5 | 2 | | | 1 | | 2 | | 3 | | 1 | | ~~21~~ 24 | 6 | | | | ~~67~~ | ~~27~~ 3 |
| 628(6) | Fire Hydrant Installation | Each | | | | 1 | | | | 1 | | 1 | 1 | | 1 | | | | ~~5~~ 7 | | | 1 | 1 | 2 | ~~7~~ 9 |
| 628(7) | Fire Hydrant Relocation | Each | | | | | | | | | | | | | | | | | | | | 2 | 1 | 3 | 3 |
| 628(8) | Fire Hydrant Removal | Each | | | | 1 | | | | 1 | | 1 | 1 | | 1 | | | | 5 | | | | | | 5 |
| 628(9) | Water Service Connections | Each | 2 | | 3 | 3 | 1 | 1 | 2 | 7 | 10 | 9 | 4 | 6 | 4 | 7 | 3 | | ~~62~~ 77 | | | 14 | 16 | ~~30~~ 35 | ~~92~~ 1 |
| 628(10A) | Install, 3" Gate Valve | Each | | 1 | | | | | | | | | 1 | | | | 1 | | 3 | | | | | | 3 |
| 628(10B) | Install, 4" Gate Valve | Each | | | | 2 | 1 | | | | | | | | 1 | | | | ~~4~~ 6 | | | | | | ~~4~~ 6 |
| 628(10C) | Install, 6" Gate Valve | Each | | | 1 | | 3 | 1 | | | | | | | 1 | | | | 6 | | | 2 | | ~~2~~ 3 | ~~8~~ 9 |
| 628(10D) | Install, 8" Gate Valve | Each | 1 | | 2 | | 1 | 1 | | | 1 | | 1 | | 1 | | | | ~~8~~ 9 | | | 4 | | 4 | ~~12~~ 13 |
| 628(11) | Adjustment of Valve Box | Each | | | 2 | | | 3 | | | | | | | | | | | ~~5~~ 3 | | | 4 | | ~~4~~ 2 | ~~9~~ 5 |

KEUFFEL & ESSER CO.

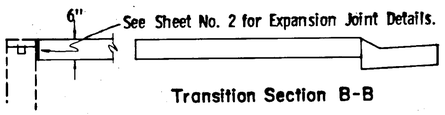
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | RF-099-3(12) | 1975 | 4 | 28 |

# SUMMARY TABLES

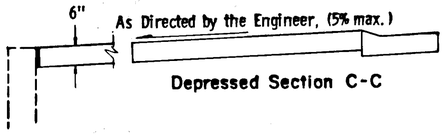



Normal Section A-A




Transition Section B-B




Depressed Section C-C

Notes;

1. When special curb cuts are installed in existing retaining wall areas, the back of sidewalk elevation shall coincide with the top of the retaining wall. Transition areas shall be installed as detailed per Section B-B.
2. Transition area for special curb cuts, shall be 10' unless otherwise noted in the Curb Cut Summary.

## SPECIAL CURB CUT DETAILS

### CURB CUT SUMMARY

| | Station | Width | Remarks |
|---|---|---|---|
| | "L" 26+77 | ~~9.34~~ | * |
| | "L" 28+37 | 189.5 | |
| | "L" 48+~~25~~ 31 | ~~34.32~~ 2.7 | * |
| 55+88 | "L" ~~49+36~~ | ~~34.48~~ 2 | * |
| 60+57 | "L" ~~50+53~~ | ~~34.46~~ | * |
| | "L" 62+10 | 40 | |
| 64+10 | "L" ~~60+54~~ | ~~28.80~~ | |
| 66+20 | "L" ~~62+25~~ | ~~48.60~~ | |
| | "L" 67+60 | 36.5 | |
| 68+22 | "L" ~~67+70~~ | ~~14.20~~ | |
| 69+29 | "L" ~~68+24~~ | ~~14.10~~ | |
| | "L" 69+69 | 30 | |
| 70+16 | "L" ~~71+67~~ | ~~24.20~~ | Trans. 10', 6' |
| 71+71 | "L" ~~73+41~~ | ~~18.27.7~~ | |
| 72+10 | "L" ~~74+47~~ | ~~14.20~~ | |
| | "L" 73+10 | 20 | |
| 73+52 | "L" ~~75+08~~ | ~~14.18~~ 2 | |
| 75+05 | "L" ~~75+49~~ | ~~14.14~~ 7.3 | |
| 76+09 | "L" ~~76+25~~ | ~~14.43~~ 4 | |
| 76+63 | "L" ~~78+15~~ | ~~48.10~~ | |
| 77+43 | "L" ~~79+16~~ | ~~14.10~~ | |
| 78+28 | "L" ~~79+97~~ | ~~50.75~~ | |
| | "L" 79+16 | 14 | |
| 79+40 | "L" ~~86+08~~ | ~~24.10~~ | |
| | "L" 80+01 | 54 | |

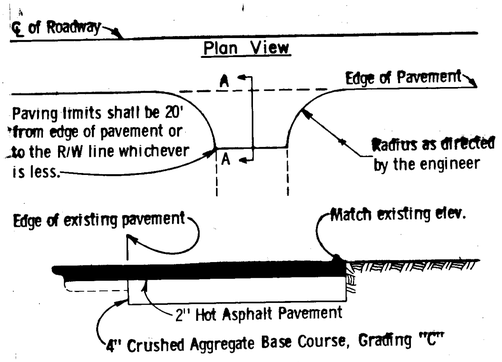
| | Station | Width | Remarks |
|---|---|---|---|
| | "L" 87+~~07.09~~ | ~~14.30~~ | |
| | "L" 88+~~37.29~~ | ~~20.70~~ | * |
| 88+86 | "L" ~~89+50~~ | ~~14.27.3~~ | |
| 89+36 | "L" ~~90+69~~ | ~~36.68.5~~ | |
| 90+12 | "L" ~~91+66~~ | ~~14.36~~ | Trans. 4', 3' |
| 91+27 | "L" ~~92+63~~ | ~~34.20~~ | |
| | "L" 91+68 | 21 | |
| 92+10 | "L" ~~94+81~~ | ~~34.20~~ | |
| 92+57 | "L" ~~95+77~~ | ~~14.53~~ | |
| 93+25 | "L" ~~96+95~~ | ~~94.10~~ | |
| | Lakeside Drive Approach | 21 | |
| | "L" 24+93 | 61 | |
| | "L" 29+82 | 20 | |
| | "L" 30+26 | 10 | |
| | "L" 30+70 | 20 | |
| | "L" 32+04 | 207.2 | |
| | "L" 37+20 | 10 | |
| | "L" 38+11 | 18.6 | |
| | "L" 39+04 | 10 | |
| | "L" 40+28 | 115.5 | |
| | "L" 42+33 | 100 | |
| | "L" 44+11 | 20 | |
| | "L" 44+66 | 10 | |
| | "L" 45+24 | 28.2 | |

* Indicates curb cuts to be installed in accordance with Standard Drawing I - 20.01.

| | | | | | |
|---|---|---|---|---|---|
| "L" 80+61 | 10 | | "L" 94+90 | 60 | |
| "L" 81+27 | 20 | | "L" 95+80 | 30 | |
| "L" 81+91 | 20 | | "L" 96+86 | 110 | |
| "L" 82+38 | 10 | | | | |
| "L" 83+78 | 90.5 | | | | |
| "L" 85+35 | 10 | | | | |
| "L" 86+09 | 43 | | | | |

### APPROACH SUMMARY

| STATION | Right | Left | Width |
|---|---|---|---|
| "L" 36+04 | X | | 14' |
| "L" 37+05 | X | | 16' |
| "L" 39+35 | X | | 24' |
| "L" 41+80 | X | | 22' |
| "L" 43+01 | X | | 14' |
| "L" 43+90 | X | | 14' |
| | | | |
| "L" 45+77 | X | | 24' |
| "L" 46+98 | X | | 26' |
| "L" 49+42 | X | | 36' |
| "L" 52+35 | X | | 22' |
| "L" 54+17 | X | | 18' |
| "L" 55+78 | X | | 48' |
| | | | |
| "L" 57+44 | X | | 38' |
| "L" 60+78 | X | | 36' |
| "L" 61+63 | X | | 36' |
| "L" 62+46 | X | | 24' |
| "L" 63+58 | X | | 14' |
| "L" 64+62 | X | | 14' |
| | | | |
| "L" 65+31 | X | | 14' |
| "L" 66+25 | X | | 16' |
| "L" 66+96 | X | | 18' |
| "L" 67+76 | X | | 14' |
| "L" 69+41 | X | | 20' |
| "L" 69+94 | X | | 14' |
| | | | |
| "L" 70+74 | X | | 14' |
| "L" 72+52 | X | | 18' |
| "L" 73+03 | X | | 16' |
| "L" 73+83 | X | | 14' |
| "L" 74+44 | X | | 18' |
| "L" 75+23 | X | | 14' |
| | | | |
| "L" 75+97 | X | | 32' |
| "L" 79+23 | X | | 36' |
| "L" 81+54 | X | | 18' |
| "L" 82+78 | X | | 36' |
| "L" 84+52 | X | | 86' |
| "L" 86+78 | X | | 14' |
| | | | |
| "L" 97+12 | X | | 30' |




Section A-A

Notes: 1. See Sheet #13 & #22 for Brady Street intersection details.
2. Approaches & intersections on the Lt. shall conform to the main line typical that applies in that area.

## APPROACH & INTERSECTION DETAIL

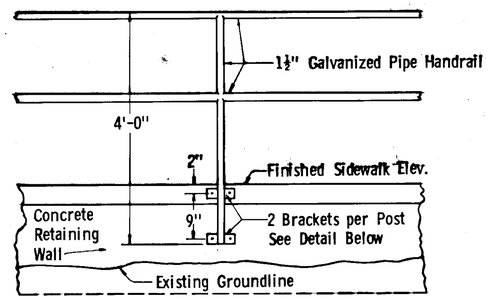
### CULVERT SUMMARY

| Station | L.F. | Size (in.) | Left | Right | Remarks |
|---|---|---|---|---|---|
| ~~"L" 25+78~~ | ~~20~~ | ~~18"~~ | ~~30'~~ | | ~~Remove~~ |
| "L" ~~27+25~~ 26+78 | 20 | 18" | 30' | | Remove |
| "L" 26+72 | 40 | 12" | 30' | | Install |
| "L" 36+04 | 21 | 18" | | 22' | Remove |
| "L" 36+04 | 30 | 18" | | 22' | Install |
| | | | | | |
| "L" ~~41+80~~ 42+84 | 40 | 18" | | 22' | Remove |
| "L" ~~41+80~~ 42+84 | 40 | 18" | | 22' | Install |
| "L" 42+96 | 24 | 18" | | 22' | Remove |
| "L" 42+89 | ~~8~~ 13 | 24" | | ~~22'~~ 23' | Install |
| "L" 43+90 | 26 | 18" | | 22' | Install |
| "L" 45+73 | 40 | 18" | | 22' | Install |
| "L" 57+43 | 44 | 18" | | 22' | Remove |
| "L" 57+43 | ~~44~~ 45 | ~~18"~~ 12" | | 22' | Install |
| "L" 58+82 | 56 | 18" | | 24' | Remove |
| "L" 58+68 | 32 | 18" | | 21' | Install |
| "L" 59+59 | 145 | 24" | | 21' | Install |
| "L" 61+20 | 168 | 24" | | 21' | Install |
| "L" 62+32 | 65 | 18" | 22' to | 22' | Install |
| "L" 75+97 | 34 | 18" | | 22' | Remove |
| "L" ~~75+97~~ 76+00 | ~~42~~ 43 | 18" | | ~~22'~~ 21' | Install |
| "L" 62+06 | 15 | 18" | | 22' | Install |
| "L" 62+10 | 10 | 18" | | 22' | Remove |
| "L" 45+73 | 40 | 18" | | 22' | Remove |
| | | | | | |

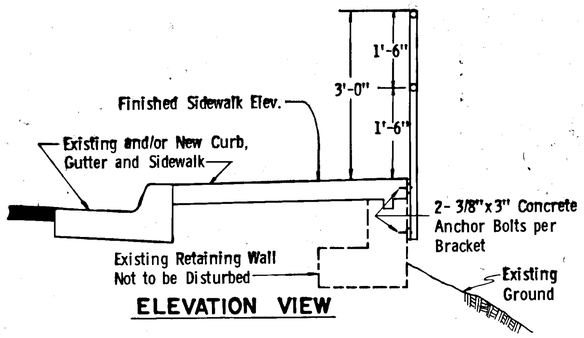
### ADJUST EXISTING MONUMENTS & CASES

| Station | Location | Point | |
|---|---|---|---|
| "L" 30+33.98 | Centerline | P.C. | |
| "L" 32+66.33 | Centerline | P.T. | |
| "L" 34+05.74 | Centerline | P.C. | |
| "L" 62+58.61 | Centerline | P.O.T. | |
| "L" 37+69.41 Bk. = "L" 37+66.73 Ahd. | Centerline | P.T. | |
| "L" 71+70 | Centerline | P.O.T. | |
| "L" 39+30.5 | Centerline | P.O.T. | |
| ~~"L" 41+55.13~~ | ~~Centerline~~ | ~~P.C.~~ | |
| "L" 46+85.21 | Centerline | P.T. | |
| "L" 77+80 | Centerline | P.O.T. | |
| "L" 52+01.5 | Centerline | P.O.T. | Install |
| "L" 58+50.0 86.47 | Centerline | P.O.T. | Install |
| "L" 66+56.7 | Centerline | P.C. | |
| "L" 74+39.09 | Centerline | P.T. | Install |
| "L" 79+76.38 | Centerline | P.C. | Install |
| "L" 82+35 | Centerline | P.O.T. | |
| "L" 83+61.62 | Centerline | P.T. | Install |
| "L" 88+31.96 | Centerline | P.C. | Install |
| "L" 90+36.36 | Centerline | P.T. | Install |
| "L" 94+71.00 | Centerline | P.C. | Install |
| "L" 87+75 | Centerline | P.O.T. | |
| "L" 97+32.11 Bk. = "L" 84+67.54 Ahd. | Centerline | P.T. / P.O.T. | Install |
| "L" 88+36 | Centerline | P.O.T. | |
| "L" 93+80 | Centerline | P.O.T. | |
| | | | |

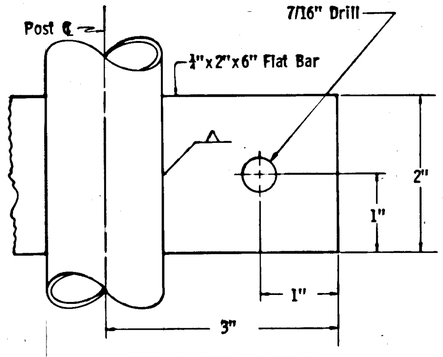
## HANDRAIL DETAILS




SIDE VIEW




ELEVATION VIEW




BRACKET DETAIL
Symmetrical About Post ℄

NOTES

1. All fabrication of brackets shall be completed before being galvanized.
2. Handrail may be erected using either adjustable type fittings or welded joints ( ground smooth ).
3. All hardware used in the installation of the handrail shall be galvanized.
4. See plan & profile sheets for post spacings, locations and length.

| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TO SHEET |
|---|---|---|---|---|
| ALASKA | RF-099-3(12) OS-3-(001) | 1975 | 5 | |

# WATER SERVICE CONNECTIONS

| | STATION | SIZE | OFFSET LT. | OFFSET RT. | REMARKS |
|---|---|---|---|---|---|
| | "L" 26+~~72~~ 66.7 | 1" | 21.5' | | Reconnect existing service. See Sheet No. 6 for Details |
| | "L" 27+~~87~~ 86 | 1" | 21.5' | | |
| "L" 28+61.4 1" Lt. | "L" 35+~~71~~ 70 | 1" | | 25' | |
| | "L" 36+~~67~~ 66 | 1" | | 25' | |
| | "L" 39+~~03~~ 00 | 1" | 21.5' | | |
| | "L" 42+~~24~~ 49 | 1" | 21.5' | | |
| | "L" 43+32.9 | 1" | | 25' | |
| | "L" 43+~~98~~ 99.2 | 1" | | 25' | |
| | "L" 48+94 | 2" | | 25' | Reconnect existing service. See Sheet No. 6 for Details |
| | | | | | |
| | "L" 54+~~20~~ 26.5 | 2" | 21.5' | | Cap future Service |
| | | | | | |
| | ~~"L" 62+50~~ | ~~1"~~ | ~~21.5'~~ | | Reconnect existing service. See sheet no. 6 for Details |
| "L" 63+93 1" Lt. | ~~"L" 62+84~~ | ~~1"~~ | ~~21.5'~~ | | |
| "L" 66+37 1" Lt. | "L" 63+~~81~~ 85 | 1" | 21.5' | | |
| "L" 66+43 2" Lt. | "L" 64+~~75~~ 76.5 | 1" | | 40' | |
| | "L" 66+~~64~~ 61.9 | 1" | | 40' | |
| | | | | | |
| | "L" 67+~~49~~ 76 | 1" | 21.5' | | |
| | ~~"L" 68+04~~ | ~~1"~~ | ~~21.5'~~ | | |
| | "L" 68+~~15~~ 16 | 1" | 21.5' | | |
| | "L" 68+~~62~~ 63.2 | 1" | | 40' | |
| | "L" 69+~~25~~ 27 | 1" | 21.5' | | |
| "L" 69+78 1" Lt. | ~~"L" 69+67~~ | ~~1"~~ | | ~~40'~~ | |
| | | | | | |
| | "L" 70+~~52~~ 55.1 | 1" | | 40' | |
| | "L" 71+20 | 1" | | 40' | |
| "L" 72+11 1" Lt. | "L" 72+~~39~~ 48.8 | 1" | | 40' | |
| | "L" 73+09 | 1" | 21.5' | | |
| | | | | | |
| | "L" 73+~~26~~ 28.5 | 1" | | 40' | |
| | "L" 73+~~94~~ 64 | 1" | | 40' | |
| | "L" 74+~~57~~ 54 | 1" | | 40' | |
| | "L" 74+~~85~~ 83 | 1" | 21.5' | | |
| | "L" 75+~~25~~ 19.5 | 1" | 21.5' | | |
| | "L" 75+~~40~~ 37.6 | 1" | | 40' | |
| | "L" 75+~~63~~ 64 | 1" | 21.5' | | |
| | "L" 76+25 | 1" | 21.5' | | |
| "L" 76+57 1" Rt. | "L" 76+~~32~~ 03 | 1" | | 40' | |
| | "L" 76+~~67~~ 66 | 1" | 21.5' | | |
| | "L" 77+43 | 1" | 21.5' | | |
| | "L" 78+~~57~~ 48 | 1" | 21.5' | | |
| | "L" 79+~~42~~ 39 | 1" | 21.5' | | |
| | "L" 79+85 | 1" | 21.5' | | |
| "L" 82+37 1" Lt. | "L" 80+~~69~~ 65 | 1" | 21.5' | | |
| | "L" 83+~~18~~ 05 | 2" | | 25' | |
| "L" 83+61.9 1" Lt. | "L" 83+~~52~~ 51 | 1" | 21.5' | | |
| | | | | | |
| "L" 85+40 1" Lt. | "L" 84+~~76~~ 73.2 | 2" | | 25' | |
| "L" 86+17.4 2" Rt. | "L" 86+~~21~~ 16 | 1" | 21.5' | | |
| "L" 87+23 1" Lt. | "L" 87+~~26~~ 21.5 | 1" | 21.5' | | |
| "L" 88+01 1" Lt. | "L" 88+~~95~~ 93.9 | 1" | 21.5' | | |
| | "L" 87+93 | 1" | | 40 | |
| | "L" 90+~~72~~ 63 | 1" | 21.5' | | |
| | "L" 91+29.8 | 1" | 21.5' | | |
| | "L" 92+~~40~~ 08.5 | 1" | 21.5' | | |
| | ~~"L" 92+93~~ | ~~1"~~ | ~~21.5'~~ | | |
| | "L" 93+16 | 1" | 21.5 | | |
| | "L" 94+86.7 | 1" | 21.5' | | |
| | "L" 94+88 | 1" | 21.5' | | |
| | "L" 95+~~90~~ 94.4 | 1" | 21.5' | | |
| | "L" 96+~~84~~ 86 | 1" | 21.5' | | Reconnect existing service. See sheet no. 6 for Details |
| | EQUATION: Station "L" 97+~~32~~ 21 Bk. = Station "L" 84+67.54 Ahd. | | | | |
| "L" 85+24 - 1" - Rt. | "L" 86+~~39~~ 27 | 1" | | 25' | Reconnect existing service. See sheet no. 6 for Details |
| "L" 85+59.5 - 1" - Lt. | "L" 86+~~90~~ 76.5 | 1" | 25' | | |
| "L" 85+66 - 1" - Lt. | ~~"L" 87+97~~ | ~~1"~~ | | ~~25'~~ | |
| "L" 87+15 - 1" - Rt. | "L" 88+~~23~~ 17.5 | 1" | | 25' | |
| "L" 87+16 - 1" - Rt. | "L" 88+~~70~~ 64 | ~~1"~~ 2" | 25' | | |
| "L" 88+24 1" Lt. | | | | | |
| | "L" 90+~~75~~ 57.5 | 1" | 25' | | |
| | "L" 91+~~78~~ 75.7 | 1" | | 25' | |
| | "L" 92+~~15~~ 04 | 1" | 25' | | |
| | ~~"L" 92+95~~ | ~~1"~~ | ~~25'~~ | | |
| | "L" 93+~~60~~ 44 | 1" | 25' | | Reconnect existing service. See sheet No. 6 for Details |
| | | | | | |
| | All service on Sheets 26 & 27 | 3/4" | 22' Lt or | Rt. | Reconnect existing service. See sheet No. 6 for details. |

# WATER MAIN INSTALLATION

4" D.I. 44.8 L.F. "L" 69+66.5 15' Lt. to 30' Rt.

4" D.I. 8 L.F. "L" 85+63 15' Lt. to 23' Lt.

| SIZE | TYPE | L.F. | WORK | STATION | OFFSET | REMARKS |
|---|---|---|---|---|---|---|
| 8" | D.I. | 2301 ~~2260~~ | Install | from "L" 23+88 | 17' Lt. | Connect to 16" C.I.W.M. |
| | | | | to "L" 46+45 | 15' Lt. | Connect to 8" G.V. |
| 3" | D.I. | ~~14~~ 20 | Install | from "L" 32+73 | 18' Lt. | Connect to tee |
| | | | | to "L" 32+75 | 38' Lt. | Connect to existing C.I.W.M. |
| 6" | D.I. | ~~60~~ 56 | Install | from "L" 39+~~40~~ 55 | 15' Lt. | Connect to tee |
| | | | | to "L" 39+~~40~~ 55 | ~~45'~~ Rt. 41' | Connect to existing 6" W.S.W.M. |
| 4" | D.I. | 16 | Install | from "L" 41+~~86~~ 88 | 30' Lt. | Cap future service |
| | | | | to "L" 41+~~86~~ 88 | 15' ~~Rt.~~ Lt. | Connect to cross |
| 4" | D.I. | ~~72~~ 78.4 | Install | from "L" 41+~~86~~ 88 | 15' Lt. | Connect to cross |
| | | | | to "L" 41+~~76~~ 88 | 54' Rt. | Connect to existing 4" W.S.W.M. |
| 4" | D.I. | ~~14~~ 16 | Install | from "L" 45+~~27~~ 26 | 15' Lt. | Connect to tee |
| | | | | to "L" 45+~~27~~ 26 | 29' Lt. | Connect to existing 4" C.I.W.M. |
| 6" | D.I. | ~~14~~ 13.2 | Install | from "L" 45+~~31~~ 30 | 15' Lt. | Connect to tee |
| | | | | to "L" 45+~~31~~ 30 | ~~29'~~ Lt. 28' | Connect to existing 6" C.I.W.M. |
| 6" | D.I. | 64 | Install | from "L" 45+~~88~~ 85 | 13' Lt. | Connect to tee |
| | | | | to "L" 45+85 | 51' Rt. | Connect to existing 6" W.S.W.M. |
| 6" | D.I. | ~~20~~ 21 | Install | from "L" 49+~~28~~ 26.6 | 10' Lt. | Connect to tee |
| | | | | to "L" 49+~~28~~ 38 | 30' Lt. | Cap future service |
| 8" | D.I. | ~~56~~ 60.9 | Install | from "L" 54+24.5 | 26' Rt. | Connect to tee |
| | | | | to "L" 54+24.5 | ~~30'~~ Lt. 34.9 | Cap future service |
| 6" | D.I. | ~~58~~ 57 | Install | from "L" 55+77 | 28' Rt. | Connect to tee |
| | | | | to "L" 55+77 | ~~30'~~ Lt. 29' | Cap future service |
| 8" | D.I. | 4382.5 ~~4,436~~ | Install | from "L" 62+~~37~~ 92 | 10' Lt. | Connect to existing 8" D.I.W.M. |
| | | | | to "L" 94+~~13~~ 14.5 | 1' Lt. | Connect to existing 8" G.V. |
| 3" | D.I. | ~~56~~ 57.2 | Install | from "L" 81+~~34~~ 36 | 15' Lt. | Connect to tee |
| | | | | to "L" 81+~~34~~ 36 | 25' Rt. | Connect to existing 3" Galv. W.M. |
| 6" | D.I. | ~~66~~ 62 | Install | from "P" ~~"L"~~ 85+~~21~~ 24 | 15' Lt. | Connect to tee |
| | | | | to "P" ~~"L"~~ 85+~~21~~ 24 | 51' Rt. | Connect to existing 6" W.S.W.M. |
| 4" | D.I. | ~~35~~ 20 | Install | from "P" ~~"L"~~ 85+~~65~~ 66 | 15' Lt. | Connect to tee |
| | | | | to "P" ~~"L"~~ 85+~~65~~ 66 | 45' Lt. | Connect to existing 4" service |
| 3" | D.I. | 50 | Install | from "P" ~~"L"~~ 93+~~21~~ 22.5 | 15' Lt. | Connect to tee |
| | | | | to "P" ~~"L"~~ 93+21 | 35' Rt. | Connect to existing 3" service |
| 8" | D.I. | 1460 ~~1,464~~ | Install | from 0+80 | 10' Rt. | Connect to existing |
| | | | | to 15+~~57~~ 60 | 15 ~~10'~~ Lt. | Connect to existing |

# WATER MAIN APPURTENANCES

| STATION | OFFSET | REMARKS |
|---|---|---|
| "L" 23+~~89~~ 87 | 16' Rt | Install 8" G.V. & V.B. |
| | | |
| "L" 31+00 | 15' Lt | Install C.A.R.V. See sheet for details |
| "L" ~~33+73~~ 32+73 | 21.5' Lt. | Install 3" G.V. & V.B. |
| "L" ~~34+75~~ 34+67 | 6' Lt. | Install 8" G.V. & V.B. |
| "L" 38+~~63~~ 54 | 15' Lt. | Install 8" G.V. & V.B. |
| "L" 39+~~40~~ 55.4 | 25' Rt. | Install 6" G.V. & V.B. |
| "L" 40+~~00~~ 34 | 15' Lt. | Install C.A.R.V. See sheet for details. |
| "L" 41+~~86~~ 88 | 28' Rt. | Install 4" G.V. & V.B. |
| "L" 41+~~86~~ 88 | 21.5' Lt. | Install 4" G.V. & V.B. |
| "L" 44+~~63~~ 68.5 | *32' Lt. | Install 6" G.V., V.B., F.H. & 6" D.I. as required |
| "L" 45+~~27~~ 26 | 21.5' Lt. | Install 4" G.V. & V.B. |
| "L" 45+~~31~~ 30 | 21.5' Lt. | Install 6" G.V. & V.B. |
| "L" 45+~~80~~ 85 | 27' Rt. | Install 6" G.V. & V.B. |
| "L" 46+~~45~~ 20 | 10' Lt. | Install 8" G.V. & V.B. |
| "L" 49+~~28~~ 26.6 | 11' Lt. | Install 8" G.V. & V.B. |
| | | |
| "L" 54+24 | 24' Rt. | Install 8" G.V. & V.B. |
| "L" 55+~~78~~ 77 | 24' Rt. | Install 6" G.V. & V.B. |
| "L" 90+17 | * 30' Lt. | Install 6" G.V., V.B., F.H., & 6" D.I. as required |
| "L" 66+~~30~~ 22 | *30' Lt. | Install 6" G.V., V.B., F.H. & 6" D.I. as required |
| "L" 69+66.5 | 24' Rt. | Install 4" G.V. & V.B. |
| "L" 73+~~00~~ 01 | 15' Lt. | Install 8" G.V. & V.B. |
| "L" 75+~~99~~ 93 | *26' Lt. | Install 6" G.V., V.B., F.H. & 6" D.I. as required |
| "L" 77+50 | 15' Lt. | Install C.A.R.V. See sheet for details |
| "L" 90+00 | 15' Lt. | Install 8" G.V. & V.B. |
| "L" 81+~~34~~ 36 | 30' Rt. | Install 3" G.V. & V.B. |
| "L" 83+~~00~~ 02 | 15' Lt. | Install 8" G.V. & V.B. |
| "L" ~~84+87~~ 83+23 | 34' Lt. | Install 6" G.V., V.B., F.H. & 6" D.I. as required |
| "L" 87+00 | 15' Lt. | Install C.A.R.V. See sheet for details |
| " P" ~~"L" 94+00~~ 93+22.5 | 15' ~~Rt.~~ | Install ~~8"~~ G.V. & V.B. 3" |
| "L" 96+75 | *45' Lt. | Install 6" G.V., V.B., F.H. & 6" D.I. as required |
| | | |
| " P" ~~"L"~~ 85+~~21~~ 24 | 16' Rt. | Install 6" G.V. & V.B. |
| " P" ~~"L"~~ 85+~~65~~ 63 | 35' Lt. | Install 4" G.V. & V.B. |
| " P" ~~"L"~~ 93+~~21~~ 85+66 | 25' Rt. | Install ~~3"~~ G.V. & V.B. 4" |

* Offset given is for F.H.. Offset for G.V. & V.B. shall be 21.5'.

* "P" 90+20 45' Lt. Install 6" G.V., V.B., F.H., & 6" D.I. as required

# SUMMARY TABLES

## ADJUST EXISTING VALVE BOXES

| STATION | OFFSET | STATION | OFFSET |
|---|---|---|---|
| "L" 34+93 | 10' Lt. | | |
| "L" 34+96 | 15' Lt. | | |
| "L" 51+81 | 9' Lt. | | |
| ~~"SR52S" 0+74~~ | ~~17' Lt.~~ | | |
| ~~"SR52S" 0+74~~ | ~~5' Rt.~~ | | |
| | | | |
| | | | |
| | | | |

## SEWER MAIN APPURTENANCES

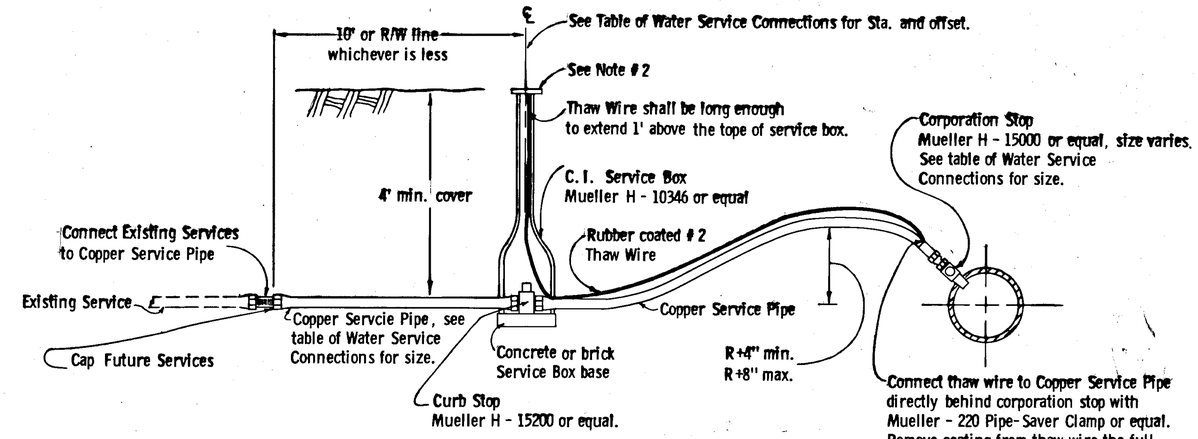
| STATION | OFFSET | REMARKS |
|---|---|---|
| | | |
| "L" 26+00 | ℄ | Adjust M.H. |
| "L" 30+78 | 12' RT. | |
| "L" 34+90 | 10' Rt. | |
| "L" 39+25 | 7' Rt. | |
| "L" 41+71 | 12' Rt. | |
| "L" 43+75 | 15' Rt. | |
| "L" 45+74 | 12.5' Rt | |
| "L" 57+28 | 11' Rt. | |
| "L" 58+60 | 10' Rt. | |
| "L" 62+47 | 10' Rt. | |
| "L" ~~66+27~~ 52+01 | 11' ~~26' Rt.~~ Lt | |
| "L" ~~85+00~~ 55+08 | 11' ~~19' Rt.~~ Lt | Adjust M. H. |

## CAST IRON SEWER MAINS & SERVICES FOR WATER LINE CROSSINGS

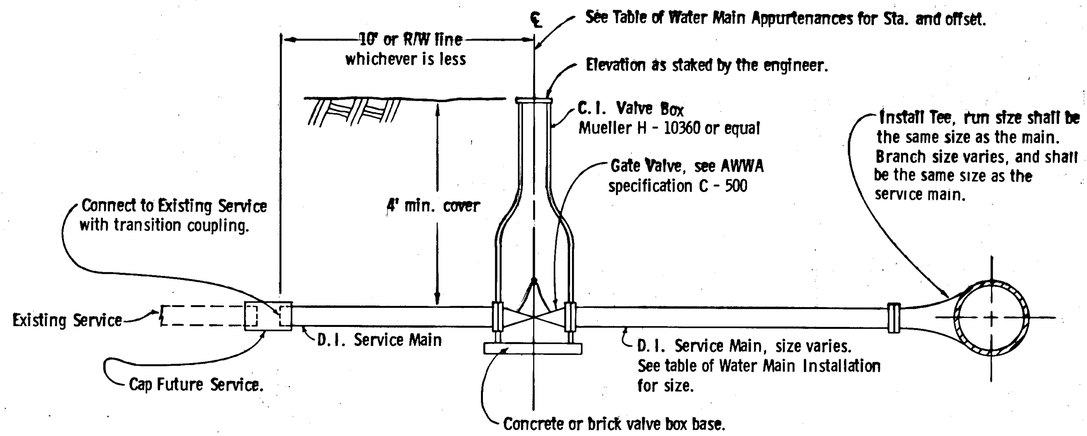
| STATION to STATION | LENGTH L.F. | SIZE | OFFSET | RRMARKS |
|---|---|---|---|---|
| "L" 24+~~67~~ 87 to "L" 24+84 | ~~30~~ 28.6 | 6" | 25' Lt.-1' Rt. | Reconnect existing service |
| "L" 26+~~81~~ 82 to "L" 26+~~82~~ 62 | ~~28~~ 25 | 6" | 25' Lt.-~~2'~~ Rt. ℄ | |
| "L" 27+~~72~~ 20 to "L" 27+~~72~~ 0 | ~~28~~ 18.6 | 6" | ~~12.5'~~ Lt.-3' Rt. | |
| 29+59 "L" ~~28+77~~ to "L" ~~27+78~~ 29+59 | ~~32~~ 30.4 | 6" | ~~29'~~ 31 Lt.-7' Rt. | |
| "L" 29+~~92~~ 20 to "L" 27+~~92~~ 0 | ~~34~~ 28.6 | 6" | ~~19.25'~~ Lt.-9' Rt. | |
| 30+80 "L" ~~30+71~~ to "L" 30+68 | 36.8 | 6" | 25' Lt.-11' Rt. | |
| 30+81.4 "L" ~~30+87~~ to "L" 30+~~92~~ 79.4 | 36.8 | 6" | 25' Lt.-~~9'~~ Rt. 11' | |
| ~~"L" 33+63 to "L" 33+65~~ | ~~22~~ | ~~6"~~ | ~~22' Lt. 0' Rt.~~ | Reconnect existing service |
| "L" 35+~~02~~ 10 to "L" 35+~~19~~ 22 | ~~20~~ 29.2 | 8" | 0' Lt.-13' ~~Rt.~~ Lt. | |
| ~~"L" 39+50 to "L" 39+50~~ | ~~20~~ | ~~6"~~ | ~~5' Lt. - 25' Lt.~~ | |
| ~~"L" 39+30 to "L" 39+50~~ | ~~20~~ | ~~10"~~ | ~~7' Rt. -7' Rt.~~ | |
| "L" 40+22 to "L" 40+22 | ~~26~~ | 6" | 4' Lt.-30' Lt. | Cap future service |
| ~~"L" 41+77 to "L" 41+97~~ | ~~20~~ | ~~10"~~ | ~~12' Rt. 14' Rt.~~ | |
| "L" 42+~~81~~ 10 to "L" 42+~~82~~ 55 | ~~22~~ 18.3 | 6" | ~~8'~~ 12 Lt. - 30 Lt. | |
| "L" 44+~~16~~ 10 to "L" 44+~~17~~ 12 | ~~26~~ 18.6 | 6" | ~~4'~~ 8 Lt. - ~~30'~~ Lt. 26' | Cap future service |
| ~~"L" 45+47 to "L" 45+59~~ | ~~20~~ | ~~6"~~ | ~~22' Lt.-6' Lt.~~ | |
| ~~"L" 45+76 to "L" 45+97~~ | ~~20~~ | ~~10"~~ | ~~13' Rt.-14' Rt.~~ | Connect to existing M.H. |
| "L" 49+~~24~~ 10 to "L" 49+~~54~~ | ~~44~~ 40.3 | 6" | 30' Lt.-~~14'~~ Rt. 10' | Connect to existing wye & cap, future service |
| ~~"L" 52+64 to "L" 52+64~~ | ~~26~~ | ~~6"~~ | ~~10' Lt. 36' Lt.~~ | Cap future service |
| ~~"L" 54+13 to "L" 54+33~~ | ~~20~~ | ~~10"~~ | ~~15' Rt. 15' Rt.~~ | |
| "L" 55+~~67~~ 10 to "L" 55+~~92~~ 88 | ~~25~~ 20 | 10" | 14' Rt.-14' Rt. | |
| "L" 55+87 to "L" 55+87 | ~~42~~ 44.6 | 6" | 30' Lt.-~~12'~~ Rt. 14 | Cap future service |
| ~~"L" 63+83 to "L" 63+85~~ | ~~20~~ | ~~6"~~ | ~~26' Lt.- 6' Lt.~~ | |
| ~~"L" 72+81 to "L" 72+82~~ | ~~20~~ | ~~14"~~ | ~~5' Lt.-25' Lt.~~ | |
| | | | | |
| "L" 35+00 | 11.9 | 8" | ℄ to 12' Lt. | |

| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | RF-099-3(12) | 1975 | 6 | 28 |

# WATER LINE DETAILS




## WATER SERVICE CONNECTIONS 2" and less

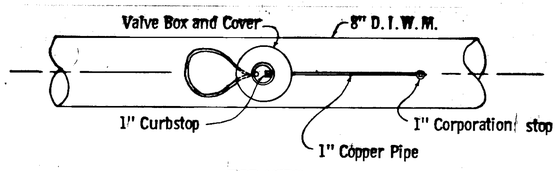



## WATER CONNECTIONS 3" and larger

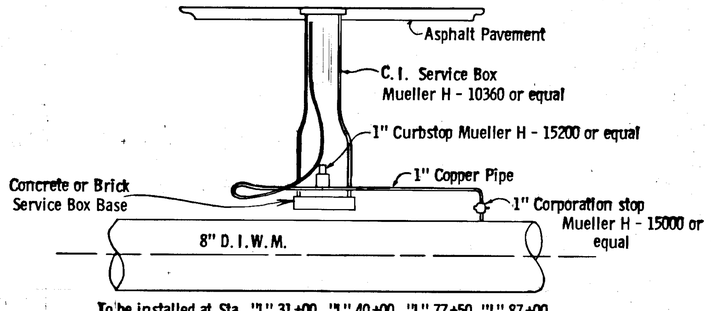
| ABBREVIATION TABLE | |
|---|---|
| A. C. | Asbestos Cement |
| S. S. | Sanitary Sewer |
| M. H. | Man Hole |
| C. O. | Clean Out |
| | |
| W. M. | Water Main |
| L. F. | Linear Foot |
| C. I. | Cast Iron |
| D. I. | Ductile Iron |
| G. V. | Gate Valve |
| V. B. | Valve Box |
| F. H. | Fire Hydrant |
| C. A. R. V. | Captive Air Relief Valve |

### NOTES

1. See Standard Drawing U - 03.00 for location and size of thrust blocks.
2. Service boxes installed on the left shall be set ½" below finished sidewalk elevation. Service boxes installed on the right shall be set flush with the existing ground or as directed by the engineer.
3. Existing fire hydrants shall be removed and disposed of as directed by the engineer.
4. Installation of new fire hydrants shall be in accordance with Standard Drawing U - 03.00. See Table of Water Main Appurtenances for locations of G.V., V.B. & F. H. Hydrants shall be Mueller A-24015 or equal.




TOP VIEW




To be installed at Sta. "L" 31+00, "L" 40+00, "L" 77+50, "L" 87+00

PLAN VIEW

## CAPTIVE AIR RELEASE VALVE DETAIL

| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | RF-099-3(12) | 1975 | 7 | 28 |

"O"
Δ = 41° 48' 52"
D = 28° Lt.
T = 78.17'
L = 149.34'
R = 204.63'
S = 0.02

"O" 22+77.13 P.T. Bk. = "O" 22+77.22 P.O.T. Ahd.

"O" 23+16.46 Bk = "L" 23+16.46 Ahd.

12" C.I.W.M.
12" C.I.W.M.
12"x10" Reducer
16"x12" Reducer
Existing Main Plugged
Existing R/W
℄ ERLER ST.
12" W.S.W.M. (Abandoned)
10" A.C.W.M.
10" A.C.W.M.
8" A.C.S.S.
16" C.I.W.M.
8" A.C.S.S.
Paving Limit
Cut & Cap
8" A.C.S.S.
8" W.S.W.M. (to be abandoned)
8" D.I.W.M.
8" A.C.S.S. (to be abandoned)
8" A.C.S.S.
N 50° 03' 52" W ~ 756.76'
8" A.C.S.S.
16" C.I.W.M.
10" C.I.S.S.
℄ SAWMILL CREEK BLVD.
℄ LAKE ST.
Existing R/W
Swan Lake
Existing R/W
"L" 26+78; 30' Lt Remove & dispose existing 18"x20' C.M.P. and regrade approach
+85.8 approach
~~"L" 27+25; 30' Lt. Remove & dispose existing 18"x20' C.M.P. and regrade approach~~
"L" 27+50; Lt. Existing Inlet box, grate, frame, & culvert shall not be disturbed.
"L" 27+30 Lt. to "L" 27+62 Existing retaining wall shall not be disturbed.
8" Underdrain
"L" 28+00
Match Line

Existing 16" C.I.
8" G.V.
45° Bend
16"x16"x8" Tapping Sleeve

"L" 23+80 to "L" 24+05 Transition Hot Asphalt Pavement to match existing

"L" 23+88 Begin installation of New 8" D.I.W.M.

"L" 26+40; Lt. to "L" 27+30; Lt. Fill & regrade existing ditch as directed by the engineer.

"L" 27+50; Lt. Connect 8" Underdrain to existing inlet box with 2-45° bends and 18' L.F. of Alum. Pipe conduit. See details below.

"L" 27+56; 27.5' Lt. to "L" 30+70; 27.5' Lt. Install 3/4 L.F. of 8" Perforated Corrugated Aluminum Pipe for Underdrains. See Underdrain detail, sheet no. 8.

HORIZONTAL CONTROL:
Bearings for this project are based on U.S.C.&G.S. triangulation stations "GRIFF" for the B.O.P. and "CHAN" for the E.O.P.

VERTICAL CONTROL:
Vertical Control was derived from U.S.C.&G.S. Benchmark #8. A standard disk, stamped, "8 1924" set in a rock 30 ft. in dia., 300 ft. south of R.C.A. office. U.S.C.&G.S. Elev. 13.14

BEGINNING OF PROJECT
RF-099-3(12)
Sta. "L" 23 + 80.00

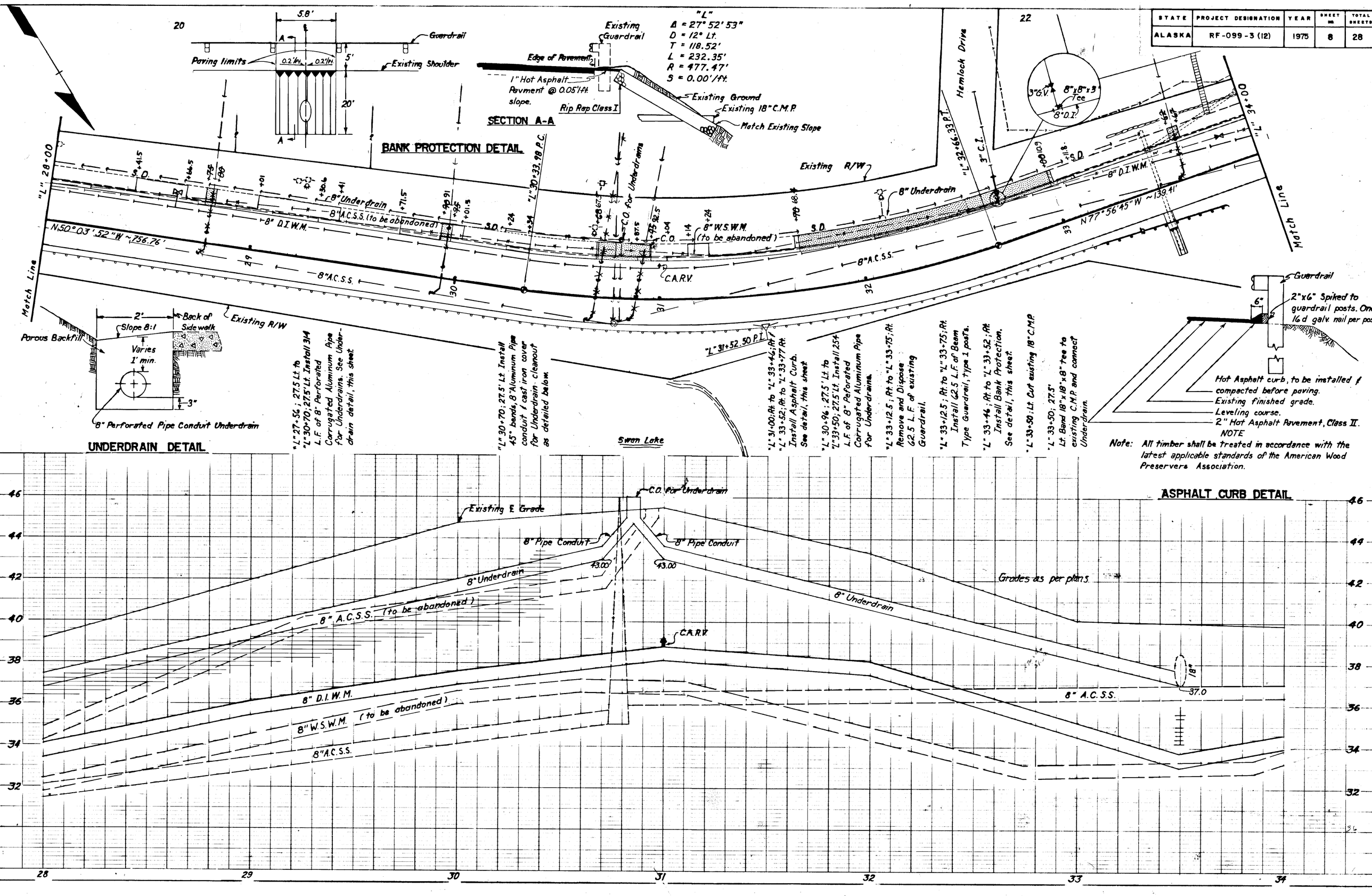
TBM #1 Elev. 34.54
Chiseled square in painted red corner of 5' x 6' Conc. slab. 35' Lt. Sta. "L" 22 + 95

38
36
34
32
30
28

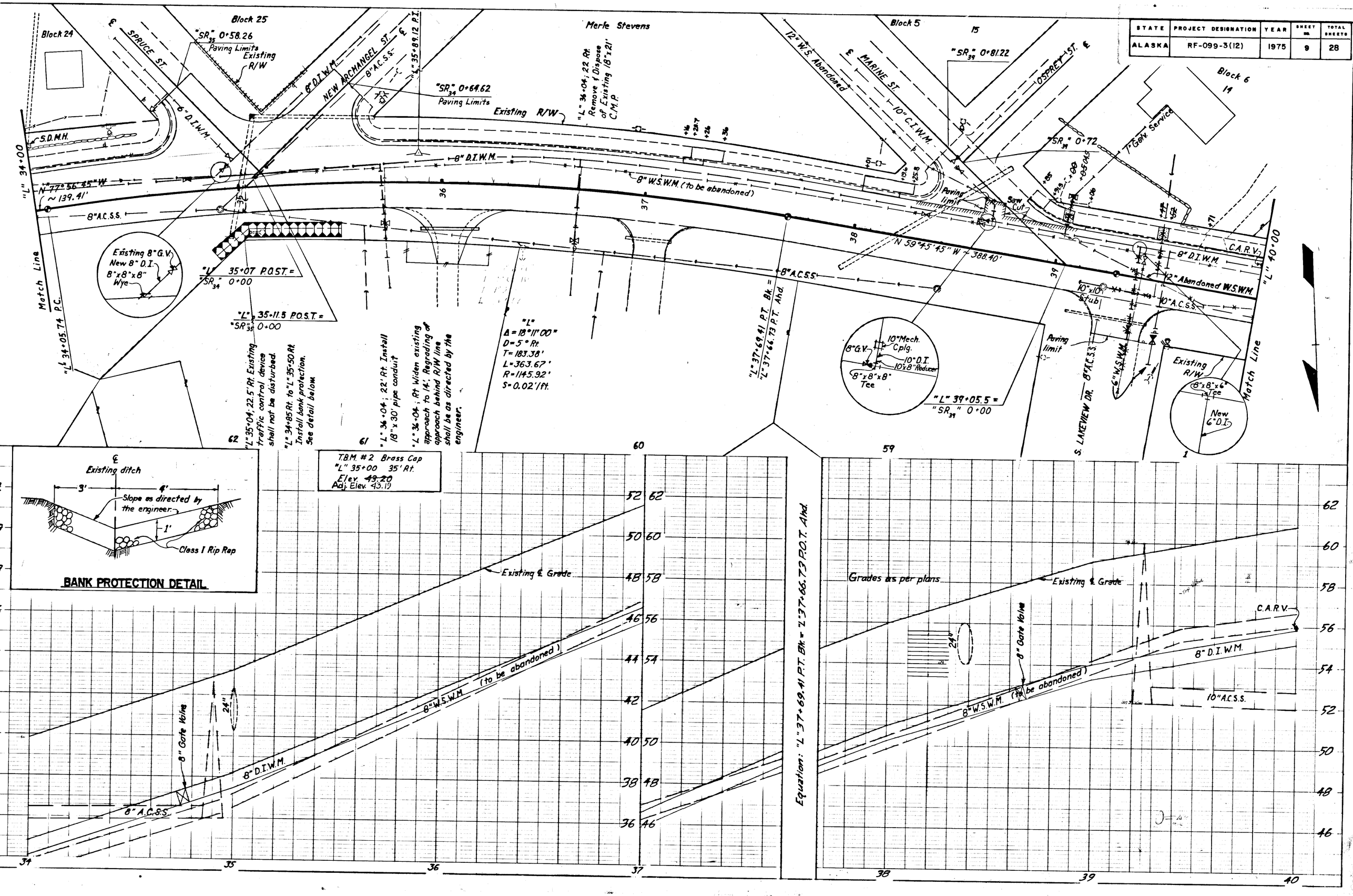
Grades as per plans
Existing ℄ Grade
8" Gate Valve
24"
24"
8" A.C.S.S. (to be abandoned)
8" D.I.W.M.
8" A.C.S.S.
10" C.I.S.S.
8" W.S.W.M. (to be abandoned)
8" D.I.W.M.
8" A.C.S.S.
24"
35.60
8" Pipe Conduit
34.40

22 23 24 25 26 27 28

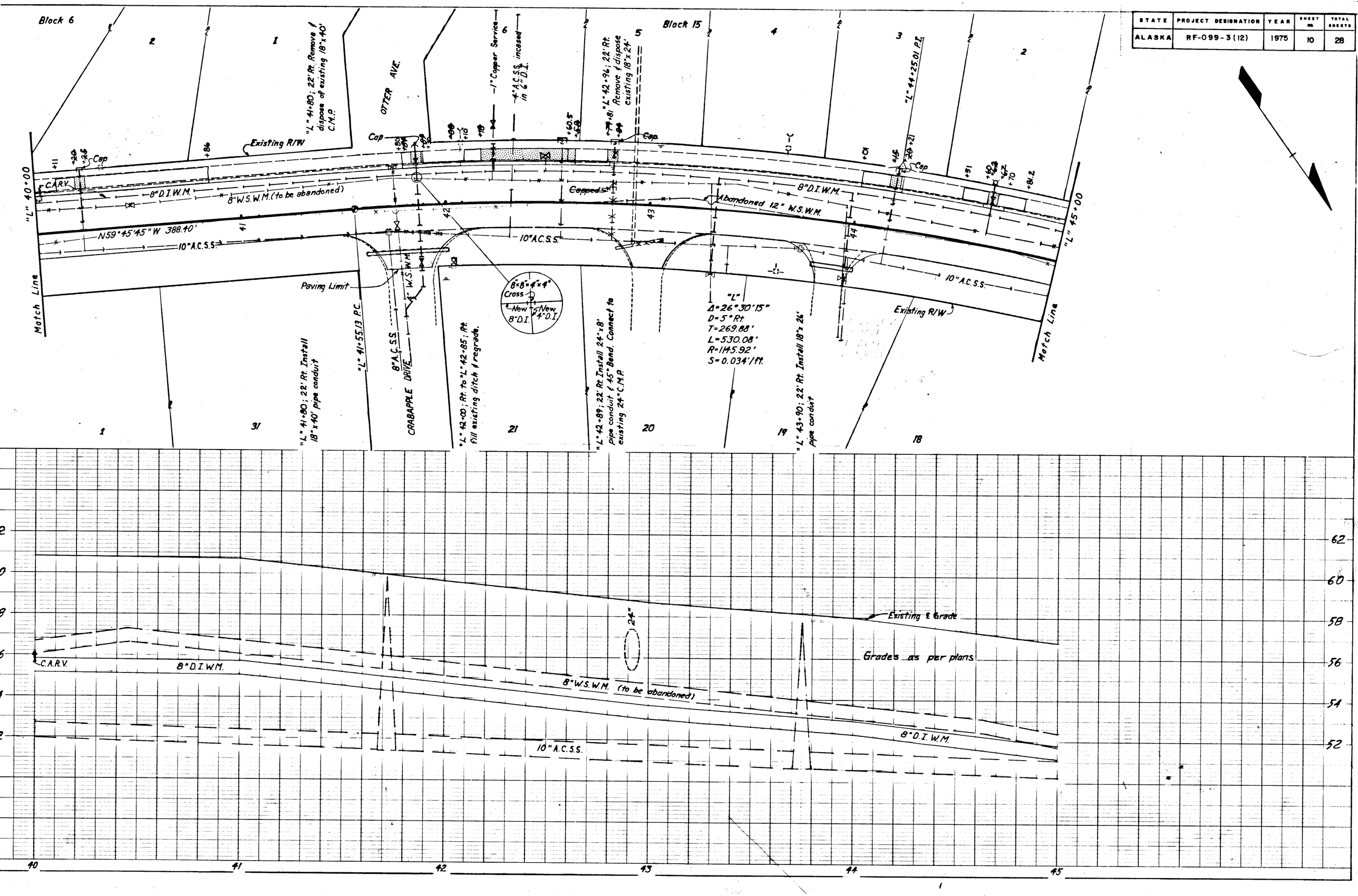
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | RF-099-3 (12) | 1975 | 8 | 28 |



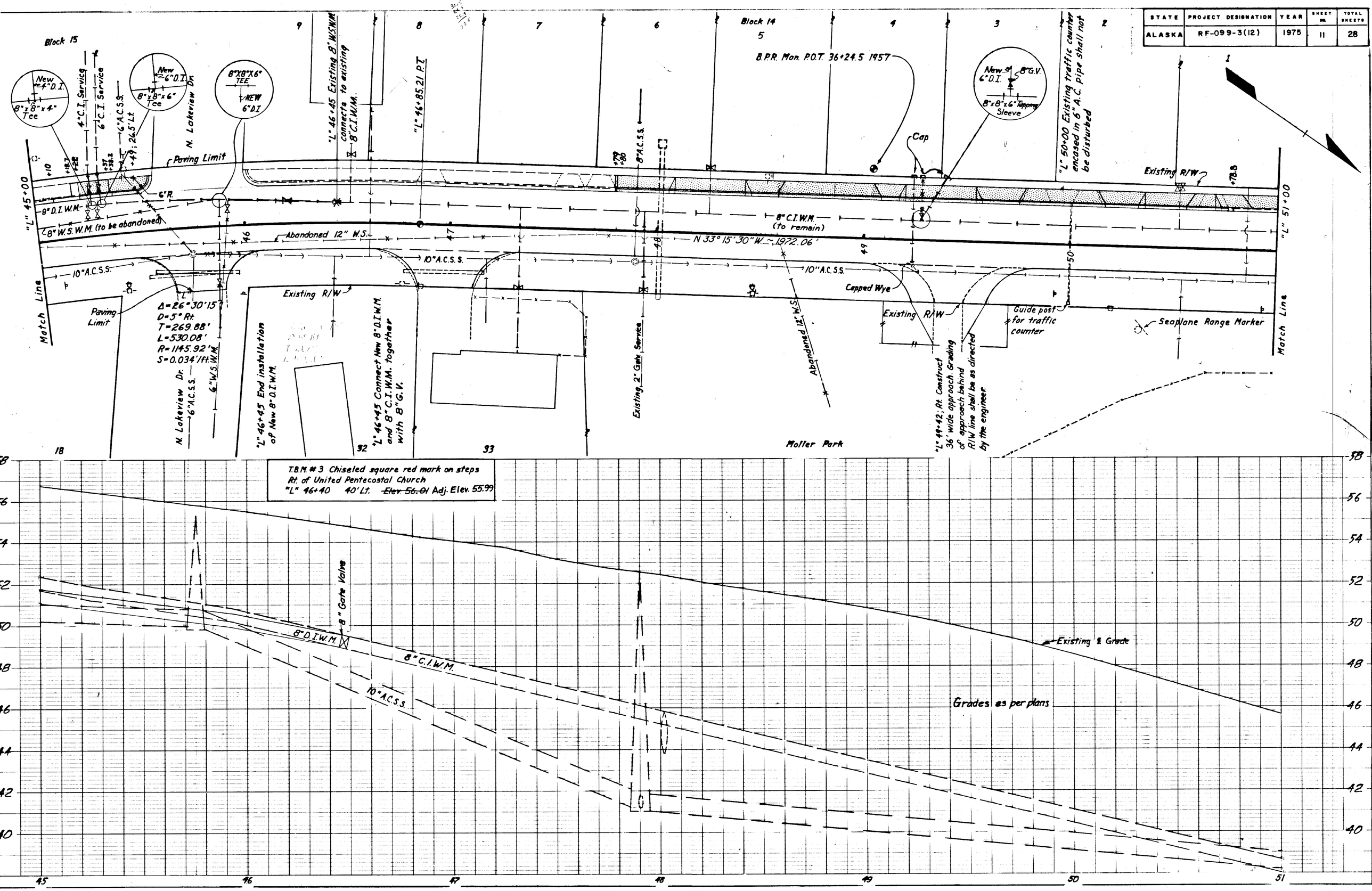
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | RF-099-3(12) | 1975 | 9 | 28 |



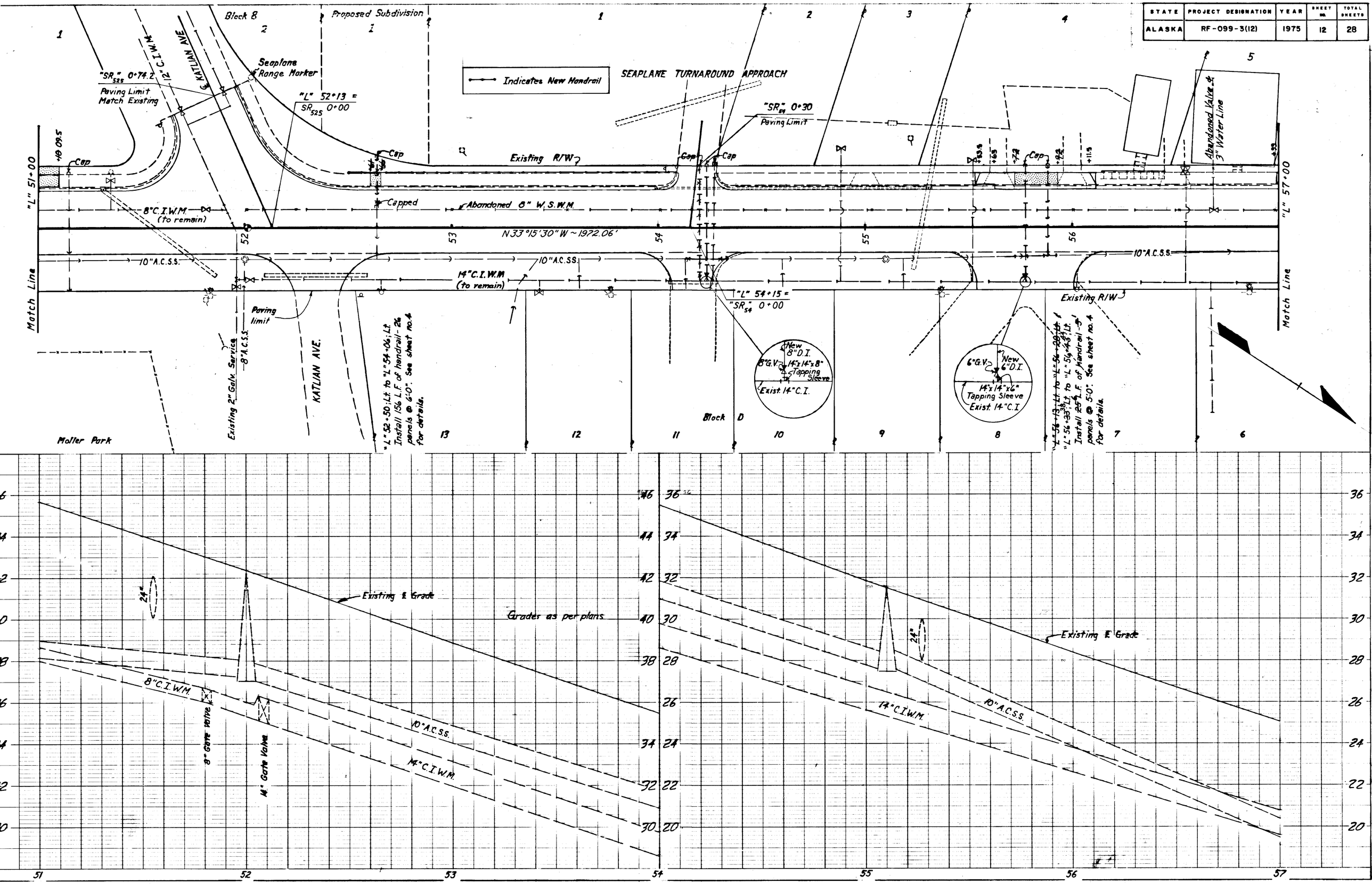
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | RF-099-3(12) | 1975 | 10 | 28 |



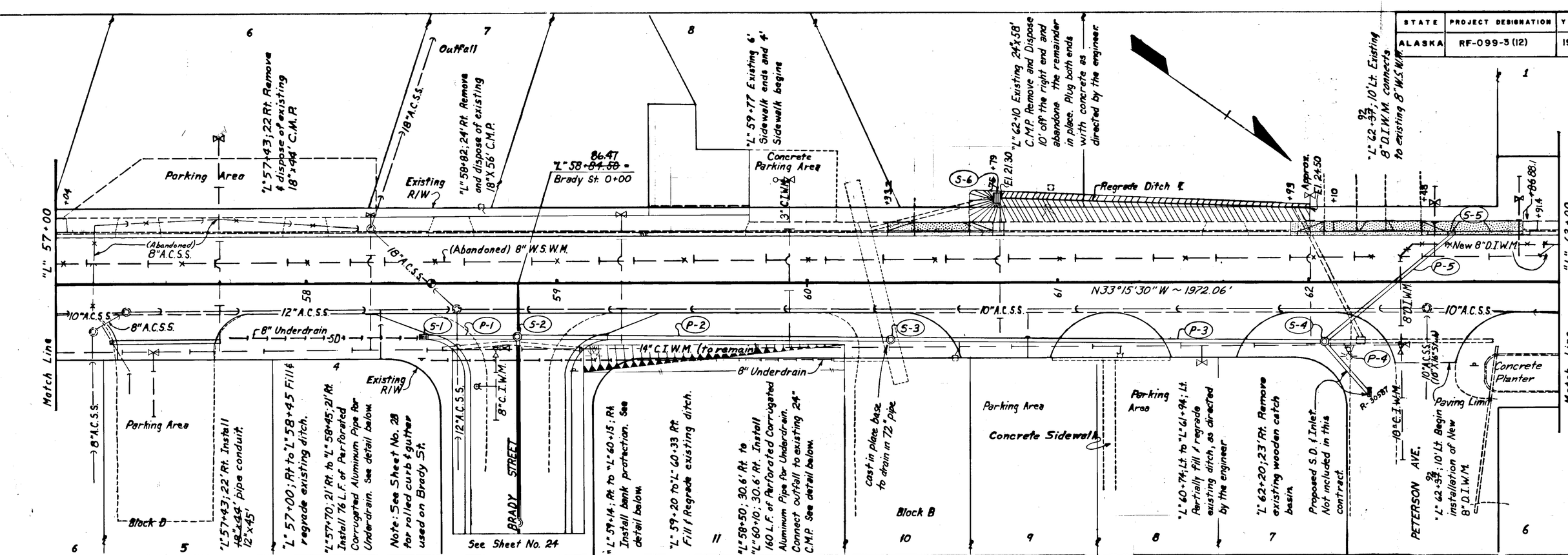
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | RF-099-3(12) | 1975 | 11 | 28 |



| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | RF-099-3(12) | 1975 | 12 | 28 |



| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | RF-099-3(12) | 1975 | 13 | 28 |







BANK PROTECTION DETAIL




UNDERDRAIN DETAIL

T.B.M. #4 Steel pipe with concrete nail. "L" 59+30 30' Lt. ~~Elev. 24.82~~ Adj. Elev. 24.75

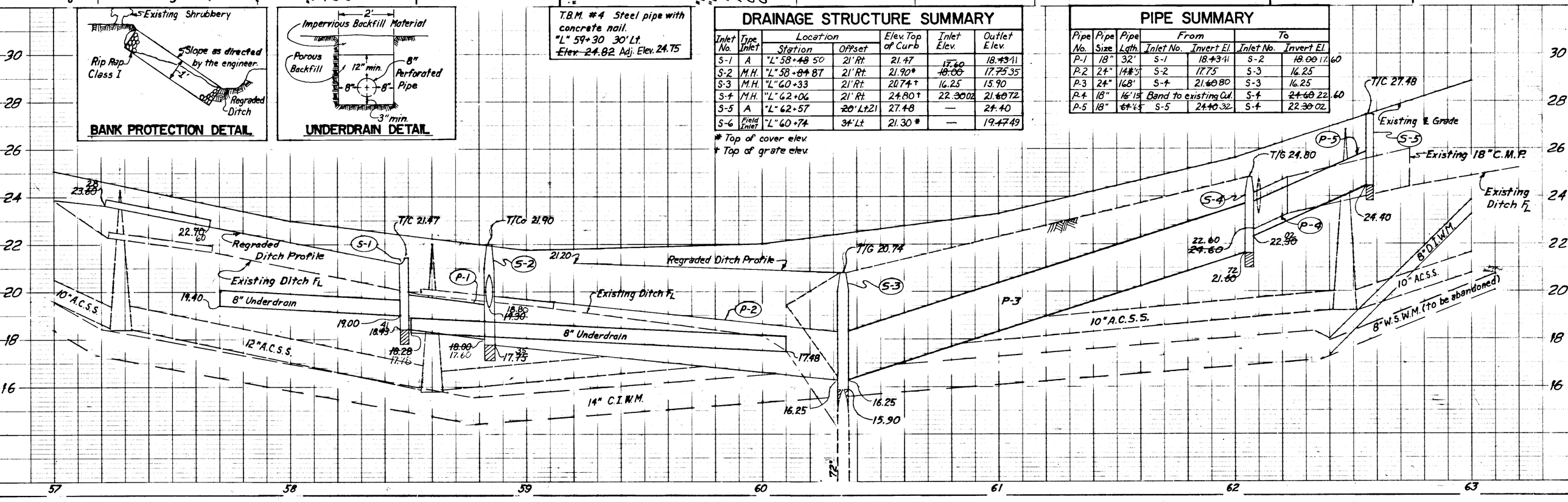
## DRAINAGE STRUCTURE SUMMARY

| Inlet No. | Type Inlet | Location: Station | Location: Offset | Elev. Top of Curb | Inlet Elev. | Outlet Elev. |
|---|---|---|---|---|---|---|
| S-1 | A | "L" 58+48 50 | 21' Rt. | 21.47 | ~~17.60~~ | 18.43 41 |
| S-2 | M.H. | "L" 58+84 87 | 21' Rt. | 21.90* | ~~18.00~~ | 17.75 35 |
| S-3 | M.H. | "L" 60+33 | 21' Rt. | 20.74† | 16.25 | 15.90 |
| S-4 | M.H. | "L" 62+06 | 21' Rt. | 24.80† | 22.30 02 | 21.60 72 |
| S-5 | A | "L" 62+57 | ~~20'~~ Lt. 21 | 27.48 | — | 24.40 |
| S-6 | Field Inlet | "L" 60+74 | 34' Lt. | 21.30* | — | 19.47 49 |

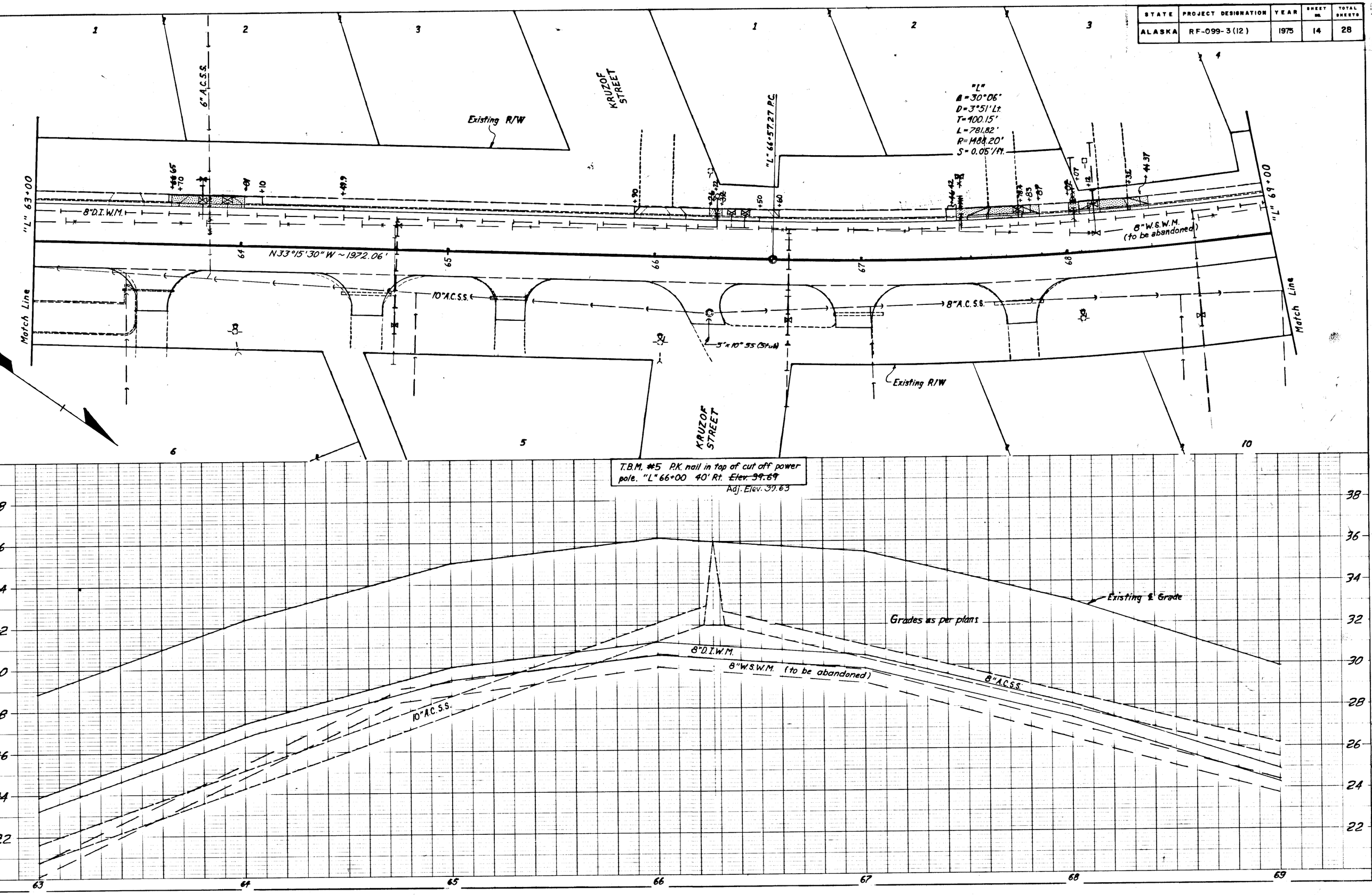
* Top of cover elev.
† Top of grate elev.

## PIPE SUMMARY

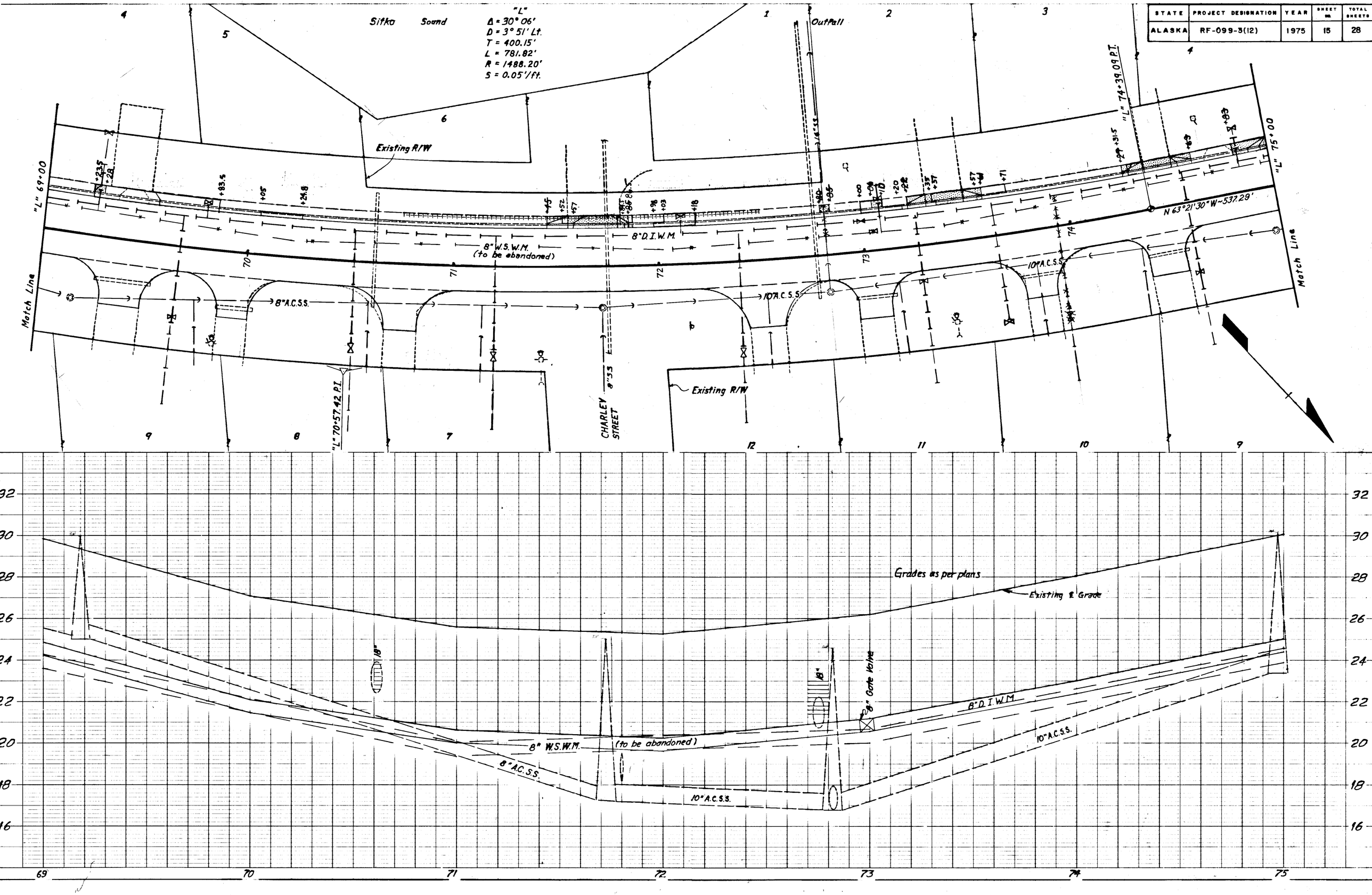
| Pipe No. | Pipe Size | Pipe Lgth. | From: Inlet No. | From: Invert El. | To: Inlet No. | To: Invert El. |
|---|---|---|---|---|---|---|
| P-1 | 18" | 32' | S-1 | 18.43 41 | S-2 | ~~18.00~~ 17.60 |
| P-2 | 24" | 14~~1.5~~ | S-2 | 17.75 | S-3 | 16.25 |
| P-3 | 24" | 168' | S-4 | 21.60 80 | S-3 | 16.25 |
| P-4 | 18" | 16'15 | Band to existing C.M. | | S-4 | ~~24.60~~ 22.60 |
| P-5 | 18" | ~~64'6.5~~ | S-5 | 24.40 32 | S-4 | 22.30 02 |



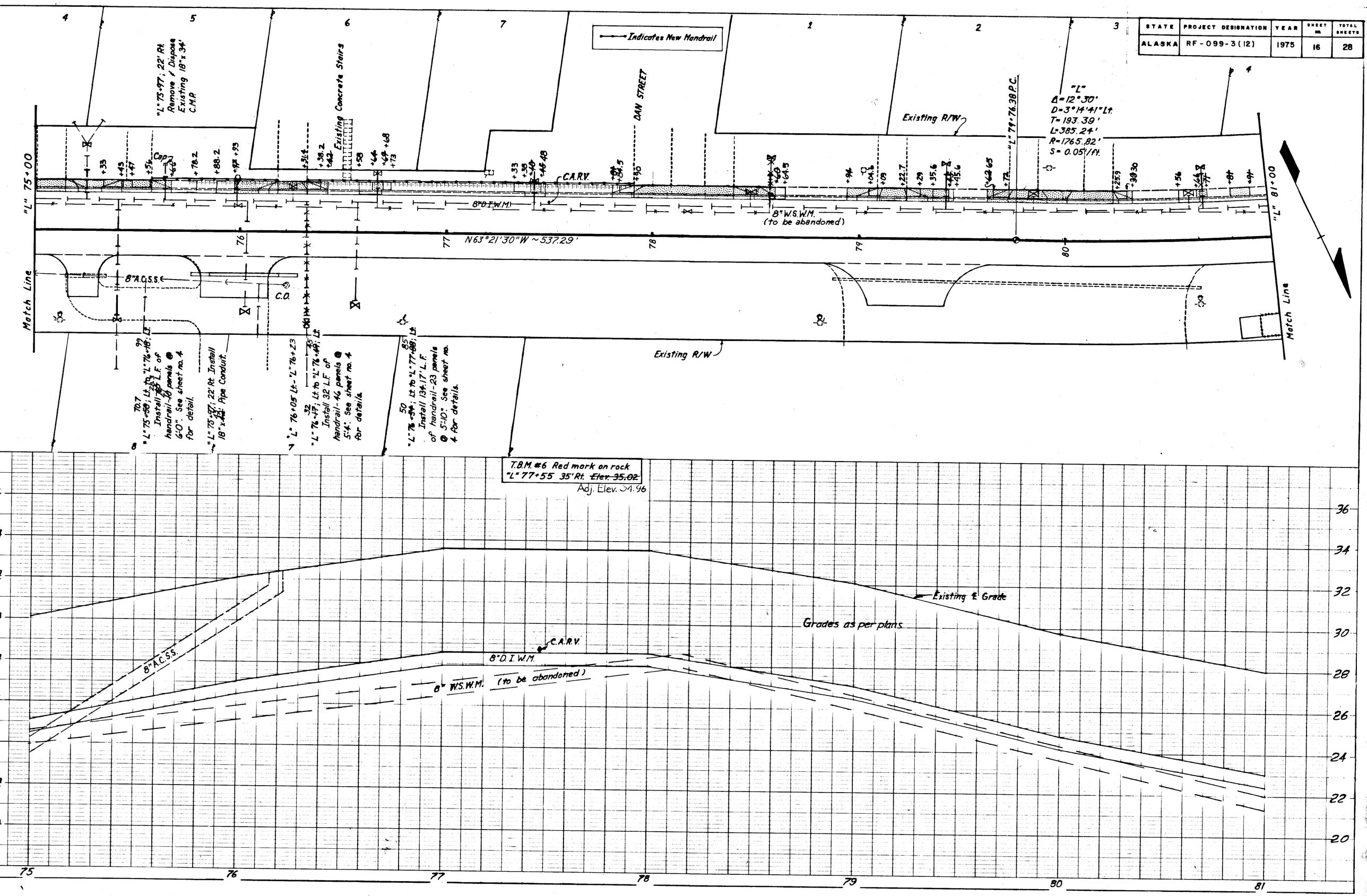
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | RF-099-3(12) | 1975 | 14 | 28 |



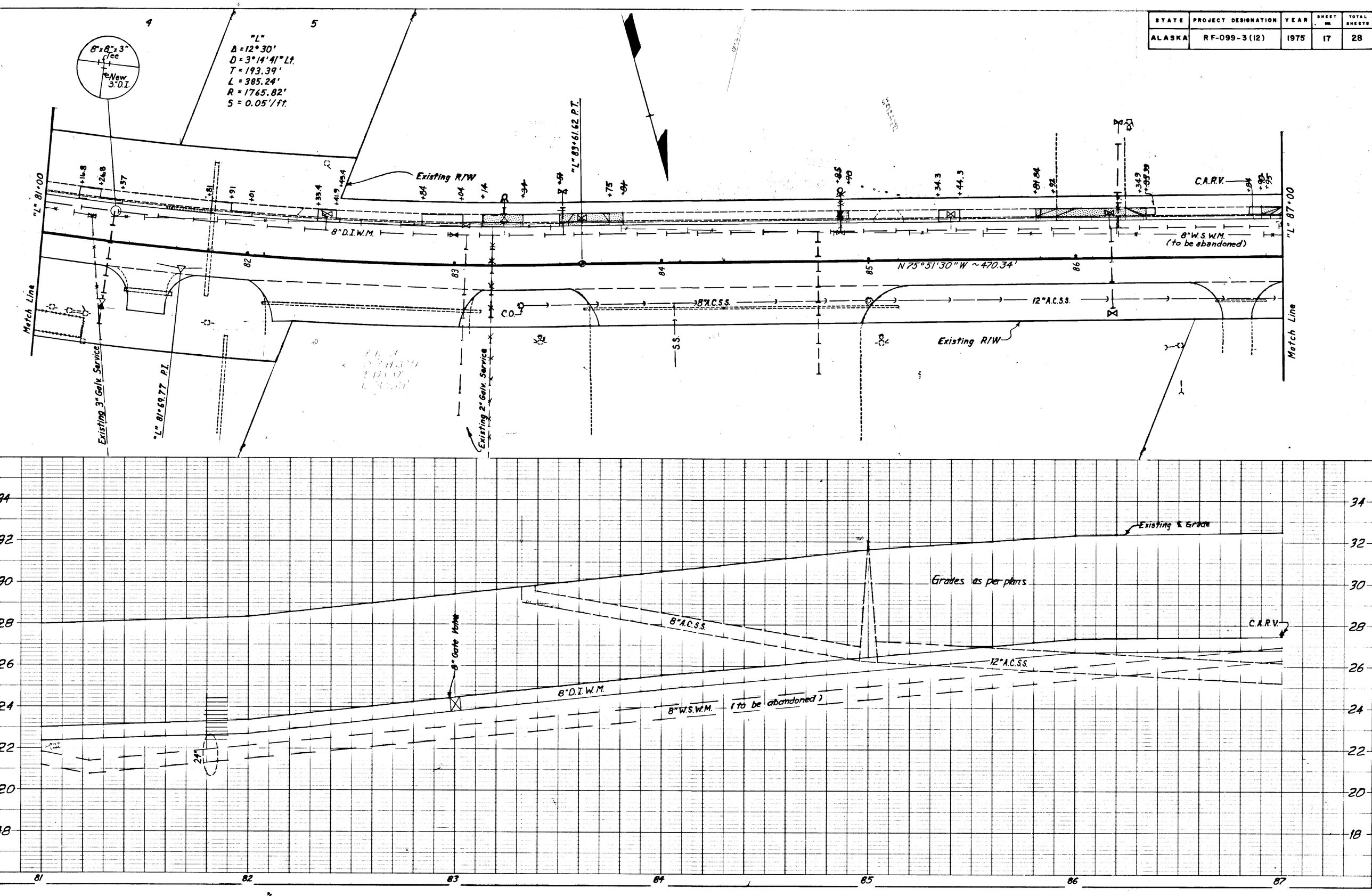
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | RF-099-3(12) | 1975 | 15 | 28 |



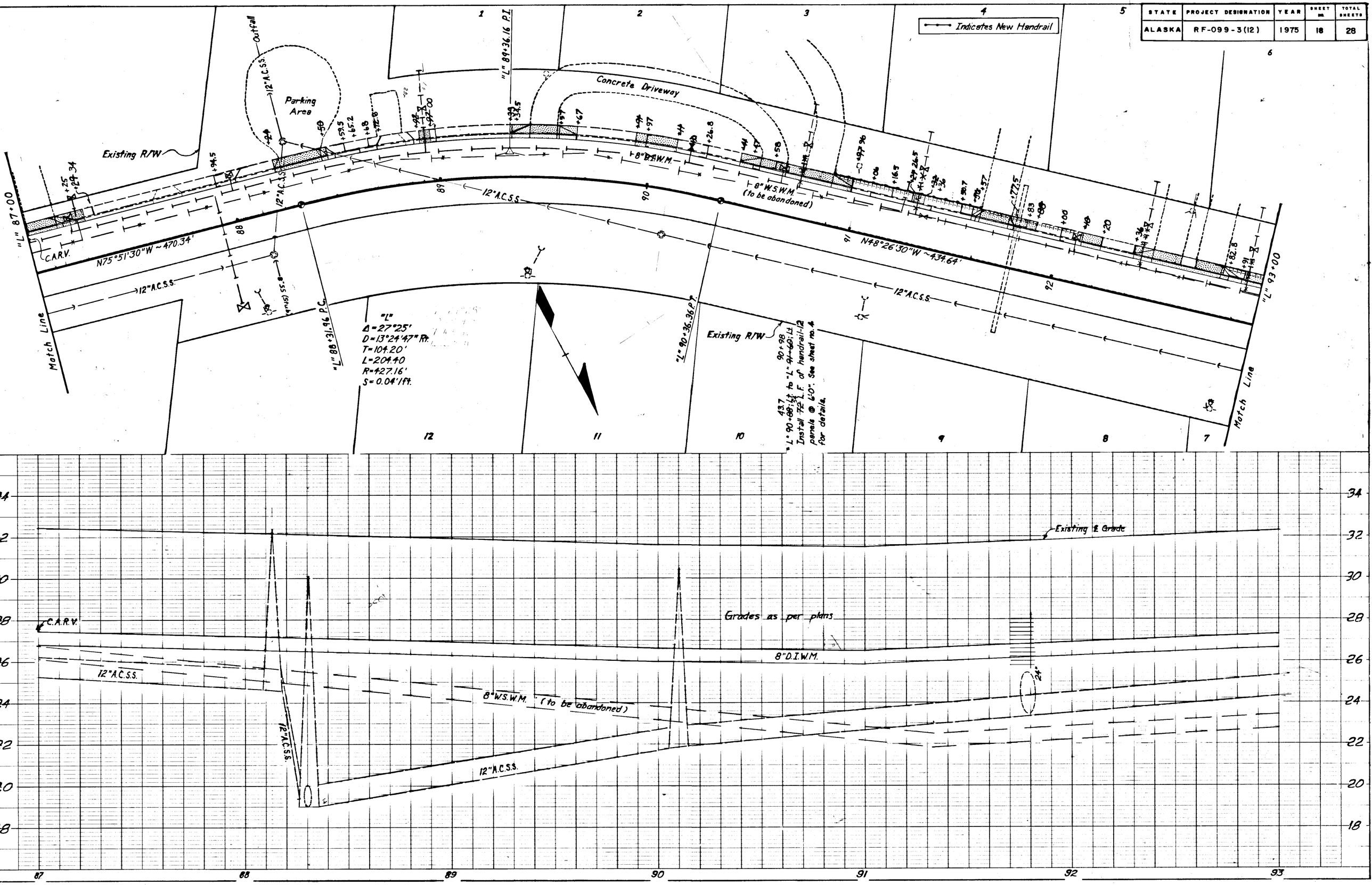
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | RF-099-3(12) | 1975 | 16 | 28 |



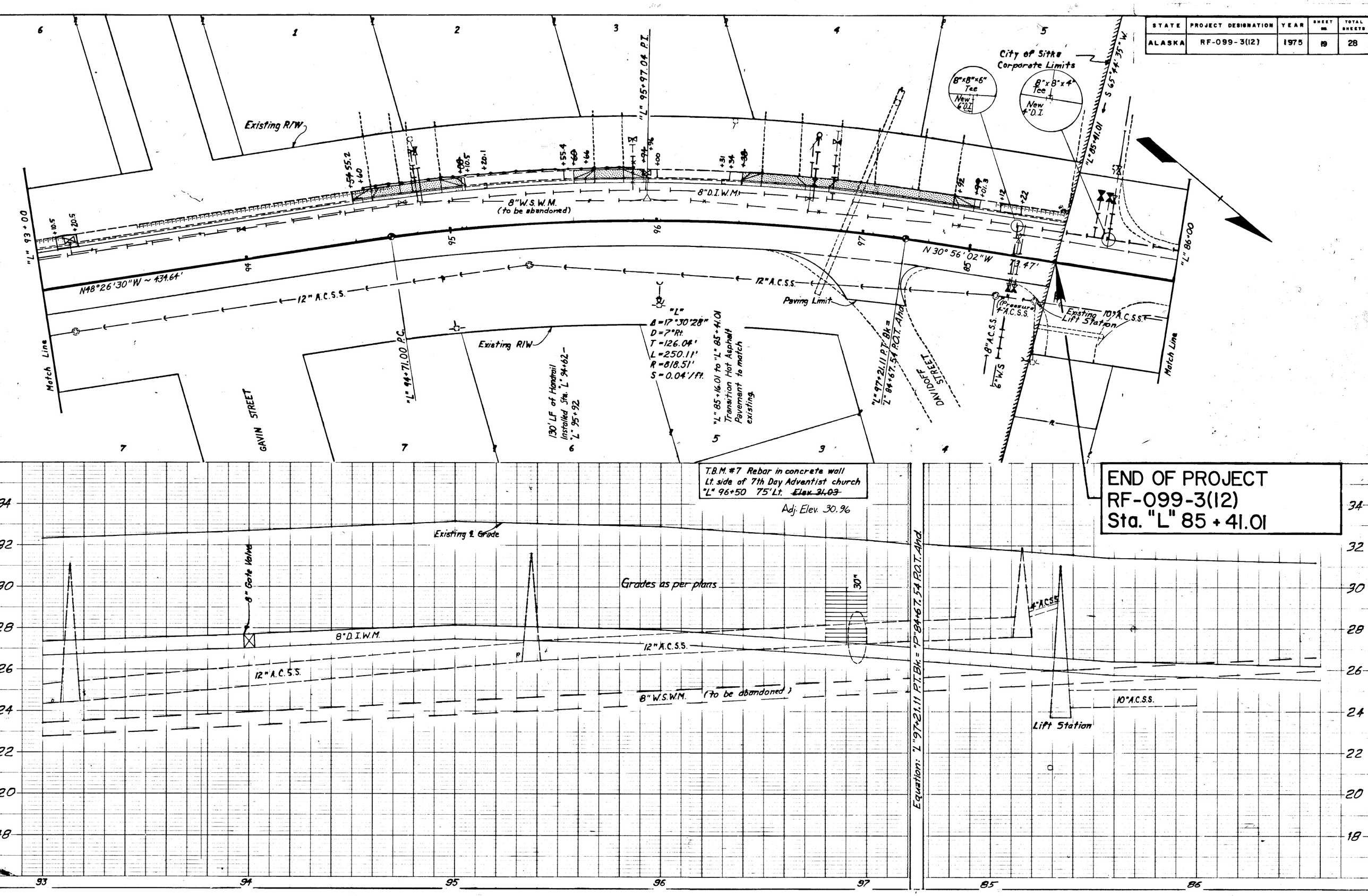
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | RF-099-3(12) | 1975 | 17 | 28 |



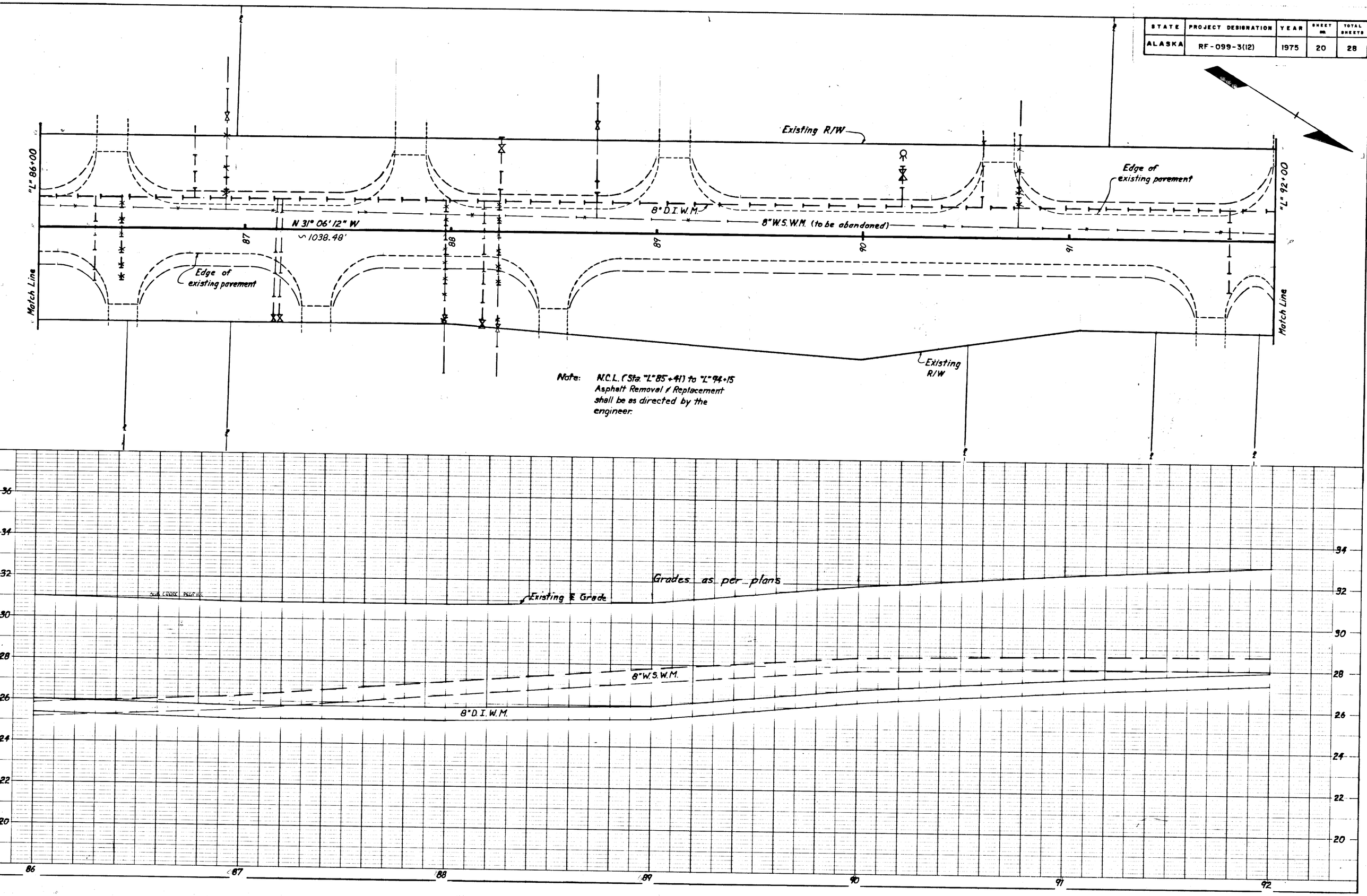
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | RF-099-3(12) | 1975 | 18 | 28 |



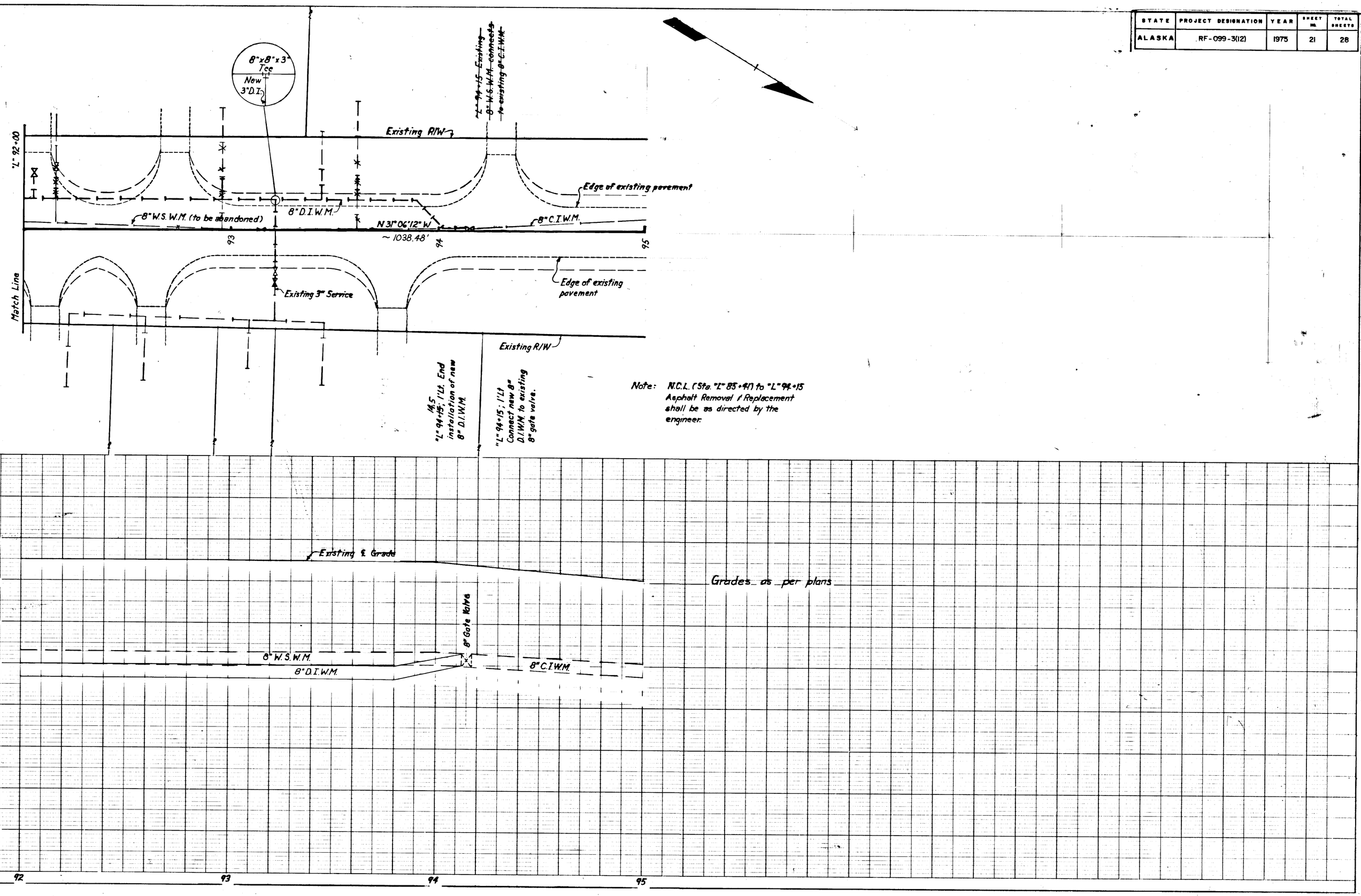
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | RF-099-3(12) | 1975 | 19 | 28 |



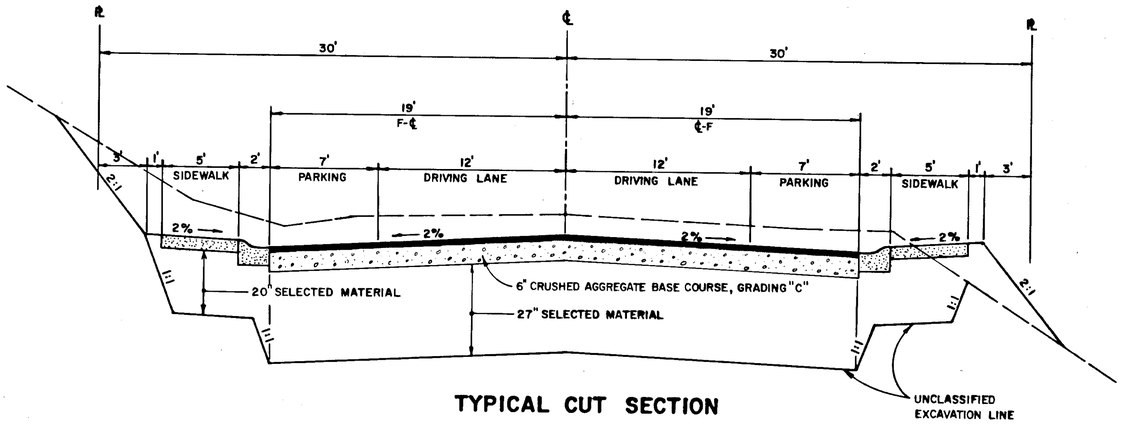
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | RF-099-3(12) | 1975 | 20 | 28 |



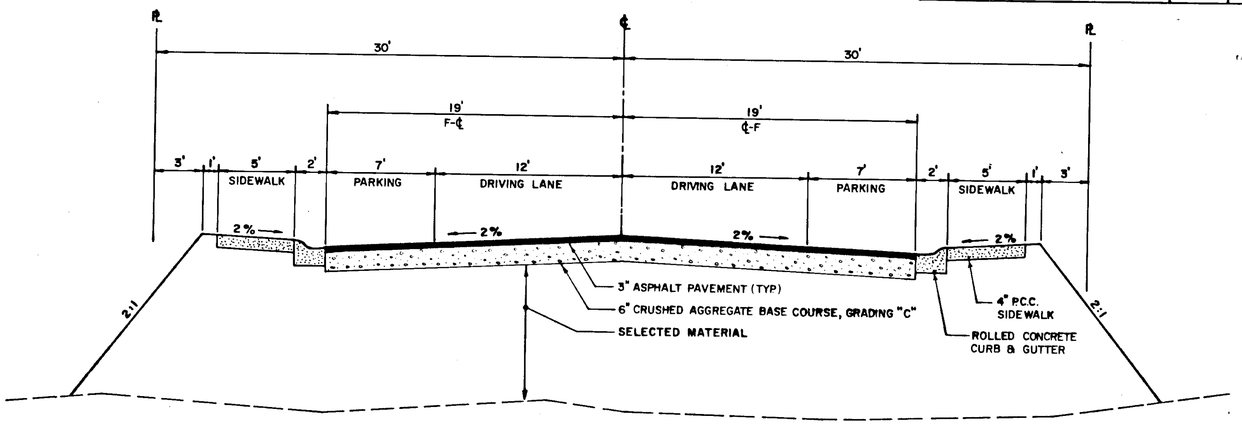
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | RF-099-3(12) | 1975 | 21 | 28 |



| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | OS-3-(001) | 1975 | 23 | 28 |




**TYPICAL CUT SECTION**
**BRADY, GAVAN AND CASCADE STREETS**




**TYPICAL FILL SECTION**
**BRADY, GAVAN AND CASCADE STREETS**

STATE OF ALASKA
49TH
No. 1616
JUNE 24, 1957
PROFESSIONAL ENGINEER

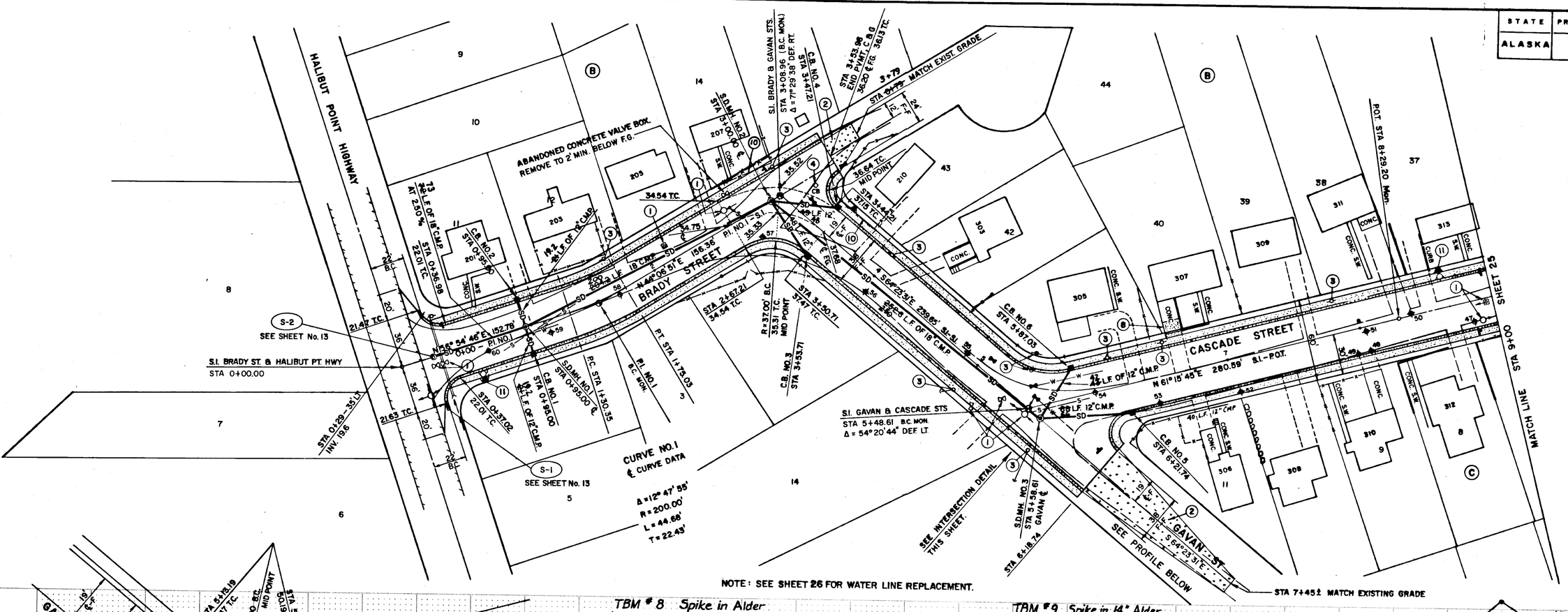
| FIELD BOOKS | | DESIGNED | M.B. |
|---|---|---|---|
| DESIGN | A-283 A-284 A-285 A-286 | DRAWN | L.N.S. |
| STAKING | | CHECKED | R.L.C. / M.B. |
| AS BUILT | | DATE | APRIL 1975 |

TRYCK NYMAN

CITY AND BOROUGH OF SITKA
STREET IMPROVEMENTS

SHEET 2 OF 18

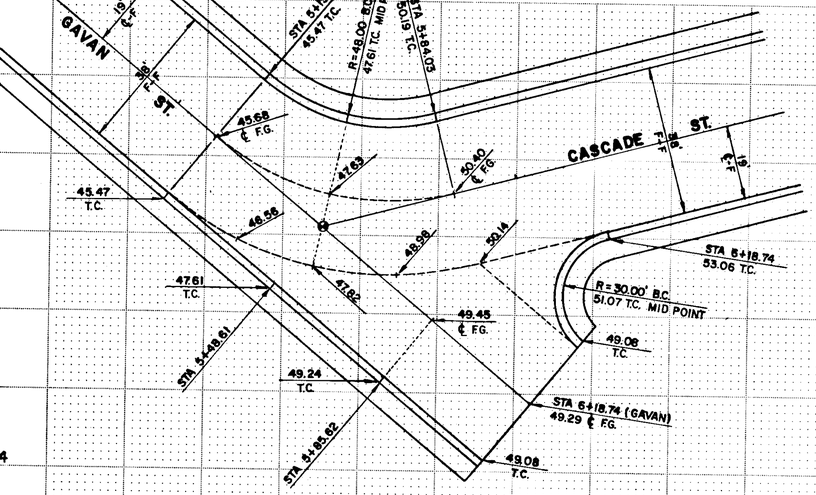
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | OS-3-(001) | 1975 | 24 | 28 |



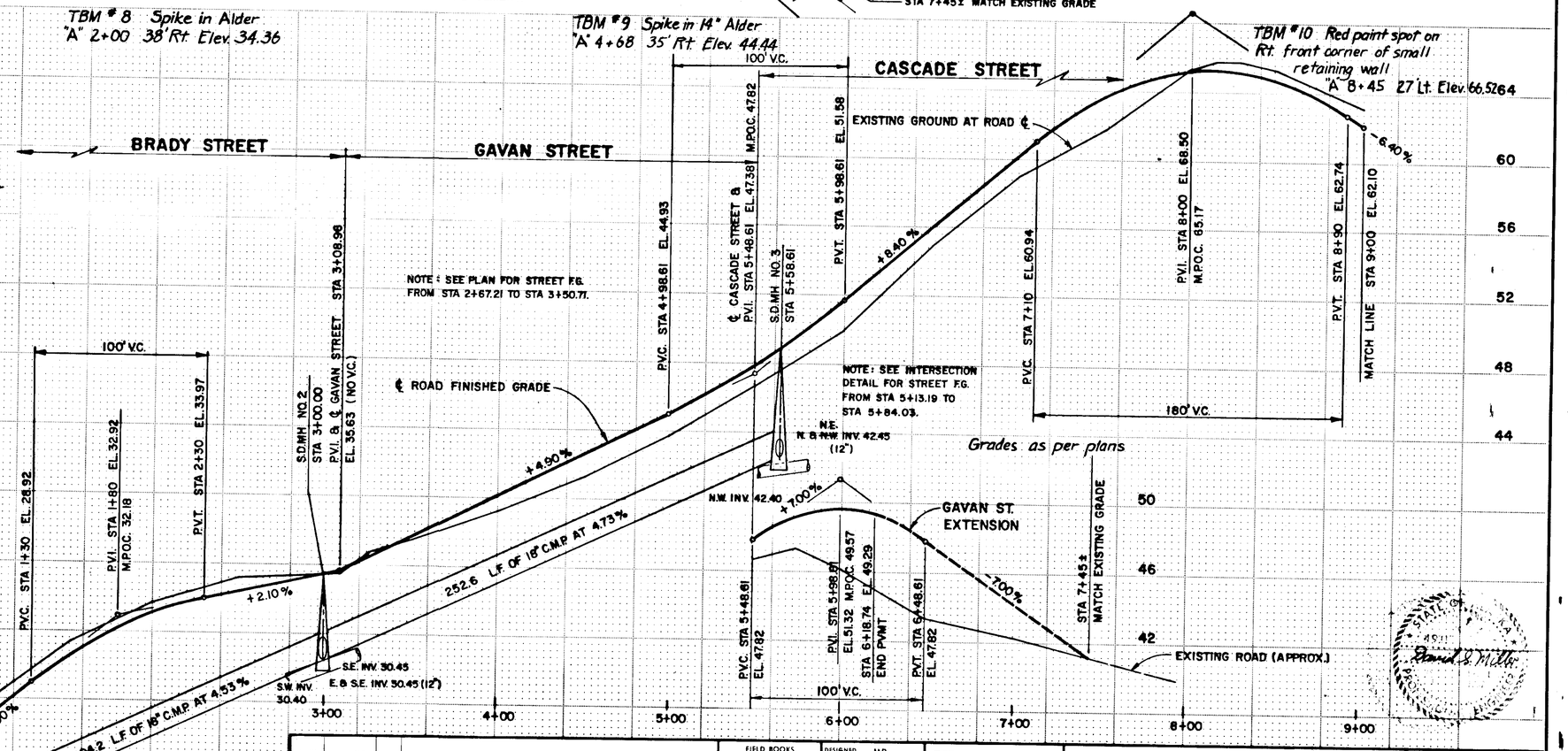

NOTES:

1. ADJUST SEWER MANHOLES, CLEANOUTS & WATER VALVES TO FINISH GRADE.
2. CRUSHED BASE THICKNESS VARIES. MATCH NEW & EXISTING GRADES AS SHOWN.
3. POWER POLE TO BE RELOCATED BY OTHERS.
4. REMOVE EXISTING CATCH BASIN.
8. REMOVE EXISTING CONC. DRIVEWAY AND RECONSTRUCT TO MATCH NEW SIDEWALK.
10. REMOVE & REPLACE FENCE TO PROPERTY LINE.
11. RELOCATE FIRE HYDRANT.

NOTE: BACK OF CURB RADIUS AT STREET INTERSECTIONS IS 15', EXCEPT AS NOTED.




INTERSECTION DETAIL
GAVAN & CASCADE STS.
SCALE: 1" = 20'




| FIELD BOOKS | | |
|---|---|---|
| DESIGN | A-893 A-894 A-896 | |
| STAKING | | |

| | |
|---|---|
| DESIGNED | M.B. |
| DRAWN | L.N.S |
| CHECKED | R.L.C. |

TRYCK NYMAN

CITY AND BOROUGH OF SITKA

STREET IMPROVEMENTS

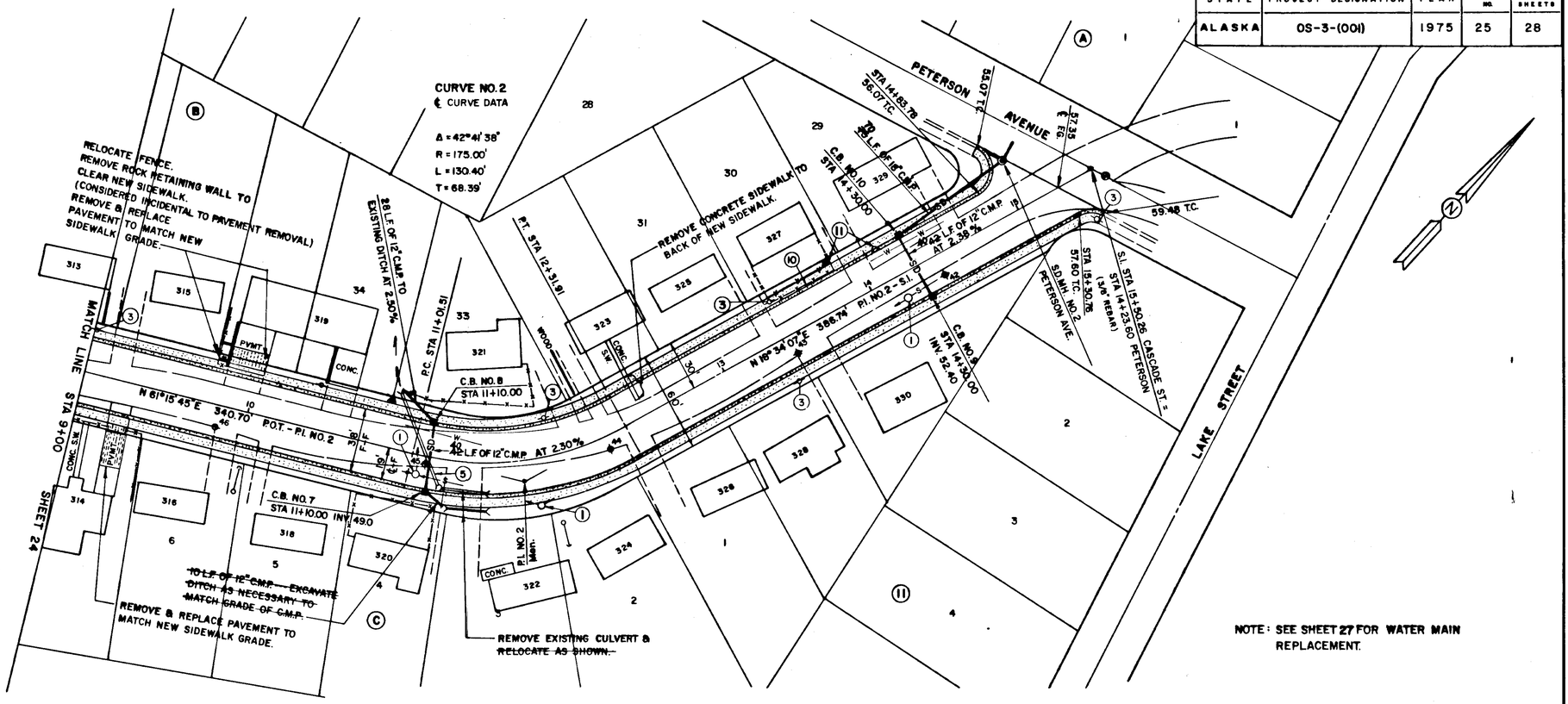
SHEET 8 OF 18

| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | OS-3-(001) | 1975 | 25 | 28 |

## NOTES:

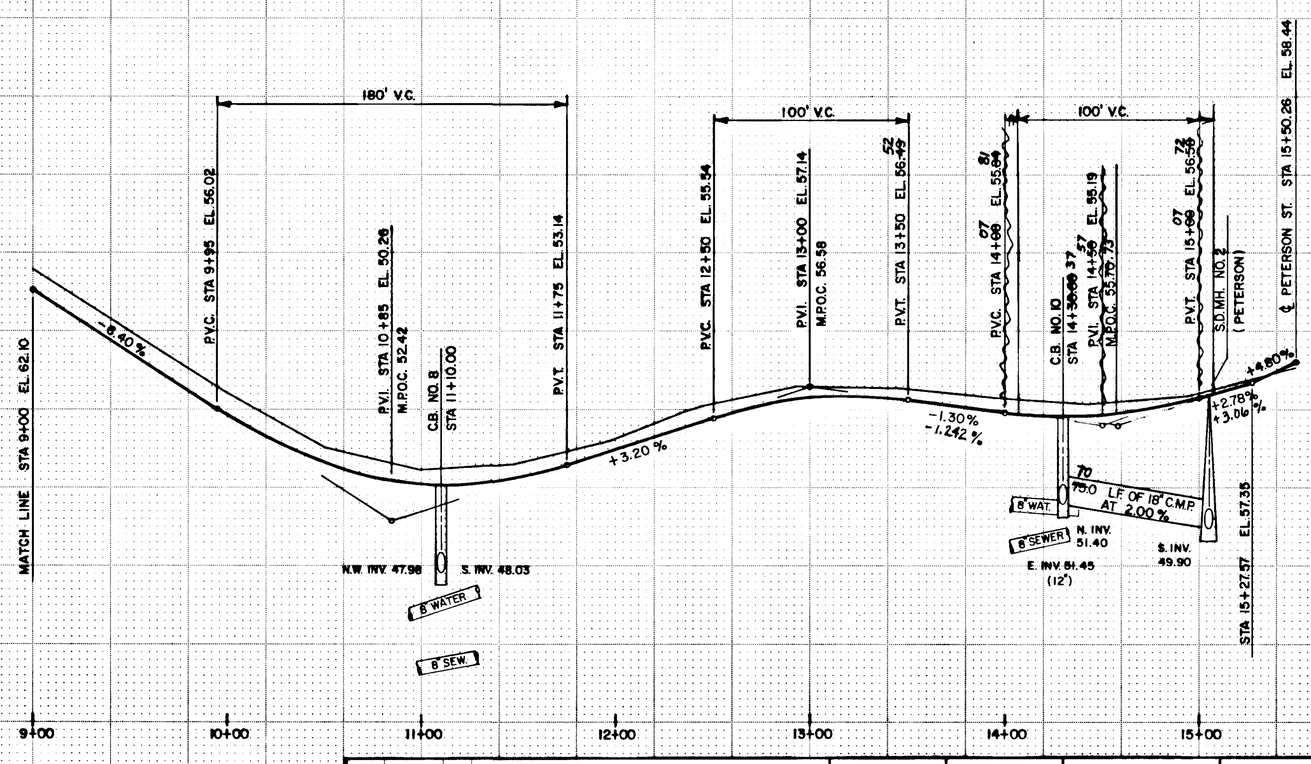
1. ADJUST SEWER MANHOLES TO FINISH GRADE.
3. POWER POLE TO BE RELOCATED BY OTHERS.
5. REMOVE EXISTING CULVERT.
10. REMOVE & REPLACE FENCE TO PROPERTY LINE.
11. RELOCATE FIRE HYDRANT

NOTE: BACK OF CURB RADIUS AT STREET INTERSECTIONS IS 15' THIS SHEET.




TBM #11 Spike Power Pole "A" 11+85 35' Rt. Elev. 54.56

TBM #12 Spike in Power Pole "A" 14+80 85' Lt. Elev. 53.78




| FIELD BOOKS | | | |
|---|---|---|---|
| DESIGN | A-283 A-284 A-286 A-286 | DESIGNED | M.B. |
| STAKING | | DRAWN | L.N.S. |
| AS-BUILT | | CHECKED | R.L.C. |
| | | DATE | APRIL, 1975 |

TRYCK NYMAN HAYES

CITY AND BOROUGH OF SITKA

STREET IMPROVEMENTS

BRADY, CASCADE STREETS

SHEET 9 OF 18

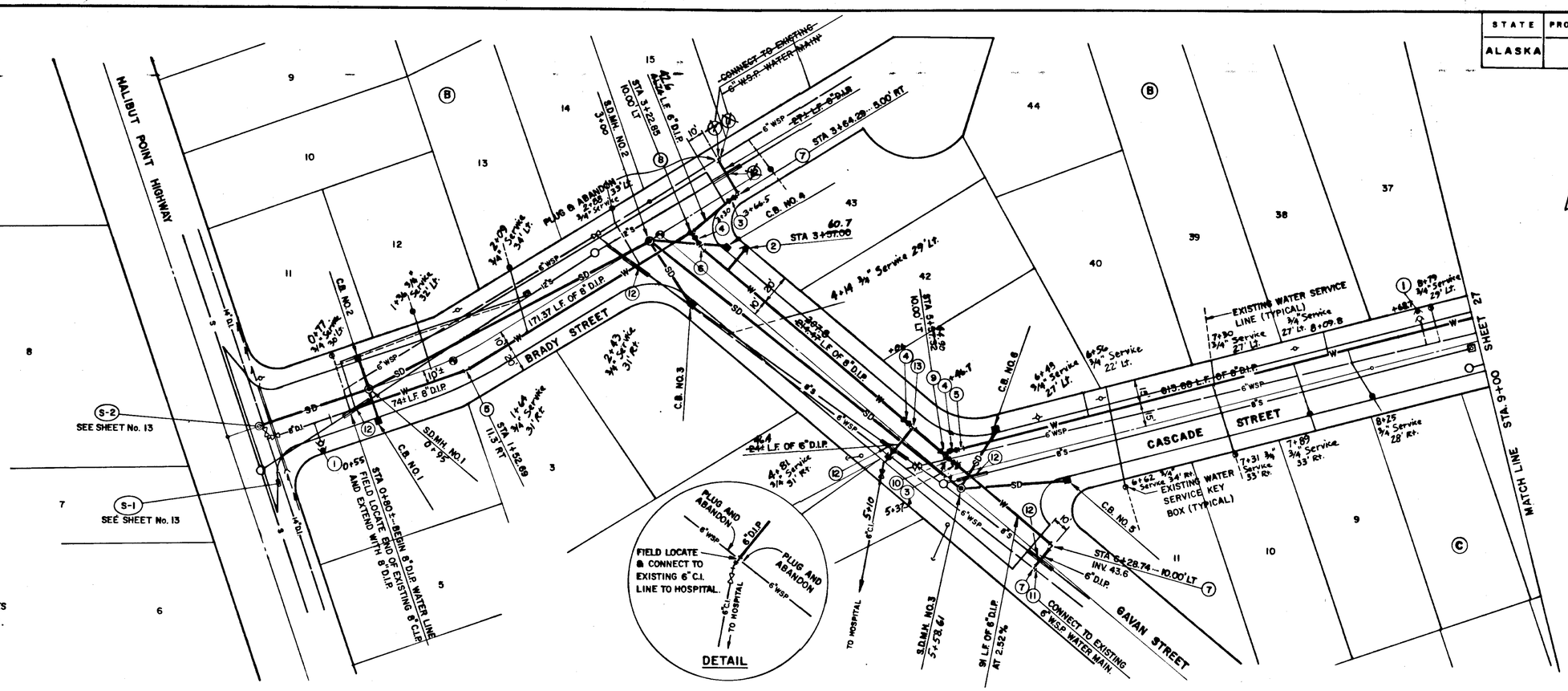
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | OS-3-(001) | 1975 | 26 | 28 |

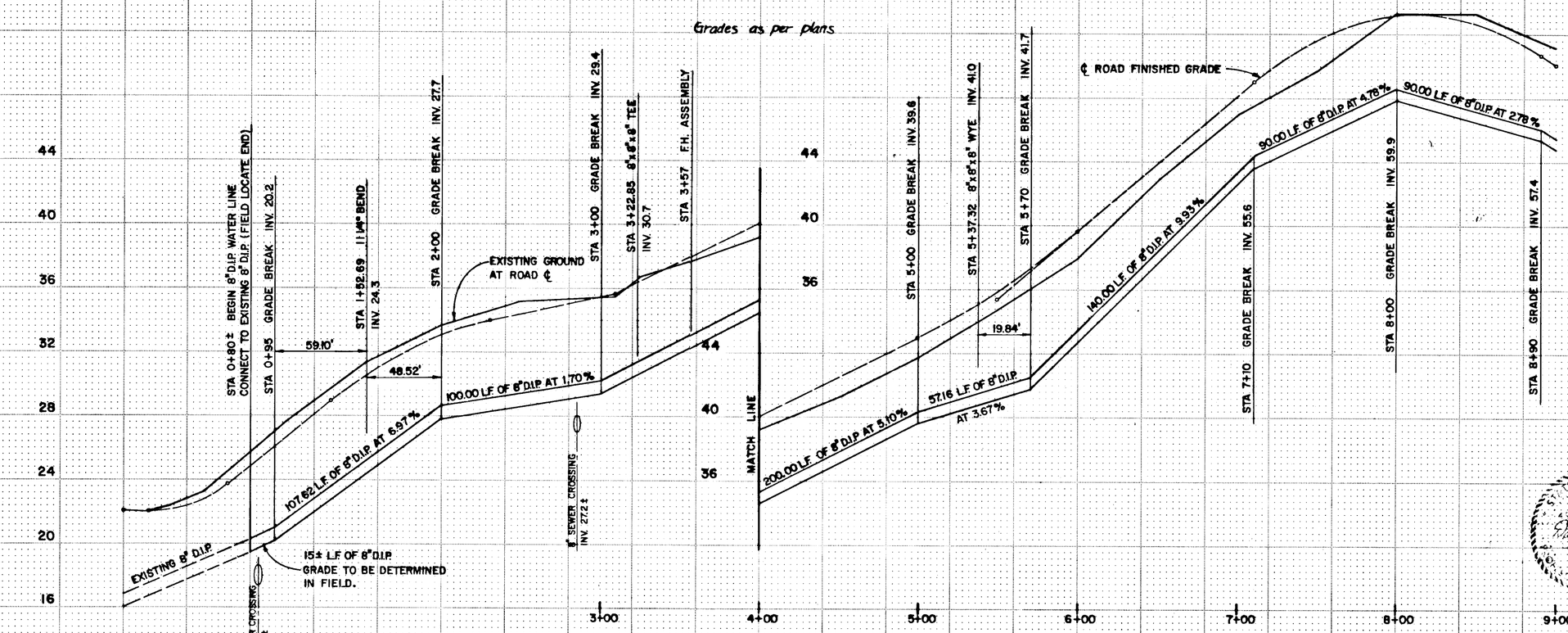
## WATER LINE INSTALLATION KEY

1. RELOCATE EXISTING FIRE HYDRANT AS SHOWN
2. NEW FIRE HYDRANT ASSEMBLY
3. 6" G.V. & V.B.
4. 8" G.V. & V.B.
5. 11 1/4° BEND
6. 22 1/2° BEND
7. 90° BEND
8. 8"x8"x8" TEE
9. 8"x8"x8" WYE
10. 8"x6" REDUCER
11. 6" D.I. TO 6" WSP FLANGE ADAPTER
12. 20 LF OF SEWER ENCASEMENT SEE DETAIL ON SHEET 12
13. 8"x8"x6" TEE

NOTES;

1. WATER LINE AND STORM DRAIN LINE STATIONING IS BASED UPON STREET CENTERLINE STATIONING.
2. 5' MINIMUM BURY ON ALL NEW WATER LINES NOT SHOWN IN PROFILE.
3. CONNECT ALL EXISTING WATER SERVICES TO NEW WATER MAIN. SEE SHEET No. 6.




| FIELD BOOKS | | | |
|---|---|---|---|
| DESIGN | A-283 A-284 A-285 A-286 | DESIGNED | M.B. |
| STAKING | | DRAWN | L.N.S. |
| AS-BUILT | | CHECKED | R.L.C. |
| | | DATE | APRIL 1975 |

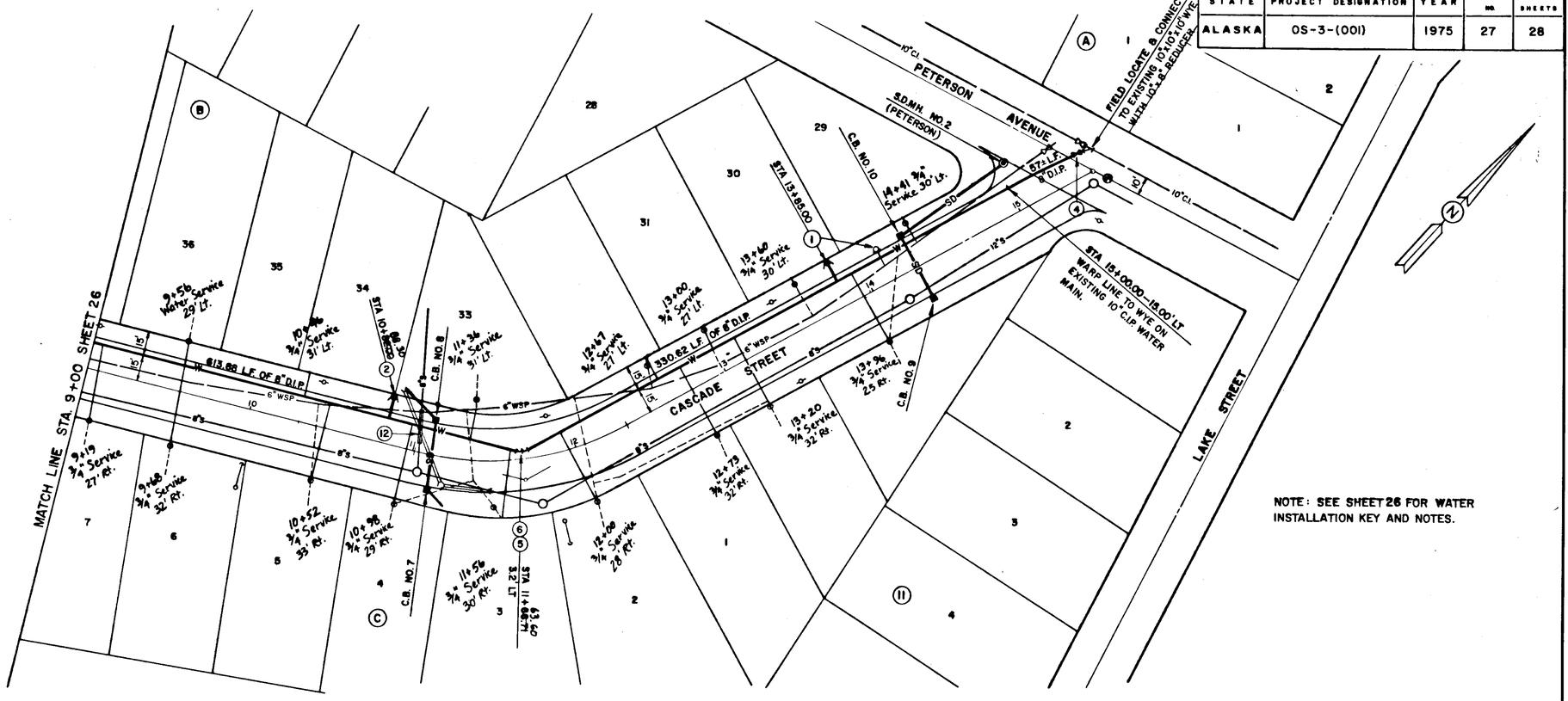
TRYCK NYMAN

CITY AND BOROUGH OF SITKA

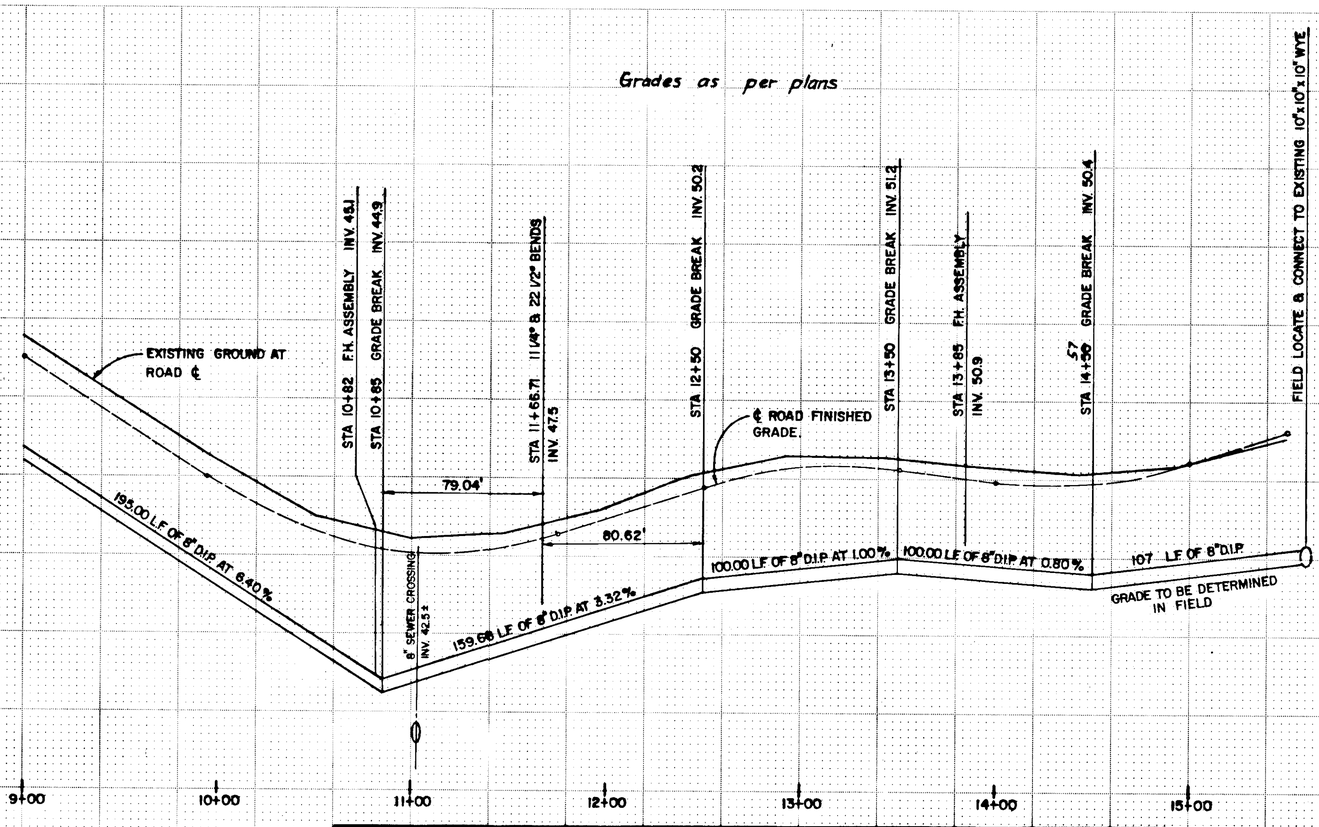
STREET IMPROVEMENTS

SHEET 10 OF 18

| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | OS-3-(001) | 1975 | 27 | 28 |




NOTE: SEE SHEET 26 FOR WATER INSTALLATION KEY AND NOTES.




| FIELD BOOKS | | | |
|---|---|---|---|
| DESIGN | A-203 | A-204 | |
| | A-205 | A-206 | |
| STAKING | | | |
| AS BUILT | | | |

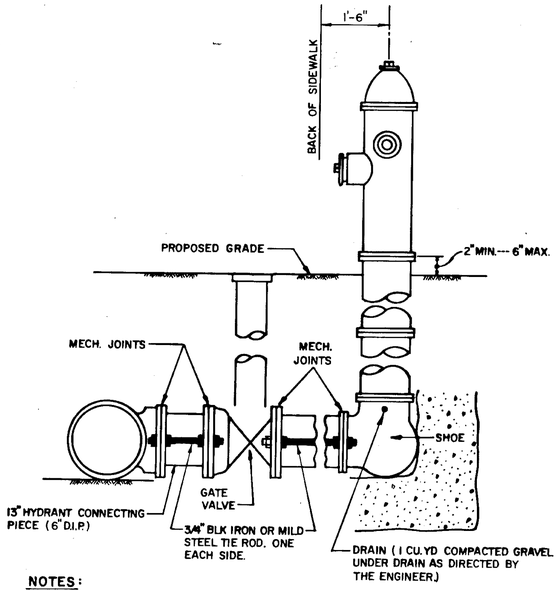
DESIGNED M.B.
DRAWN L.N.S.
CHECKED R.L.C.

TRYCK NYMAN

CITY AND BOROUGH OF SITKA
STREET IMPROVEMENTS

SHEET 11 OF 18

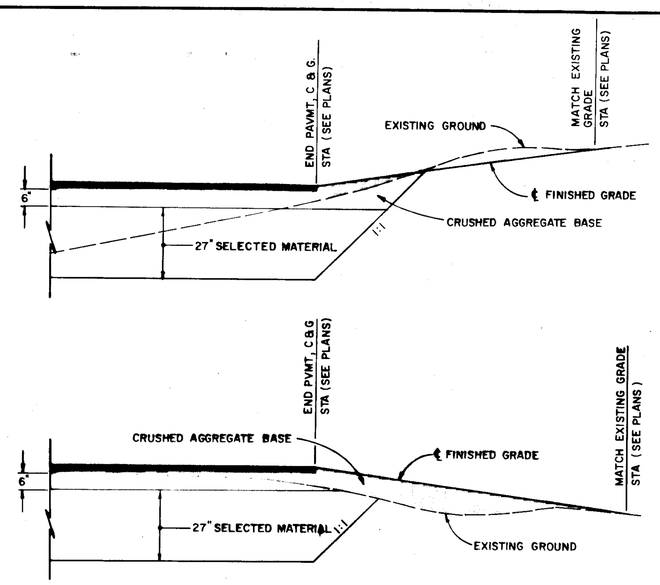
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | OS-3-(001) | 1975 | 28 | 28 |



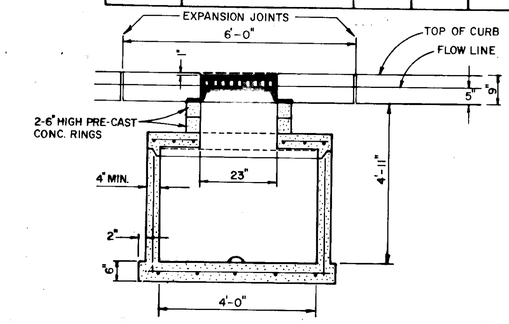

NOTES:

1. HYDRANT BARREL MUST BE INSTALLED PLUMB AND THE LEG MUST BE INSTALLED LEVEL.
2. AUXILIARY GATE VALVE BOX TO BE INSTALLED ACCORDING TO DETAIL FOR TYPICAL VALVE BOX.
3. DRAIN PLUG TO BE REMOVED BY CONTRACTOR.

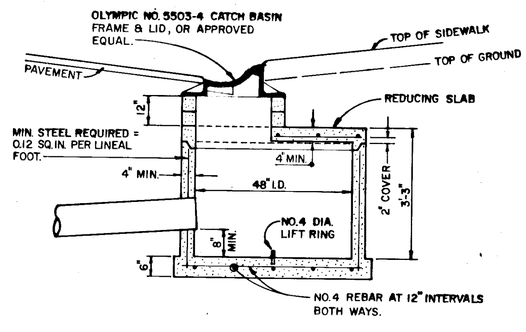
## FIRE HYDRANT INSTALLATION



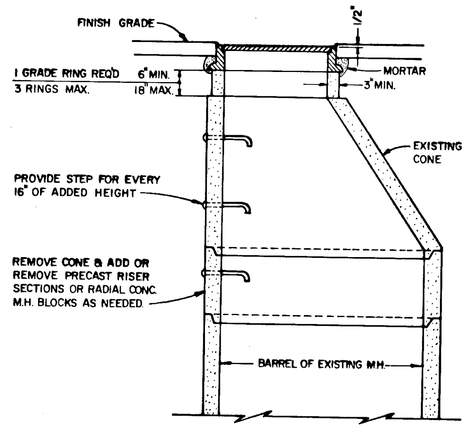

## TRANSITION DETAIL -- END OF PAVEMENT TO EXISTING GRADE ON INTERSECTING STREETS




FRONT VIEW



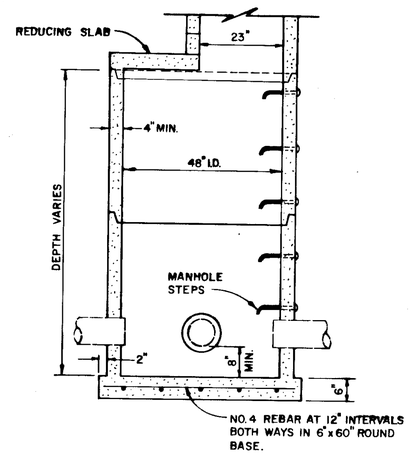

SIDE VIEW




NOTES:

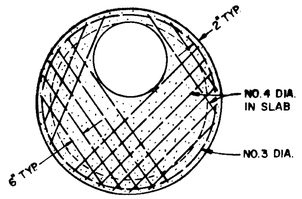
1. RESET RING IN FULL BED OF MORTAR.
2. RESET CONE IN MASTIC GASKET.
3. REFER TO A.S.T.M. DESIGNATION C-478-69 FOR DESIGN AND STRENGTH REQUIREMENTS.

## MANHOLE CONE ADJUSTMENT




1. MANHOLE STEPS TO BE CONSTRUCTED PER ALASKA DEPARTMENT OF HIGHWAYS STANDARD D-20.10

## CATCH BASIN MANHOLE

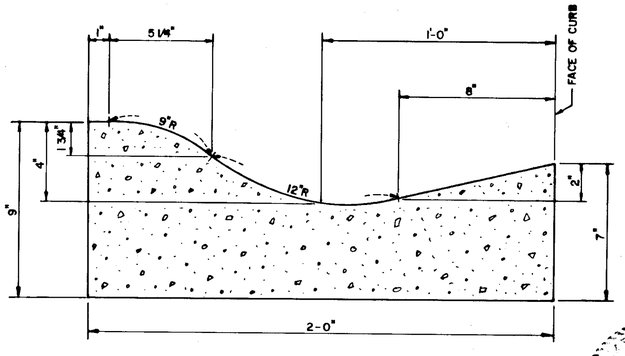



REDUCING SLAB

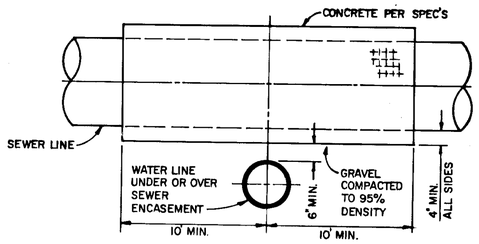
NOTES:

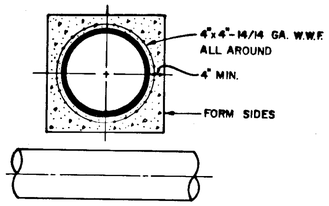
1. AT CATCH BASIN, DELETE CONC. CURB & GUTTER; PAVE TO FACE OF CATCH BASIN INLET.
2. COMPRESSIVE STRENGTH OF CONCRETE SHALL BE MINIMUM 4,000 P.S.I. EXCEPT BASE SLAB WHICH MAY BE 3,000 P.S.I. BASE & BARREL SHALL BE CONNECTED BY CONTINUOUS STEEL.
3. CATCH BASIN RISERS & RINGS SHALL CONFORM TO A.S.T.M. C-478-69.

## PRECAST CATCH BASIN




## ROLLED CURB AND GUTTER




## SEWER ENCASEMENT

| FIELD BOOKS | | | DESIGNED | M.B. |
|---|---|---|---|---|
| DESIGN | A-283 | A-284 | DRAWN | L.N.S. |
| | A-285 | A-286 | CHECKED | R.L.C. |
| STAKING | | | | |

TRYCK NYMAN

CITY AND BOROUGH OF SITKA

STREET IMPROVEMENTS

SHEET 12 OF 18