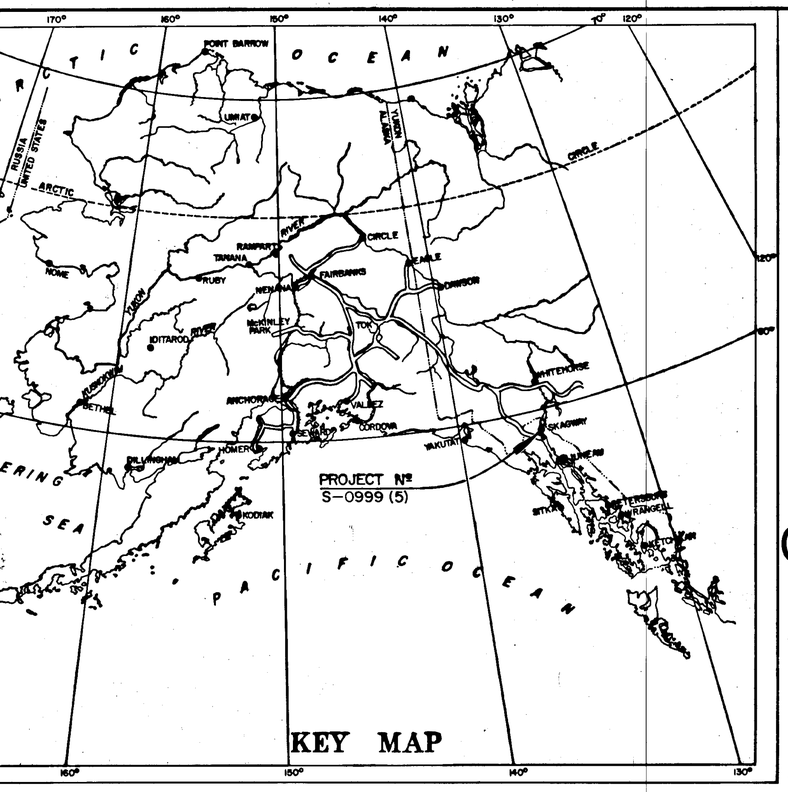


KEY MAP

STATE OF ALASKA
DEPARTMENT OF HIGHWAYS

PLAN AND PROFILE
PROPOSED HIGHWAY PROJECT
Nº S-0999(5)
SKAGWAY
CITY THRU ROUTE & FERRY TERMINAL FACILITY
GRADING, DRAINAGE, & SURFACING

AS BUILT PLANS

CONTRACTOR: GREEN CONSTRUCTION CO.
PROJECT ENGINEER: TED VANDER WEYET
BEGAN PROJECT: AUG. 5, 1963
ENDED PROJECT: AUG. 22, 1964

MICROFILMED
L. Withrow DATE 9-8-66

STATE	ROUTE	SECTION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	999 (5)		1962	1	33

TYPE 6201 IMPROVEMENT
TYPE Y060 IMPROVEMENT

INDEX OF SHEETS

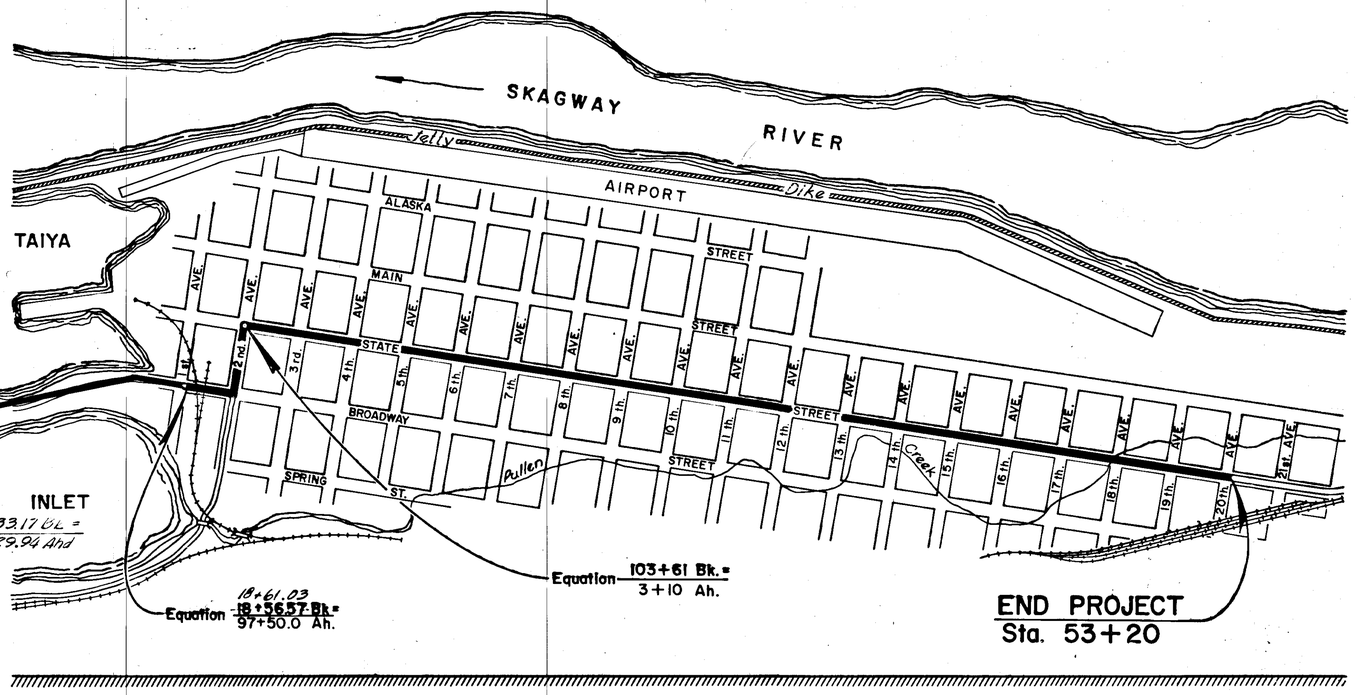
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-3	TYPICAL SECTIONS & ESTIMATE OF QUANTITIES
4	MISCELLANEOUS DETAILS
5	HOLDING AREA GENERAL PLAN
6	INTERSECTION DETAILS & PIT LOCATION SHEET
7-12	PLAN & PROFILE SHEETS
13-17	UTILITY ADJUSTMENT
18-24	CULVERT & MISCELLANEOUS WORK
25	STD. BRASS CAP MONUMENT & MONUMENT CASE
26	SUMMARY OF STANDARDS SIGNS
S-1	STANDARD CULVERTS
S-2	STANDARD METAL END SECTIONS
S-3	STANDARD APPROACHES
S-6	STANDARD PROJECT IDENTIFICATION SIGN
S-10	STD. DROP INLET, CATCH BASINS & MANHOLES
S-13	STANDARD CULVERT MARKER POSTS
S-16	STANDARD RAILROAD CROSSINGS

DESIGN DESIGNATION
ADT (1960) = 507
ADT (1980) = 1,000
DHV = 150
D = 65%
T = 5%
V = 25 mph

Field reports of the foundation soils and the type of materials found in the suggested pits for this project are available for inspection in the Dept. of Highways, District office at Juneau and the Headquarters office at Juneau.

Detail cross sections for this project are available for inspection in the Headquarters office at Juneau and the District office at Juneau.

BEGIN PROJECT
STA. 0+00.00



CONVENTIONAL SIGNS

PROPOSED CONSTRUCTION CENTERLINE
PRELIMINARY SURVEY LINE
OWNSHIP LINE
ECTION LINE
ROPERTY LINE
IGHT-OF-WAY LINE
ASEMENT LINE
ORPORATED OR CITY LIMITS
OWER LINE
ELEPHONE OR TELEGRAPH LINE
OLE ANCHOR
IGHT POLE
ATER LINE (IN PLACE)
EWER LINE (IN PLACE)
ALVE BOX
ATCH BASIN
ROP INLET
ANHOLE
ULVERT PROPOSED
ULVERT EXISTING
RE HYDRANT
RAVELED WAY
WAMP
ENCE
URB CUT
AND MONUMENT
TORM SEWER LINE (PROPOSED)

PROJECT SUMMARY

WIDTH OF SUBGRADE		*	
WIDTH OF SURFACING		*	
LENGTH OF GRADING	7,159.56	7147.34'	= 1.354 Mi.
LENGTH OF PAVING	7,471.03	7468.21'	= 1.414 Mi.
LENGTH OF PROJECT	7,480.43	7477.61'	= 1.416 Mi.

* See Typical Sections

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STATE OF ALASKA
DEPARTMENT OF HIGHWAYS

APPROVED
Date 5/1/62
COMMISSIONER OF HIGHWAYS

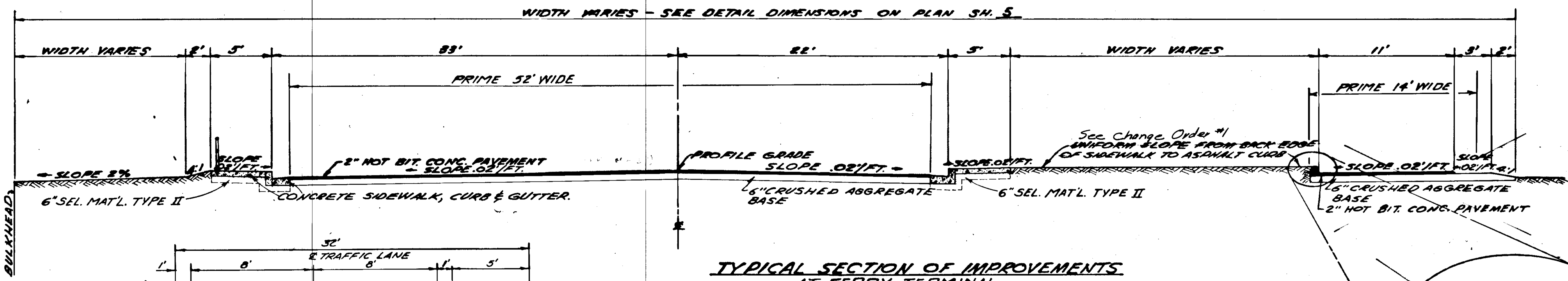
APPROVED
Date
REGIONAL ENGINEER
BUREAU OF PUBLIC ROADS
REGION TEN

As builts entered 1-22-65

AS BUILT

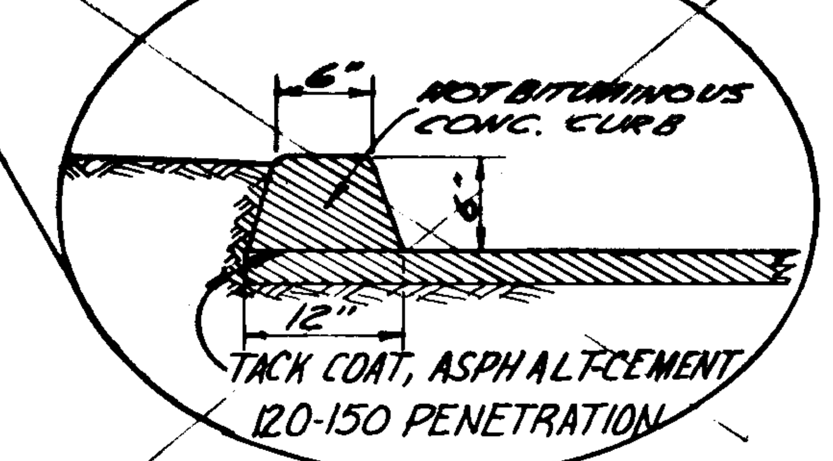
MICROFILMED

By L. Withrow DATE 9-8-86

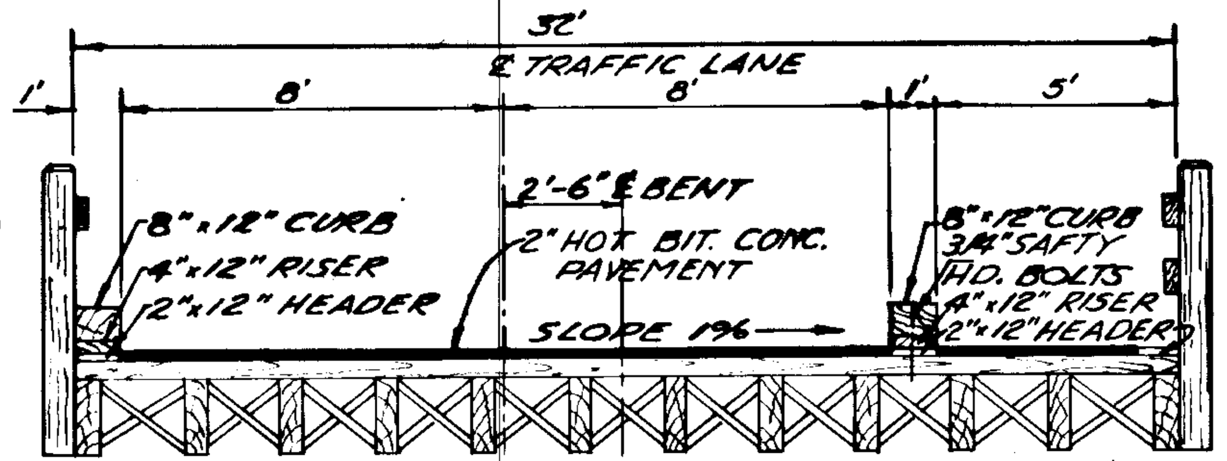


TYPICAL SECTION OF IMPROVEMENTS AT FERRY TERMINAL

STA. 3+20.87 TO STA. 8+16.08



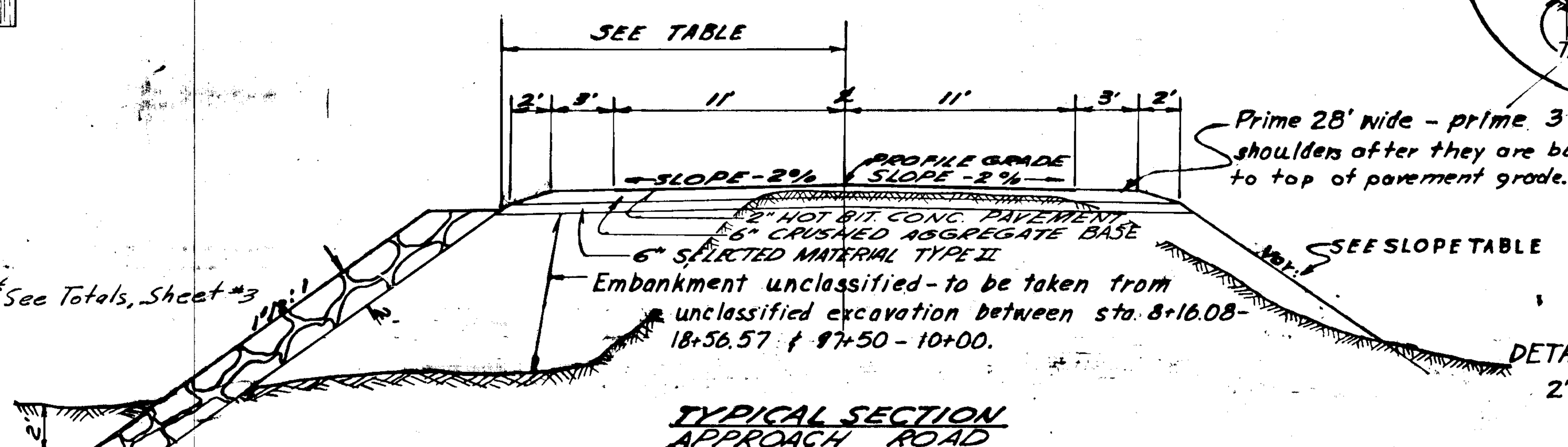
TIMBER CURBS & 4"x12" RISER SHALL BE REMOVED PRIOR TO PAVING TO FACILITATE COMPACTION OF THE BITUMINOUS PAVING. AND AFTER COMPACTION OF THE BITUMINOUS PAVING THE CURBS SHALL BE REPLACED. REMOVAL AND REPLACEMENT OF THE TIMBER CURBS SHALL BE INCIDENTAL TO ITEMS OF WORK PREFORMED UNDER SECTION 322.



TYPICAL SECTION FOR PAVING TRESTLE

STA. 0+00 TO STA 3+20.87

(SEE DETAIL FOR WIRE MESH)



Prime 28' wide - prime 3' shoulders after they are built to top of pavement grade.

*See Totals, Sheet #3

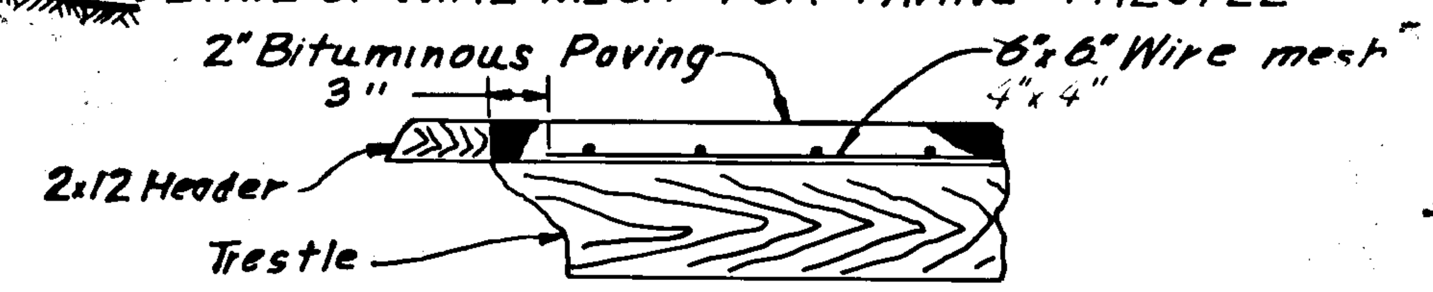
TYPICAL SECTION APPROACH ROAD

STA. 8+16.08 TO STA. 18+56.57

RIPRAP TABLE

STA. TO STA.	DIST. FROM CENTERLINE	LEFT OR RIGHT
8+30 TO 11+77	18.5'	LEFT
15+28 TO 16+28	18.5'	LEFT
15+55 TO 16+28	23.0	RIGHT

DETAIL OF WIRE MESH FOR PAVING TRESTLE

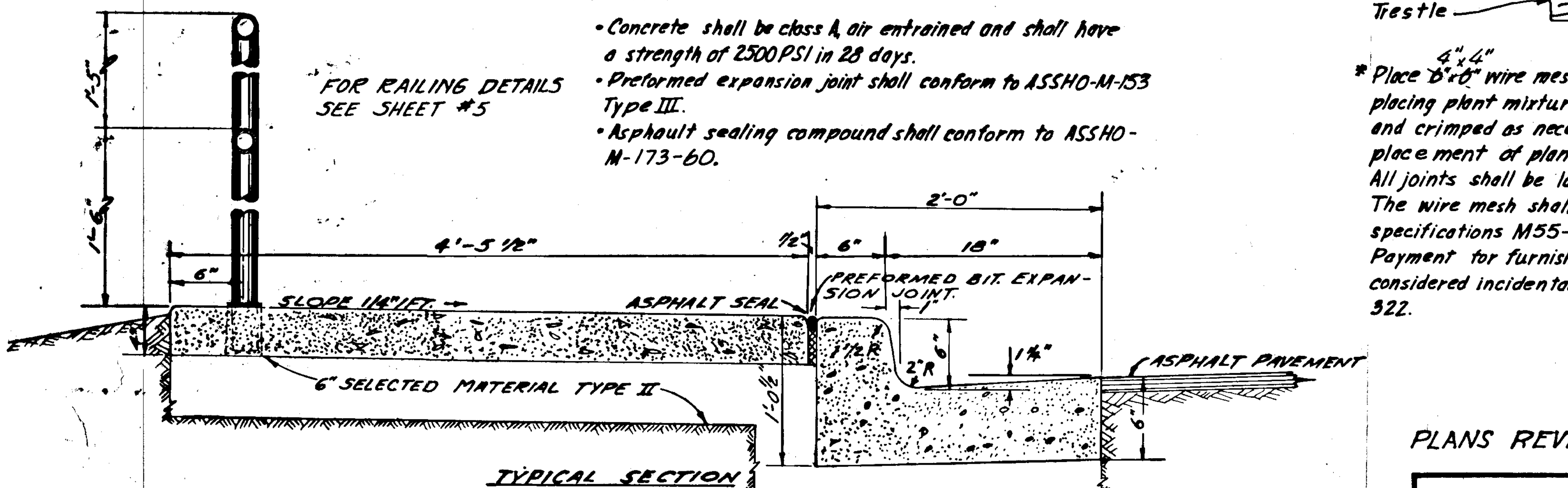


* Place 4"x4" wire mesh, 14 gage, on trestle deck before placing plant mixture. Mesh shall be stapled on 24" centers and crimped as necessary to prevent buckling during placement of plant mixture.
All joints shall be lapped 12".
The wire mesh shall meet the requirements of AASHO specifications M55-60.
Payment for furnishing and placing the mesh shall be considered incidental to pay items covered under section 322.

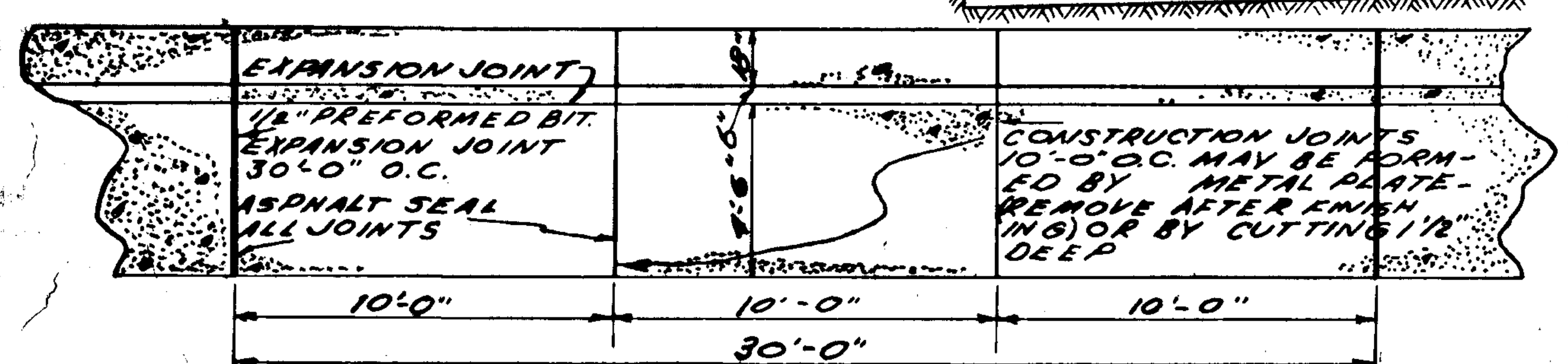
ITEM NO.	QUANTITY	UNIT	ITEM
ESTIMATE OF QUANTITIES ~ STA. 3+20.87 to STA. 18+56.57			
102(1)	2800	C.Y.	UNCLASSIFIED EXCAVATION*
102(7A1)	1500	TON	SELECTED MATERIAL, TYPE II BORROW, CASE 2, GRADING B*
200(4)	2094	TON	CRUSHED AGGREGATE BASE, GRADING D-1*
310(3)	1900	GAL.	ASPHALT, GRADE MC-70, PRIME COAT*
322(1)	745	TON	HOT BITUMINOUS CONCRETE PAVEMENT*
322(2)	10,350	GAL.	ASPHALT CEMENT, 120-150 PENETRATION*
453(4E)	376	L.F.	18" Asbestos Bonded CORRUGATED METAL PIPE, 16 GAGE
453(4J)	78	L.F.	42" Asbestos Bonded CORRUGATED METAL PIPE, 12 GAGE
457(1)	150	L.F.	REMOVAL OF CULVERTS
510(1)	325	C.Y.	LOOSE RIPRAP
521(3)	2 1	EACH	CATCH BASINS Inlet
524(3)	785 471	L.F.	CONCRETE CURB & GUTTER
530(1)	405	S.Y.	CONCRETE SIDEWALK
601	342	L.F.	PIPE HANDRAIL
103(1)	10	Cu. Yd.	Excavation for Structures
521(1)	1	Each	Manholes
589(1)	1070	Lin. Ft.	12" Asbestos Cement Pipe

"FOR RAILING DETAILS SEE SHEET #5

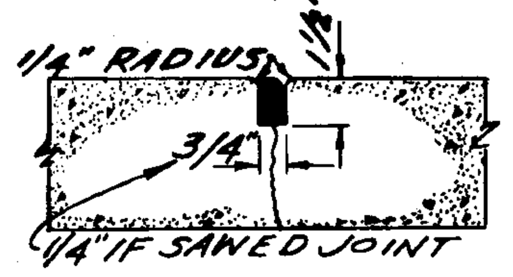
- Concrete shall be class A, air entrained and shall have a strength of 2500 PSI in 28 days.
- Preformed expansion joint shall conform to ASSHO-M-153 Type III.
- Asphault sealing compound shall conform to ASSHO-M-173-60.



TYPICAL SECTION



PARTIAL PLAN



ASPHALT SEAL
NOT TO SCALE

CONCRETE CURB, GUTTER & SIDEWALK

VARIABLE SLOPE TABLE

STATION	LT.	RT.	STATION	LT.	RT.
8+77		*DL	13+25	*DL	3:1
9+25		*DL	13+76	*DL	3:1
9+75		*DL.	14+25	*DL	3:1
10+25		*DL	14+77	3:1	4:1
10+75		3:1	15+28		*DL
11+30		3:1			
11+75	3:1	3:1	16+75	2:1	*DL
12+23		3:1	17+25		*DL
12+75	*DL.	3:1	17+77		*DL

*Daylight @ 24:1 for drainage.

PLANS REVISED BY DEPT. OF HIGHWAYS

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
SOUTHEAST ALASKA FERRY SYSTEM
SKAGWAY FERRY TERMINAL
PROJECT NO. S-0999(5)
TYPICAL SECTIONS AND ESTIMATE OF QUANTITIES
Scale: As Noted
Sheet 2 Of 33
TONER & NORDLING • Registered Engineers • Juneau

J-5

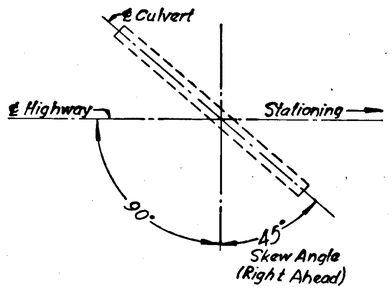
STATE	ROUTE	SECTION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	999(5)		1963	3	33

AS BUILT

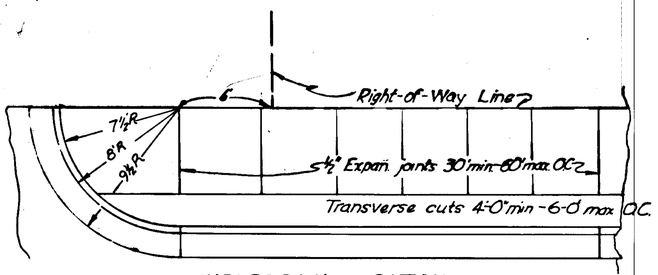
MICROFILMED

By L. Withrow DATE 9-8-66

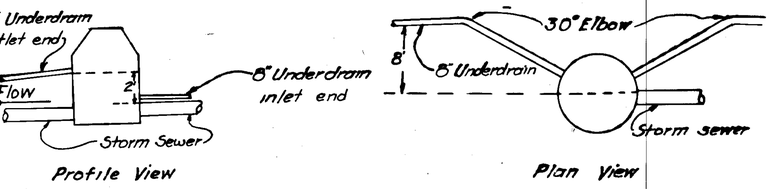
SKEW ANGLE



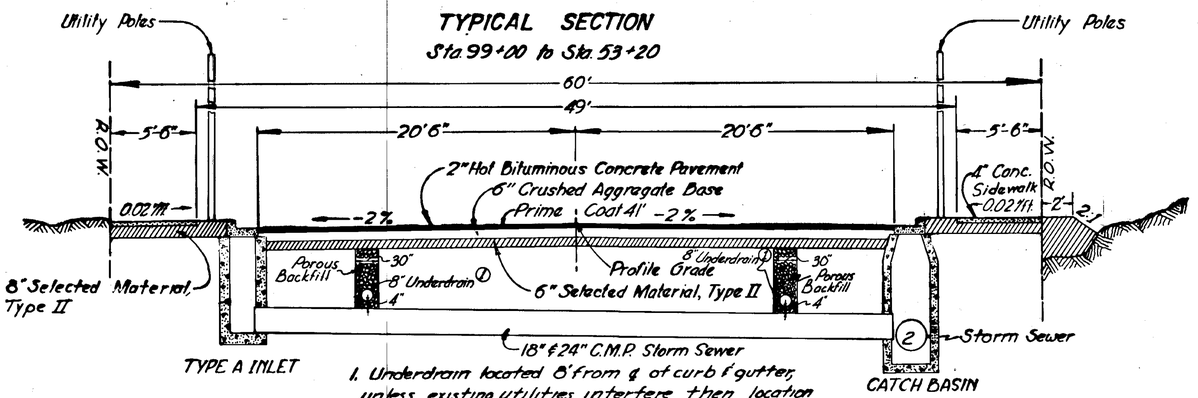
TYPICAL EXPANSION & CONTRACTION JOINT DETAIL



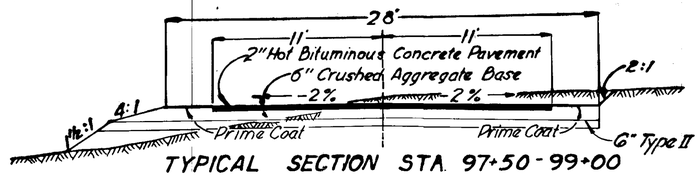
UNDERDRAIN DETAIL



TYPICAL SECTION
Sta 99+00 to Sta. 53+20



1. Underdrain located 8' from ℄ of curb & gutter, unless existing utilities interfere, then location may be adjusted, by approval of the engineer.
2. Storm Sewer located on Lt. between Sta. 34+20 & Sta. 51+00



TYPICAL SECTION STA. 97+50 - 99+00

ESTIMATE OF QUANTITIES ~ STA. 97+50 TO END OF PROJECT

	ITEM No.	QUANTITIES	UNIT	ITEM
	10	All Req'd.	Lump Sum	Misc. Force Account Work as authorized under Articles 9.4 & 9.5
	102(1)	17,500	Cu. Yd.	Unclassified Excavation
	102(7A)	13,000	Ton	Selected Material, Type II Borrow, Case 2, Grading B
	103(1)	11,079	Cu. Yd.	Excavation for Structures
	200(4)	9,300	Ton	Crushed Aggregate Base, Grading D-1
*	310(3)	8,300	Gal.	Asphalt, Grade MC-70 Prime Coat
	322(1)	3,200	Ton	Hot Bituminous Concrete Pavement
	322(2)	48,000	Gal.	Asphalt Cement, 120-150 Penetration
	453(1A)	300	Lin. Ft.	8" Galvanized Corrugated Metal Pipe, 16 Gage
	453(1E)	4,166	Lin. Ft.	18" Galvanized Corrugated Metal Pipe, 16 Gage
	453(1G)	1,506	Lin. Ft.	24" Galvanized Corrugated Metal Pipe, 16 Gage
*	453(2G)	500	Lin. Ft.	24" Bituminous Coated Corrugated Metal Pipe, 16 Gage
	457(1)	258	Lin. Ft.	Removal of Culverts
	460(2G)	3	Each	Metal End Sections for 24" Pipe Culverts
	513(1)	10	Each	Adjusting Fire Hydrants
	513(2)	85	Each	Valve Boxes
	513(3)	50	Each	Water Valves
	520(4)	10,476	Lin. Ft.	8" Perforated Corrugated Metal Pipe Under Drain
	521(1)	1	Each	Manholes
	521(2)	18	Each	Inlets
	521(3)	24	Each	Catch Basins
	521(7)	15	Each	Adjusting Manholes
	524(3)	10366	Lin. Ft.	Concrete Curb and Gutter 6" Depth.
	530(1)	5,704	Sq. Yd.	Concrete Sidewalk
	530(2)	367	Sq. Yd.	Concrete Sidewalk and Driveway, 6" Depth.
	560(3)	4	Each	Culvert Marker Posts
	561(1)	2	Each	Monument Cases
	584(1)	35	Each	Standard Signs
	585(1)	2	Each	Railroad Crossings
*	305(2A)	1,500	Ton	Stockpiled Material Section 200, Grading D-1
	305(2B)	2,000	Ton	Stockpiled Material Section 314, Grading E
*	453(1I)	84	Lin. Ft.	36" Galvanized Corrugated Metal Pipe, 12 Gage
*	460(2I)	2	Each	Metal End Sections for 36" Pipe Culverts
	700(1)	All Req'd	Lump Sum	Utility Adjustments

8" UNDERDRAIN QUANTITIES

8" Perforated C.M.P.			
Station	to	Station	Lin. Ft.
98+80		99+80 Lt. & Rt.	200
100+32		103+40 Lt. & Rt.	616
3+40		47+00 Rt.	4360
3+40		47+50 Lt.	4410
48+50	48+35	53+20 Rt.	470
49+00	47+05	53+20 Lt.	420
		Total	10,476
8" C.M.P.			
47+00		48+50 Rt.	150'
47+50		49+00 Lt.	150'
		Total	300

1. The underdrain will flow into the Catch basins & Inlets, beginning at sta. 45+40
2. A 30° Elbow will be used to direct the underdrain into and out of the catch basins and inlets. The outlet end of the underdrain will be installed 2' above the top of the Storm sewer, or as directed by the engineer.
3. Underdrain will convert to 8" CMP between stas 47+00 to 48+50 Rt. and 47+58 to 49+08 Lt.
4. Min depth for Underdrains is 3.5' below top of Pavement

GENERAL NOTES

Expansion Joints: Premolded expansion joint filler ½" thick complying to AASHO designation M153, Type III shall be used at all expansion joints. Joints shall be located as follows:

Curb & Gutter – Expansion joints shall be at the end of the curved portion of the curb return and immediately following and preceding curb cuts. Thereafter expansion joints shall be spaced intermediately at intervals of 60', except where shorter sections are needed for closure. These shorter sections shall not be less than 30'.

Sidewalks – Expansion joints shall be opposite expansion joints in adjoining curb & gutter. Transverse contraction joints shall be at uniform intervals of 6' except where shorter sections are necessary for closures. These shorter sections shall not be less than 4'.

Existing Utilities:
All water valve boxes to be left in place & sewer manholes that may fall within the limits of construction on this project will be adjusted to the proper grade prior to paving. Utility poles existing within construction limits to be moved by others, except where otherwise noted.

Alignment and Grades shown are subject to minor revisions

All thickness dimensions shown on Surfacing Courses are nominal.

All concrete shall be class A, air entrained, and have a minimum compressive strength of 2,500 P.S.I. in 28 days.

The culvert lengths shown are approximate.

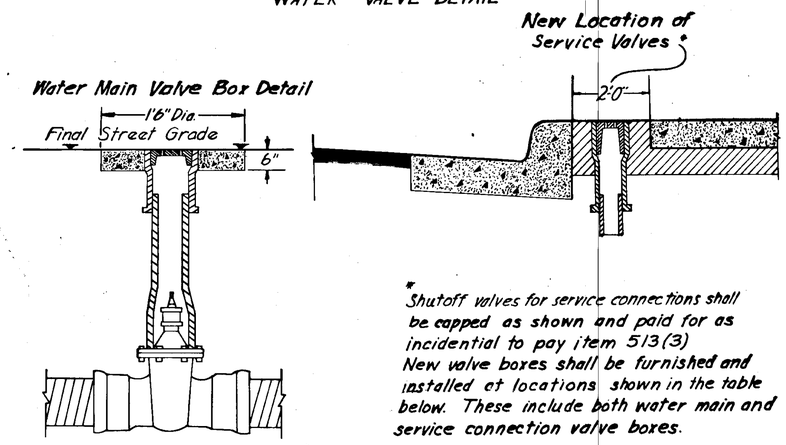
Waste material shall be disposed of as shown on the plans or in the special provisions, and in a manner satisfactory to the Engineer.

Location of existing utilities as shown on plans are approximate only.

STATE	ROUTE	SECTION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-999 (5)		1963	4	33

AS BUILT

WATER VALVE DETAIL



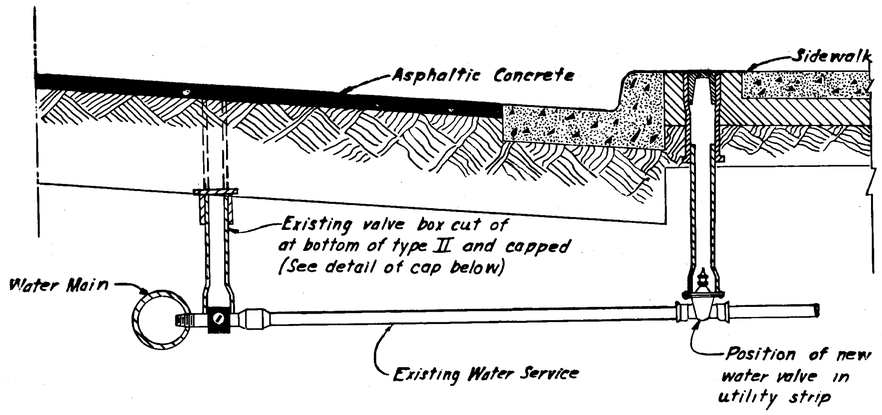
*Shutoff valves for service connections shall be capped as shown and paid for as incidental to pay item 513(3)
New valve boxes shall be furnished and installed at locations shown in the table below. These include both water main and service connection valve boxes.

LIST OF VALVES

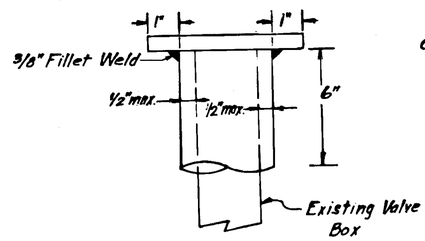
Station	Distance from ℄	Valve Box	New Valve	
100+15.5	56.6' Rt.	1	1	-
100+15.7	57.8' Rt.	1	1	
100+16.1	70' Rt.	1	-	
100+16.8	92.5' Rt.	1	1	
100+21.7	11.5' Rt.	1		
100+30.9	20.4' Rt.	1		
100+79.8	10.6' Rt.	1	1	
100+89.7	12.0' Rt.	[illegible]	1	
101+46.9	10.5' Rt.	[illegible] Lt.	1	
102+05.8	11.9' Rt.	[illegible]	1	
102+06.7	21.8' Rt.	[illegible]	1	
102+65.8	11.6' Rt.	[illegible]	1	
2+80.3	9.6' Rt.	1	1	
3+20.1	10.1' Lt.	1		
6+01.8	2.9' Rt.	1		
6+20.5	17.4' Rt.	1		
7+04.3	13.4' Rt.	[illegible]	1	
7+32.1	9.1' Rt.	1	1	
7+73.3	9.9' Rt.	[illegible]	1	
8+80.9	2.0' Lt.	1		
8+81.1	14.2' Rt.	1		
8+89.1	30.8' Rt.	1		
9+01.7	10.0' Rt.	1		
9+54.9	10.5' Rt.	1	1	
10+67.4	10.5' Rt.	1	1	
10+92.3	5.0' Rt.	1	1	
11+20.2	17.6' Rt.	1		
11+60.5	2.8' Rt.	1		
11+60.6	18.1' Rt.	1		
12+23.5	10.0' Rt.	1	1	
Con't.	Con't.	Con't.	Con't.	

Station	Distance from ℄	Valve Box	New Valve	
12+44.2	12.0' Rt.	[illegible]	1	
13+16.1	8.5' Rt.	1	1	
13+72.9	9.7' Rt.	1	1	
13+99.9	18.3' Rt.	1		
14+00.6	17.4' Rt.	1		
14+40.9	32.7' Rt.	1		
14+41.4	0.6' Rt.	1		
15+18.4	12.0' Rt.	1	1	
16+48.3	22.9' Rt.	1	1	
16+80.0	18.1' Rt.	1	1	
17+01.6	1.8' Rt.	1		
18+86.6	11.6' Rt.	[illegible]	1	
19+35.0	10.9' Rt.	1	1	
19+80.1	17.9' Rt.	1		
19+80.3	1.2' Rt.	1		
20+21.7	19.3' Lt.	1		
20+66.4	6.1' Lt.	[illegible]	1	
22+80.5	2.4' Lt.	1		
22+84.5	6.8' Lt.	1		
23+15.1	35.9' Lt.	1	1	
23+45.3	7.3' Lt.	1	1	
24+45.9	7.5' Lt.	[illegible]	1	
25+34.5	16.8' Lt.	1		
25+82.2	19.8' Lt.	1		
25+96.3	8.4' Lt.	1	1	
26+10.4	8.2' Lt.	[illegible]	1	
27+34.4	7.9' Lt.	1	1	
28+40.5	2.7' Lt.	1		
28+40.6	9.4' Lt.	1		
30+91.3	22.0' Lt.	1		
Con't.	Con't.	Con't.	Con't.	
[illegible]	[illegible] Rt.	1	1	

Station	Distance from ℄	Valve Box	New Valve	
31+09.2	9.7' Lt.	1		
31+11.9	6.9' Lt.	1		
31+14.1	9.8' Lt.	1		
31+61.1	8.0' Lt.	1	1	
31+79.8	6.1' Lt.	[illegible]	1	
32+06.8	5.4' Lt.	[illegible]	1	
32+31.7	7.6' Lt.	[illegible]	1	
[illegible]	[illegible] Lt.	1	1	
33+14.3	7.1' Lt.	1	1	
33+23.6	7.9' Lt.	1	1	
33+94.0	23.9' Lt.	1	1	
35+94.4	8.6' Lt.	[illegible]	1	
36+38.8	17.7' Lt.	1		
37+14.1	8.2' Lt.	[illegible]	1	
38+74.7	9.2' Lt.	[illegible]	1	
39+57.4	22.9' Lt.	1	1	
40+27.9	6.1' Lt.	[illegible]	1	
42+01.6	18.1' Lt.	1		
42+34.7	7.8' Lt.	[illegible]	1	
46+08.7	7.8' Lt.	[illegible]	1	
46+90.8	6.9' Lt.	[illegible]	1	
47+60.3	20.0' Lt.	1		
47+98.6	14.3' Lt.	1	1	
48+02.3	23.1' Lt.	1	1	
48+58.4	5.4' Lt.	[illegible]	1	
50+52.0	6.5' Lt.	1	1	
100+57	68' Lt.	1	0	
100+58	64' Lt.	1	0	
100+59	63' Lt.	1	1	
100+90	63' Lt.	1	1	
101+03	63' Lt.	1	0	
34+60	Lt & Rt	2	0	
40+49	Lt	1	0	
41+81	Lt	1	0	



VALVE BOX CAP DETAIL



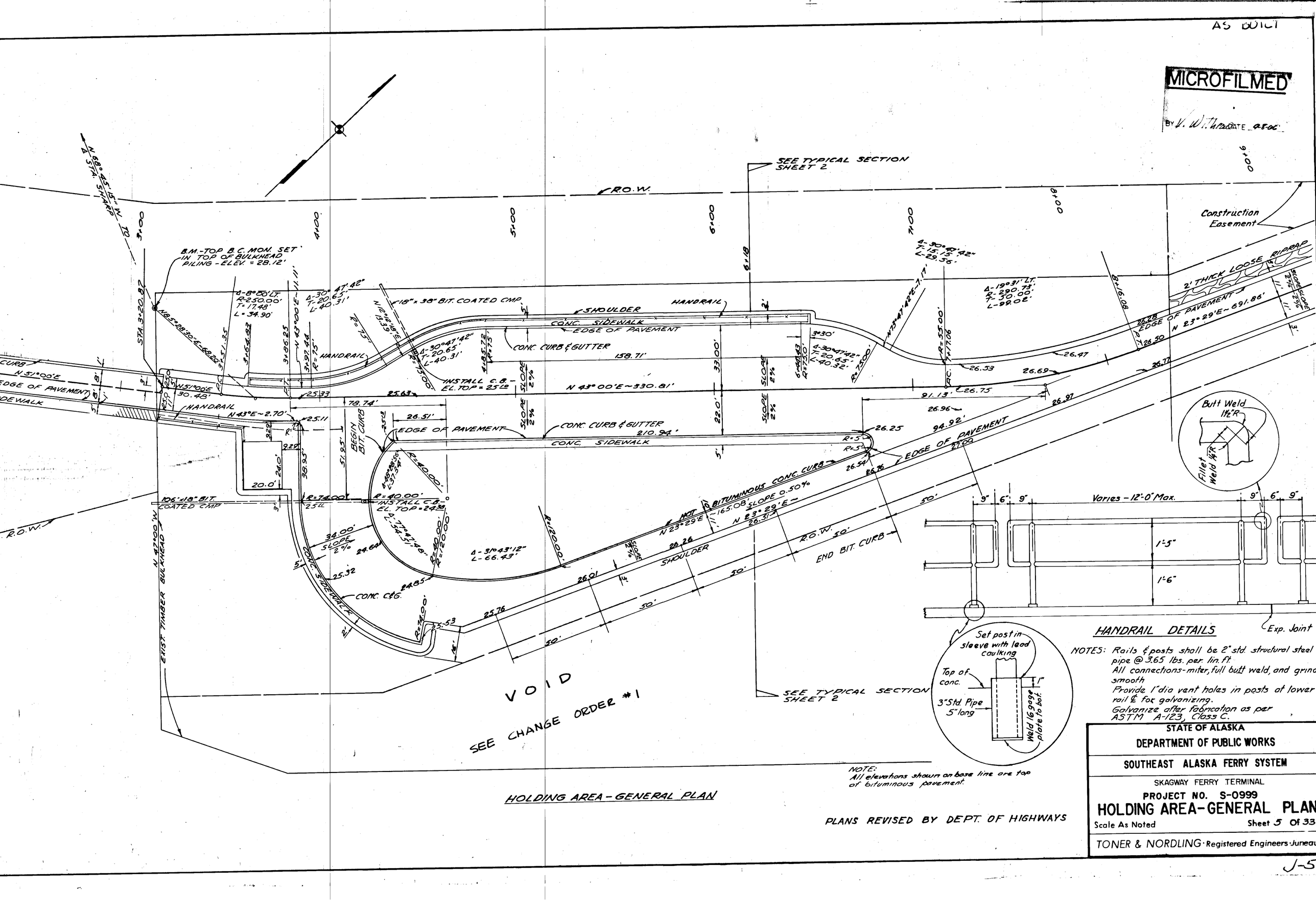
Cap Deminsions
Length - 6"
Diameter - Diameter of existing valve box +1"
Gage (wall thickness) 8 gage

Cap Cover Dimensions
Thickness - 8 gage
Width - Diameter of cap +2"
Length - Diameter of cap +2"

Steel shall conform to ASTM 373 steel
All welding shall conform to American Welding Society Specifications.

The new valve and valve box shall be installed prior to the capping of the old valve box. The corporation cock valve shall be opened prior to the placement of the valve box cap.

AS BUILT



HOLDING AREA - GENERAL PLAN

PLANS REVISED BY DEPT. OF HIGHWAYS

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
SOUTHEAST ALASKA FERRY SYSTEM
SKAGWAY FERRY TERMINAL
PROJECT NO. S-0999
HOLDING AREA - GENERAL PLAN
Scale As Noted
Sheet 5 Of 33
TONER & NORDLING · Registered Engineers · Juneau

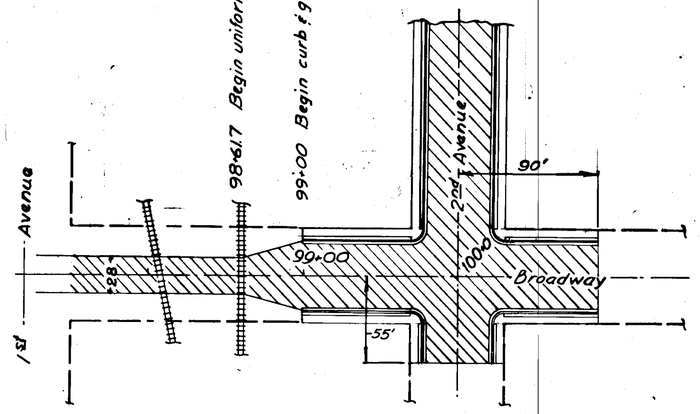
J-5

STATE	ROUTE	SECTION	YEAR	SHEET NO	TOTAL SHEETS
ALASKA	999 (5)		1963	6	33

AS BUILT

MICROFILMED

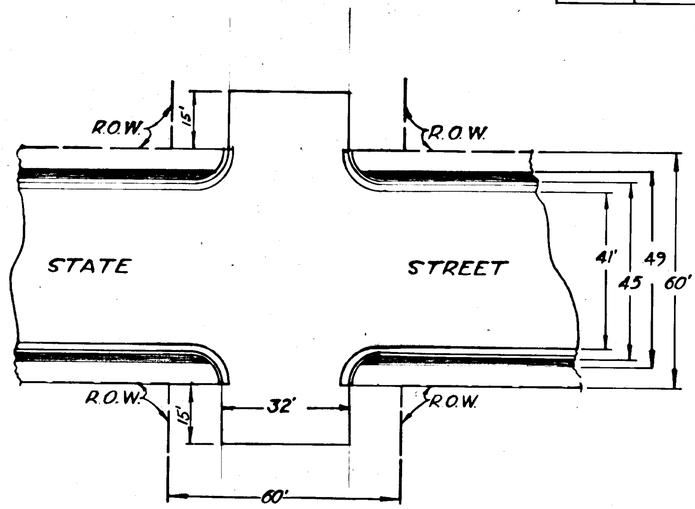
By V. Whitmore DATE 9-8-06



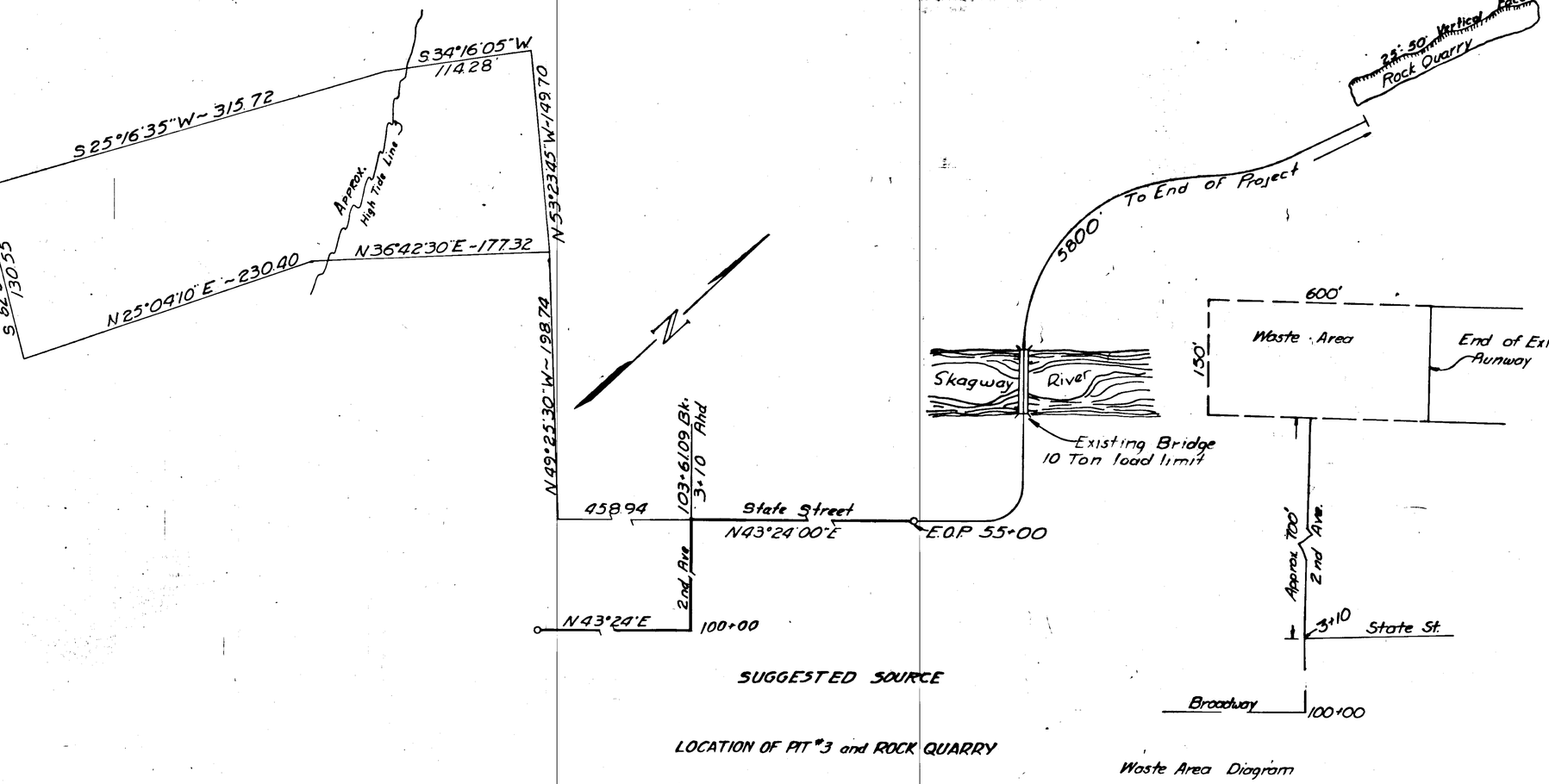
INTERSECTION of BROADWAY & 2nd Avenue

INTERSECTIONS

Station	Intersections
5+90	3rd Avenue and State Street
8+70	4th Avenue and State Street
11+50	5th Avenue and State Street
14+30	6th Avenue and State Street
17+10	7th Avenue and State Street
19+90	8th Avenue and State Street
22+70	9th Avenue and State Street
25+50	10th Avenue and State Street
28+29.95 Bk. 28+30.00 Ah.	11th Avenue and State Street
31+10	12th Avenue and State Street
33+90	13th Avenue and State Street
36+70	14th Avenue and State Street
39+50	15th Avenue and State Street
42+30	16th Avenue and State Street
45+10	17th Avenue and State Street
47+90	18th Avenue and State Street
50+70	19th Avenue and State Street

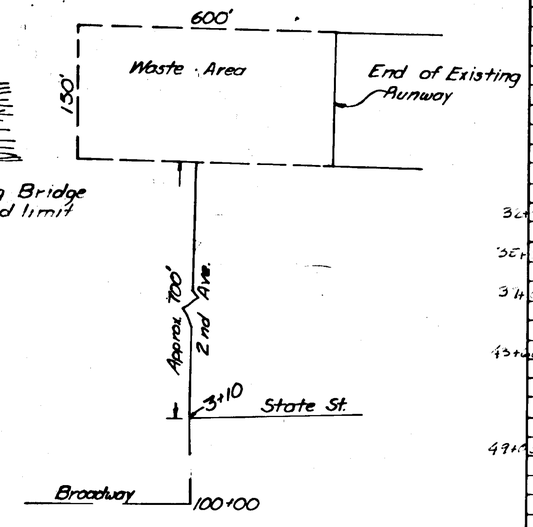


TYPE 1-A INTERSECTION DETAIL



SUGGESTED SOURCE

LOCATION OF PIT #3 and ROCK QUARRY



Waste Area Diagram

CURB CUTS

Station	Description
101+89	16' Curb cut Lt.
102+41	24' Curb cut Lt.
102+50	16' Curb cut Rt.
4+50	16' Curb cut Lt. & Rt.
5+05	16' Curb cut Rt.
7+30	16' Curb cut Lt. & Rt.
10+10	16' Curb cut Lt. & Rt.
12+90	16' Curb cut Lt. & Rt.
15+67	16' Curb cut Lt. & Rt.
18+50	16' Curb cut Lt. & Rt.
19+00	16' Curb cut Rt.
21+30	16' Curb cut Lt. & Rt.
21+77	16' Curb cut Rt.
24+11	16' Curb cut Lt.
24+16	16' Curb cut Rt.
24+89	16' Curb cut Rt.
26+80	16' Curb cut Rt.
26+90	16' Curb cut Lt.
29+42	16' Curb cut Rt.
29+70	16' Curb cut Lt. & Rt.
31+24	24' Curb cut Rt.
32+00	16' Curb cut Rt.
32+50	16' Curb cut Rt.
35+30	16' Curb cut Lt. & Rt.
36+75	24' Curb cut Lt. & Rt.
38+10	16' Curb cut Lt. & Rt.
40+49	16' Curb cut Rt.
44+35	16' Curb cut Rt.
45+09	16' Curb cut Lt.
	16' " " Lt.
46+50	16' Curb cut Lt. & Rt.
47+78	16' Curb cut Lt.
48+96	16' Curb cut Rt.
49+31	16' Curb cut Lt. & Rt.
50+30	16' Curb cut Rt.
	16' " " Rt.
52+40	16' Curb cut Rt.
53+34	16' Curb cut Lt.

Station	
	18' Curb Cut Rt.
	18' " " Lt.
	18' " " Lt.
	16' " " Lt.
	16' " " Lt.
	16' " " Rt.
	16' " " Rt.
	16' " " Lt.
	16' " " Rt.
	18' " " Lt.
	16' " " Rt.
	18' " " Rt.
	18' " " Lt. & Rt.

STATE	PROJECT	YEAR	SHEET NO	TOTAL SHEETS
ALASKA	999(5)	1963	7	33

AS BUILT

KAIYA INLET

PULLEN CREEK

N 51° 00' E ~ 620.00'

EXISTING DOLPHINS

BEGINNING OF PROJECT STA. 0+00

TRANSFER BRIDGE & DOCK STRUCTURE (NOT IN CONTRACT)

N 76° 09' 45" W ~ 382.37'

S 29° 30' W ~ 440.00'

TIMBER TRESTLE APPROACH STRUCTURE Paving only in contract

N 51° 00' E ~ 209.00'

Δ-37° 26' 47"
D-33° 27' 40"
T-50.01'
L-111.87'
R-171.23'

P.C. 0+00

P.T. 1+11.87

EXISTING FERRY RAMP

EXISTING DOLPHINS

N 40° 59' 05" W ~ 195.00'

Δ-8° 00' LT.
D-22° 55' 15"
T-17.44'
L-34.90'
R-250.00'

8° 08' 18"
23° 19' 21"

N 40° 48' 51" E ~ 508.00
N 43° 00' E ~ 508.00
N 43° 00' E

12" x 1070' Sewer line to be installed

3+20.87

P.C. 3+34.31

P.T. 3+66.25

Old sewer line (Abandon)

N 46° 44' 55" E ~ 341.90'
N 43° 00' E ~ 330.81'

P.C. 7+17.06

Δ = 19° 55' 11"
D = 19° 44' 30"

Construction Easement

R.O.W.

8+83.17 P.T.
8+94.24 P.C.

Δ-19° 57' LT.
D-19° 42' 30"
T-50.00'
L-99.02'
R-290.73'

8+16.88

N 23° 00' E ~ 99.70'

Existing Sewer

12" Thick Loose Riprap

N 23° 29' E

69.86'

EDGE OF SHOULDER

R.O.W.

STA. 3+20.87 TO STA. 8+30.94 FERRY TERMINAL HOLDING AREA. SEE DETAILS ON SH. 5

3+08.83 P.T.

R.O.W.

23° 25' 55"
S 29° 30' W ~ 480.08

42° 56' 55"
S 45° 00' W ~ 112.04'

COMBINED BULKHEAD & PIERHEAD LINE

EXISTING TIMBER BULKHEAD

9+27 9+20 Construct sewer manhole 37' Lt. -1.00 to 9+20
Install 12"x1070' Asbestos Cement pipe. Minimum cover 2'.
Plug Old Sewer Outlet

MICROFILMED

BY K.W. Throw DATE 9-8-06

Excavation Cu. Yd. 2800
Embankment Cu. Yd. 4606 ①
Select Material Type II Borrow Case 2 Cu. Yd. 766

① Includes 1600 yds. in place from sta 97+50 - 10+00

4 PILE BENTS

Ground Line @ Proposed Sewer

Top Elv. = 17.70
Invert Elv. = 8.75
Install manhole 9+20

0.5%
12" Asbestos Cement Sewer Line
-1.90%
0.50%
0.00%

0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00

PLATE 1 - PLAN - PROFILE O.P.R. & R.E. STANDARD
1964-S AGEPROOF FILM— MADE AND PRINTED IN U.S.A.
EUGENE DIETZGEN CO.

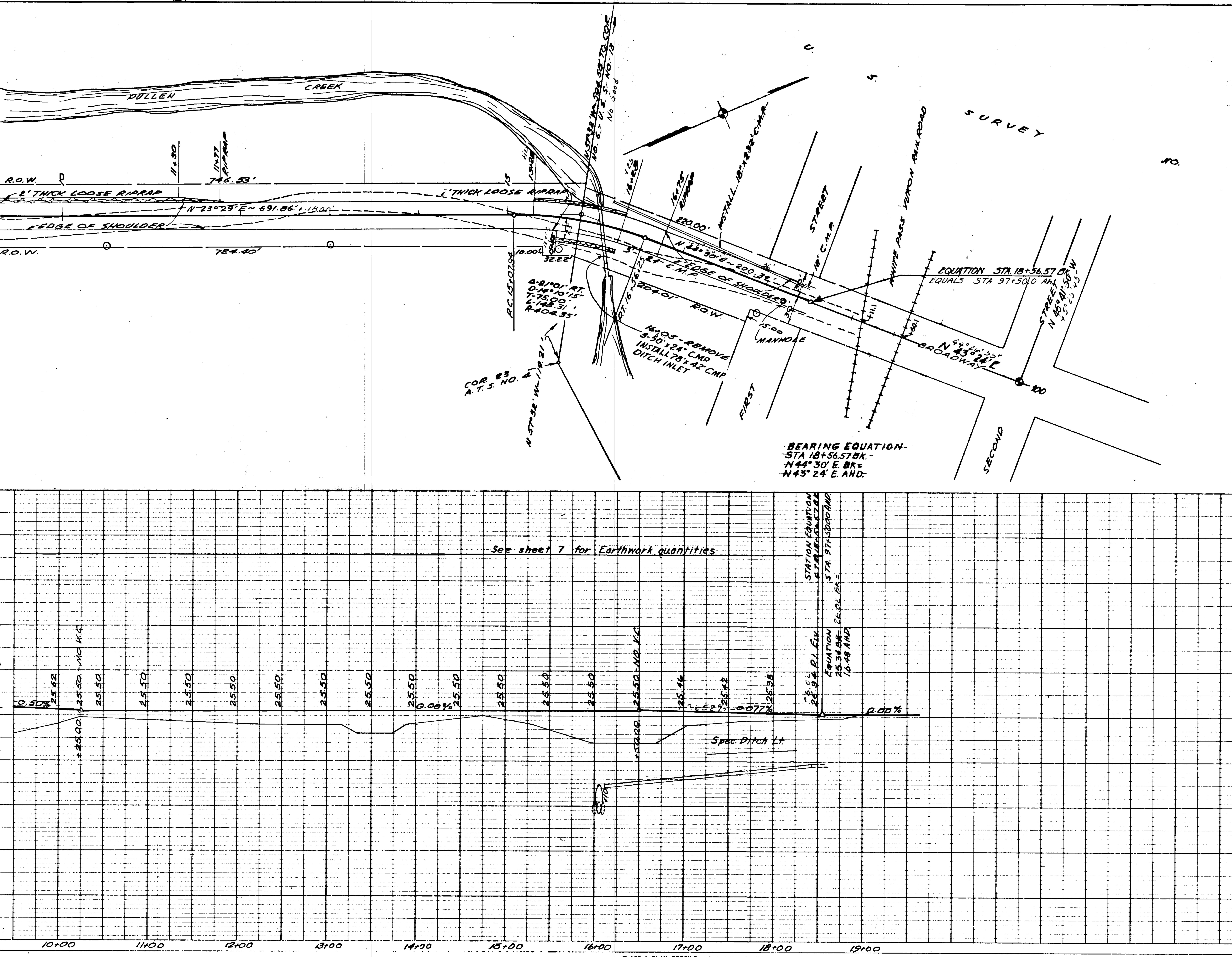
J-5

STATE	ROUTE	YEAR	SHEET NO	TOTAL SHEETS
ALASKA	S-999 (5)	1963	8	33

AS BUILT

MICROFILMED

BY V. Withrow DATE 9-8-06



PULLEN
CREEK
U. S. SURVEY NO. 13
R.O.W.
2' THICK LOOSE RIPRAP
N-23°29'E - 691.86'
EDGE OF SHOULDER
746.53'
724.40'
11+30
11+77 RIPRAP
2' THICK LOOSE RIPRAP
220.00'
INSTALL 18"x232' C.M.P.
N 44°30'E - 200.32'
EDGE OF SHOULDER
24" C.M.P.
18" C.M.P.
204.01'
R.O.W.
P.C. 15+07.94
10.00'
32.22'
Δ-21°01' RT.
D-14°10'15"
T-75.00'
L-148.31'
R-404.35'
P.T. 16+56.25
16+05 - REMOVE 3-30"x24" CMP. INSTALL 78"x42" CMP. DITCH INLET
15.00
MANHOLE
COR. 23 A.T.S. NO. 4
FIRST
STREET
WHITE PASS YUKON RAILROAD
EQUATION STA. 18+56.57 BK. EQUALS STA 97+50.0 AHD.
BROADWAY
N 43°24'E
SECOND
STREET
100
BEARING EQUATION
STA 18+56.57 BK.
N44° 30' E. BK=
N43° 24' E. AHD.
See sheet 7 for Earthwork quantities
STATION EQUATION STA 18+56.57 BK. STA 97+50.00 AHD.
EQUATION 25.34 BK= 26.06 BK= 16.48 AHD.
0.50%
0.00%
0.00%
-0.077%
NO V.C.
+25.00
+50.00
Spec. Ditch Lt.
10+00
11+00
12+00
13+00
14+00
15+00
16+00
17+00
18+00
19+00

PLATE 1 - PLAN - PROFILE O.F.R.&R.E. STANDARD
EUGENE DIETZGEN CO.

J-5

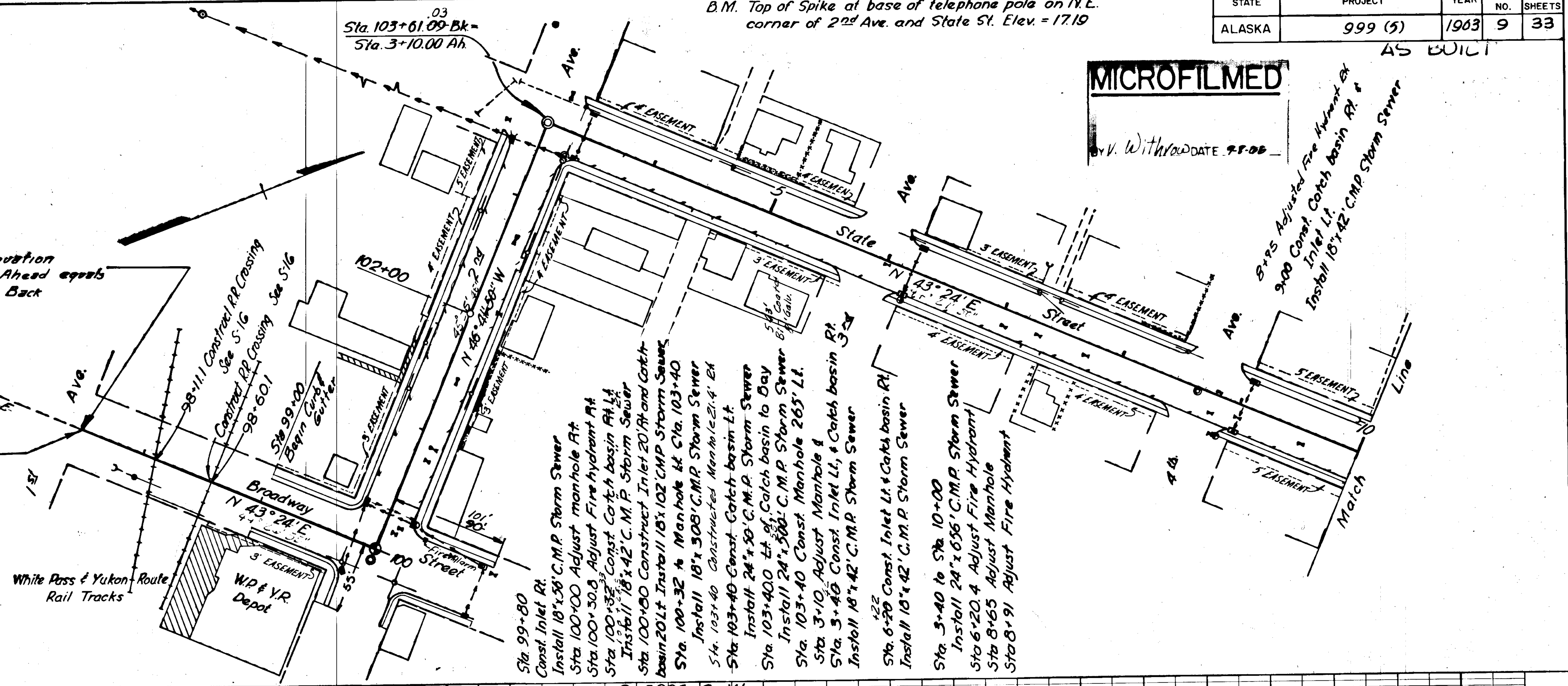
STATE	PROJECT	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	999 (5)	1963	9	33

AS BUILT

MICROFILMED
BY V. Withrow DATE 9-8-86

NOTE:
See sheet Nº 6 for list of curb cuts, for alleys, driveways and streets.
See sheet Nº 3 for detailed list of Underdrain quanities

B.M. Top of Spike at base of telephone pole on N.E. corner of 2nd Ave. and State St. Elev. = 17.19



Sta. 103+61.09 Bk = Sta. 3+10.00 Ah.
Station Equation
Sta 97+50.0 Ahead equals
Sta 18+56.57 Back
Bearing Equation
N 43°24'E Ahead equals
N 44°-30'E Back
N 44°-30'E
Ave.
1st
Broadway
N 43°24'E
Street
State
N 43°24'E
2nd
N 46°40'50" W
102+00
100
Ave.
4th
Line
Match
98+11.1 Construct RR Crossing See S-16
Construct RR Crossing See S-16
98+60.1
Sta 99+00 Begin Curb & Gutter
White Pass & Yukon Route Rail Tracks
W.P. & Y.R. Depot
3' EASEMENT
4' EASEMENT
5' EASEMENT
Sta. 99+80 Const. Inlet Rt.
Install 18"x 58' C.M.P. Storm Sewer
Sta. 100+00 Adjust manhole Rt.
Sta. 100+30.8 Adjust Fire hydrant Rt.
Sta. 100+30 Const. Catch basin Rt. Lt.
Install 18"x 42' C.M.P. Storm Sewer
Sta. 100+80 Construct Inlet 20' Rt and Catch basin 20' Lt Install 18 x 102 CMP Storm Sewer
Sta. 100+32 to Manhole Lt. Sta. 103+40
Install 18"x 308' C.M.P. Storm Sewer
Sta. 103+40 Const. Catch basin Lt.
Install 24"x 50' C.M.P. Storm Sewer
Sta. 103+40.0 Lt. of Catch basin to Day
Install 24"x 300' C.M.P. Storm Sewer
Sta. 103+40 Const. Manhole 26.5' Lt.
Sta. 3+10 Adjust Manhole
Sta. 3+40 Const. Inlet Lt. & Catch basin Rt.
Install 18"x 42' C.M.P. Storm Sewer
Sta. 6+20 Const. Inlet Lt. & Catch basin Rt.
Install 18"x 42' C.M.P. Storm Sewer
Sta. 3+40 to Sta. 10+00
Install 24"x 656' C.M.P. Storm Sewer
Sta 6+20.4 Adjust Fire Hydrant
Sta 8+65 Adjust Manhole
Sta 8+91 Adjust Fire Hydrant
8+95 Adjusted Fire Hydrant Rt.
9+00 Const. Catch basin Rt. & Inlet Lt.
Install 18"x 42' C.M.P. Storm Sewer

Elevation Datum Brass monument marked U.S. Coast and Geodetic survey dated 1910, located S.E. corner of old District Court house now the Skagway museum. Elev. = 23.49
Profile Grade is Finished Grade
Excavation ① 5,296 Cu. Yds.
Embankment 1,450 Cu. Yds.
Selected Material Type II Borrow Case 2 1,557 Cu. Yds.
① 2000 cu. yds. to be used on approach road to Ferry Terminal
3267 cu. yd waste.
Station Equation
Sta 97+50.0 Ahead equals Sta. 18+56.57 Back
Elevation Equation
Sta. 97+50 Ahead
Elev. 16.48 Ahead
Equals Elev. 25.34 Back
-0.077%
0.00%
-0.35%
+0.18%
+0.18%
+0.80%
Elev. 16.48 No V.C.
Elev. 16.48 No V.C.
Elev. 15.99 No V.C.
Elev. 17.75 400 V.C.
Elev. 20.05 No V.C.
18" C.M.P.
24" C.M.P.
F.L. existing 12" Sanitary Sewer
Equation Sta. 103+61.09 Bk = Sta. 3+10.00 Ahd
F.L. Inlet Rt. Sta. 99+80 = 11.20
F.L. Catch Basin Lt. Sta. 100+30 = 10.90
F.L. Catch basin Rt. Sta. 100+30 = 11.10
F.L. Outlet Lt. Sta. 103+40 determined by Tide elev.
F.L. Catch basin Lt. Sta. 103+40 = 10.00
F.L. Inlet Lt. Sta. 3+40 = 10.80
F.L. Catch Basin Rt. Sta. 3+40 = 10.20
F.L. Inlet Lt. Sta. 6+20 = 12.00
F.L. Catch Basin Rt. Sta. 6+20 = 11.81
F.L. Inlet Lt. Sta. 9+00 = 13.61
F.L. Catch basin Rt. Sta. 9+00 = 13.41
30
20
10
97
98
99
100
101
102
103
3
4
5
6
7
8
9
10

PLATE 1 - PLAN-PROFILE O.P.R. & R.E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E Co. No. 348-1FG

J-5

STATE	PROJECT	YEAR	SHEET Nº	TOTAL SHEETS
ALASKA	999 (5)	1963	10	33

Manhole Sta. 10+33
10+00 to Catch basin Sta 11+40
Install 24" x 736' C.M.P
Storm Sewer

11+20 Adjust Fire Hydrant

11+80 Const. Inlet Lt, Catch-Basin Rt. Install 18"x42" C.M.P
Storm Sewer

12+91 Adjust Manhole Rt

14+00 Adjust Fire Hydrant Rt

14+60 Const. Catch basin Rt and Inlet Lt. Install 18"x42" C.M.P Storm Sewer

17+40 Const. Inlet Lt, Catch-Basin Rt. Install 18"x52" C.M.P 41' C.M.P Storm Sewer, 10' of this length is to be used to connect to existing drainage structure 18"x52" C.M.P at 31+40 to 31+40 C.M.P Install 18"x1400 C.M.P Storm Sewer

18+55 Const. Manhole Rt Install 18"x 96' C.M.P to connect to existing drainage ditch

19+99 Adjust Manhole Rt.

20+20 Const. Inlet Lt. & Catch-Basin Rt. Install 18"x42" C.M.P Storm Sewer

20+21.7 Adjust Fire Hydrant

22+60 Adjust Manhole Rt.

23+00 Const. Inlet Lt, and Catch Basin Rt. Install 18"x42" C.M.P Storm Sewer

Match Line

City Hall

Fire Alarm

Flag Pole

B.P.O.E.

5' EASEMENT
4' EASEMENT
6' EASEMENT
7' EASEMENT
8' EASEMENT
existing drainage

Ave. 5th Ave. 6th Ave. 7th Ave. 8th Ave. 9th

State Street

N 43° 24' E

10 15 20 25

10+16 B.M. Top of spike at base of telephone pole located 26' Lt. Elev = 20.55

17+25 B.M. Top of Spike at base of telephone pole 26' Lt. Elev = 23.80

24+00 B.M. Top of Spike at base of telephone pole 26' Lt. Elev. = 27.58

Excavation
Embankment
Selected Material Type II, Borrow Case 2

① 3,353 Cu. Yds.
2,054 Cu. Yds.
1,850 Cu. Yds.
① 3,206 Cu. Yds. to be wasted

20.55
1% VC
+0.53%

24" C.M.P
18" C.M.P

F.L. Inlet Lt. Sta. 11+80 = 15.80
F.L. Catch Basin Rt. Sta. 11+80 = 15.62
F.L. Catch Basin Rt. Sta. 14+60 = 16.95
F.L. Inlet Lt. Sta. 14+60 = 17.15
F.L. Inlet Lt. Sta. 17+40 = 18.30
F.L. Catch Basin Rt. Sta. 17+40 = 18.31
F.L. Manhole Rt. Sta. 18+55 = 19.86
F.L. existing 12" Sanitary Sewer
F.L. Inlet Lt. Sta. 20+20 = 19.85
F.L. Catch basin Rt. Sta. 20+20 = 19.85
F.L. Inlet Lt. Sta. 23+00 = 21.20
F.L. Catch Basin Rt. Sta. 23+00 = 21.00

10 11 12 13 14 15 16 17 18 19 20 1 2 3 4 25

PLATE 1 - PLAN - PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E Co. No. 348-1PG 183 24967

J-5

STATE	PROJECT	YEAR	SHEET Nº	TOTAL SHEETS
ALASKA	999 (5)	1963	11	33

AS BUILT

25+78 Const. Inlet Lt. and Catch basin Rt. Install 18"x 4' C.M.P. Storm Sewer

25+82.4 Adjust Fire Hydrant Rt.

26+75 Adjust Manhole Rt.

28+20 Adjust Manhole Rt.

28+60 Const. Inlet Lt., and Catch Basin Rt. Install 18"x 42' C.M.P. Storm Sewer & 8"x 15" CMP Connecting side street drainage

31+40 Const. Catch basin Rt. and Inlet Lt. Install 18"x 42' C.M.P. Storm Sewer

32+49 Adjust Manhole Rt.

Skagway School

34+20 Const. Catch Basin Lt. & Rt. Install 18"x 164' C.M.P. Storm Sewer

34+20 to 45+40 Install 18"x 1120' C.M.P. Storm Sewer Lt.

35+30 Adjust Manhole Rt.

36+58.8 Adjust Fire Hydrant Rt.

36+61 Adjust Manhole Rt.

37+00 Const. Inlet Rt. and Catch basin Lt. Install 18"x 42' C.M.P. Storm Sewer

37+10 Remove and dispose 6'x 60' Steel Pipe

38+10 Adjust Manhole Rt.

39+60 Remove & Dispose 18"x 114' C.M.P.

39+80 Const. Inlet Rt. and Catch Basin Lt. Install 18"x 42' C.M.P. Storm Sewer Lt.

Match Line

Ave. Ave. Ave. Ave. Ave.

Stale Street N 43° 24' E

5' EASEMENT 6' EASEMENT 10' EASEMENT 11' EASEMENT

Fire Alarm Flag Pole Garden Platform Creek Creek

10th 12th 13th 14th 15th

28+29.95 POT Bk = 28+30.00 Ahd 11th

29+78 B.M. Top of Spike in base of telephone pole
26' Lt. Elev. = 32.69

35+21 B.M. Top of Spike in base of telephone pole
26' Lt. Elev. = 37.12

MICROFILMED

BY L. With row DATE 8-8-06

Excavation
Embankment
Select Material Type II, Borrow Case 2

① 3,755 Cu. Yds.
2,122 Cu. Yds.
1,904 Cu. Yds.
② 3,381 Cu. Yds. to be wasted

Elev. 28.53
400' V.C.

Elev. 35.00
No V.C.

+0.53%
+1.05%
+0.56%

18" C.M.P.

Equation

F.L. existing 12" Sanitary Sewer

F.L. Inlet Lt. Sta. 25+99 = 23.65'
F.L. Catch basin Rt. Sta. 25+80 = 23.45'

F.L. Inlet Lt. Sta. 28+60 = 26.10
F.L. Catch Basin Rt. Sta. 28+60 = 25.90

F.L. Inlet Lt. Sta. 31+40 = 28.55'
F.L. Catch basin Rt. Sta. 31+40 = 28.35'

F.L. of Inlet into stream Rt. Sta. 34+20 = 31.50

F.L. Catch basin Lt. Sta. 34+20 = 32.00
F.L. Catch Basin Rt. Sta. 34+20 = 32.20

F.L. Inlet Rt. Sta. 37+00 = 33.73'
F.L. Catch basin Lt. Sta. 37+00 = 33.93'

F.L. Inlet Rt. Sta. 39+80 = 35.70
F.L. Catch Basin Lt. Sta. 39+80 = 35.50

PLATE 1 - PLAN - PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E Co. No. 348-1PG 183 24067

J-5

STATE	PROJECT	YEAR	SHEET Nº	TOTAL SHEETS
ALASKA	999 (5)	1963	12	33

AS BUILT

MICROFILMED

BY V. Withrow DATE 9-8-06

40+73 Adjust Manhole Rt.

42+01.6 Adjust Fire Hydrant Lt.

42+60 Const. Inlet Rt. & Catchbasin Lt. Install 18"x 42' C.M.P. Storm Sewer

PIUS X Mission Living Quarters

45+40 Const. Inlet Rt. & Catchbasin Lt. Install 18"x 42' C.M.P. Storm Sewer

46+50 Adjust Manhole Rt.

47+60.3 Adjust Fire Hydrant Lt.

47+90 Broken Concrete Headwalls for 36" C.M.P. & 18" Lt.

47+86 Remove & Dispose 30'±84' C.M.P.

47+90 Install 36"x 84' C.M.P. Skew 45° Lt. Ahead

Install 2-Metal End Sections

48+20 Const. Catchbasin Rt. & Lt.

Install 18"x 70' C.M.P. Storm Sewer & 18"x 40' C.M.P.

48+20 to 51+00 Install 18"x 280' C.M.P. Storm Sewer

49+30 Adjust Manhole Rt.

51+00 Const. Catchbasin Lt. & Inlet Rt.

Install 18"x 42' C.M.P.

53+70 Install 24"x 64' C.M.P.

Install 2 Metal End Sections

Ditch out to Creek

END OF PROJECT

Sta. 53+20

Match Line

15th Ave.

16th Ave.

17th Ave.

18th Ave.

19th Ave.

20th Ave.

State Street

N 43° 24' E

Creek

5' EASEMENT

3' EASEMENT

4' EASEMENT

6' EASEMENT

7' EASEMENT

Fire Alarm

Fire Alarm Box

30' Antenna

Parking Area

D.P.W. Main Shop

40+66 B.M. Top of Spike in base of telephone pole 26' Lt. Elev. = 40.71

45+30 B.M. Top of Spike in base of telephone pole 26' Lt. Elev. = 45.01

53+17 B.M. Top of Spike in telephone pole 26' Lt., Elev. = 51.37

Excavation

Embankment

Select Material Type II, Borrow Case 2

④ 4,544 Cu. Yds.

1,956 Cu. Yds.

1,761 Cu. Yds.

④ 4,502 Cu. Yds. to be wasted

Elev. = 40.36 No V.C.

+0.56%

+0.83%

Elev. 50.49

F.L. existing 12" Sanitary Sewer

F.L. Catchbasin Rt. Sta. 42+60 = 39.60 37.60

F.L. Inlet Lt. Sta. 42+60 = 37.80

F.L. Inlet Lt. Sta. 45+40 = 39.90

F.L. Catchbasin Sta. 45+40 = 39.70

F.L. 24" Post Creek - Inlet = 41.80 - Outlet 41.60

F.L. Catchbasin Rt. Sta. 48+20 = 43.00

F.L. Storm Sewer outlet Rt. Sta. 47+38 = 42.60 +2.0

F.L. Inlet Lt. to 48+20 = 44.50 +2.0

F.L. Outlet Lt. Sta. 48+20 = 43.00

F.L. Inlet Rt. Sta. 51+00 = 46.66 +2.0

F.L. Catchbasin Lt. Sta. 51+00 = 44.86 +2.0

40 1 2 3 4 45 6 7 8 9 50 1 2 3 4 55

PLATE 1 - PLAN - PROFILE O. P. R. & R. E. STANDARD

KEUFFEL & ESSER CO., NEW YORK.

K & E Co. No. 348-IPG 183 24967

J-5

STATE	ROUTE	SECTION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0999(5)		1963	13	33

AS BUILT

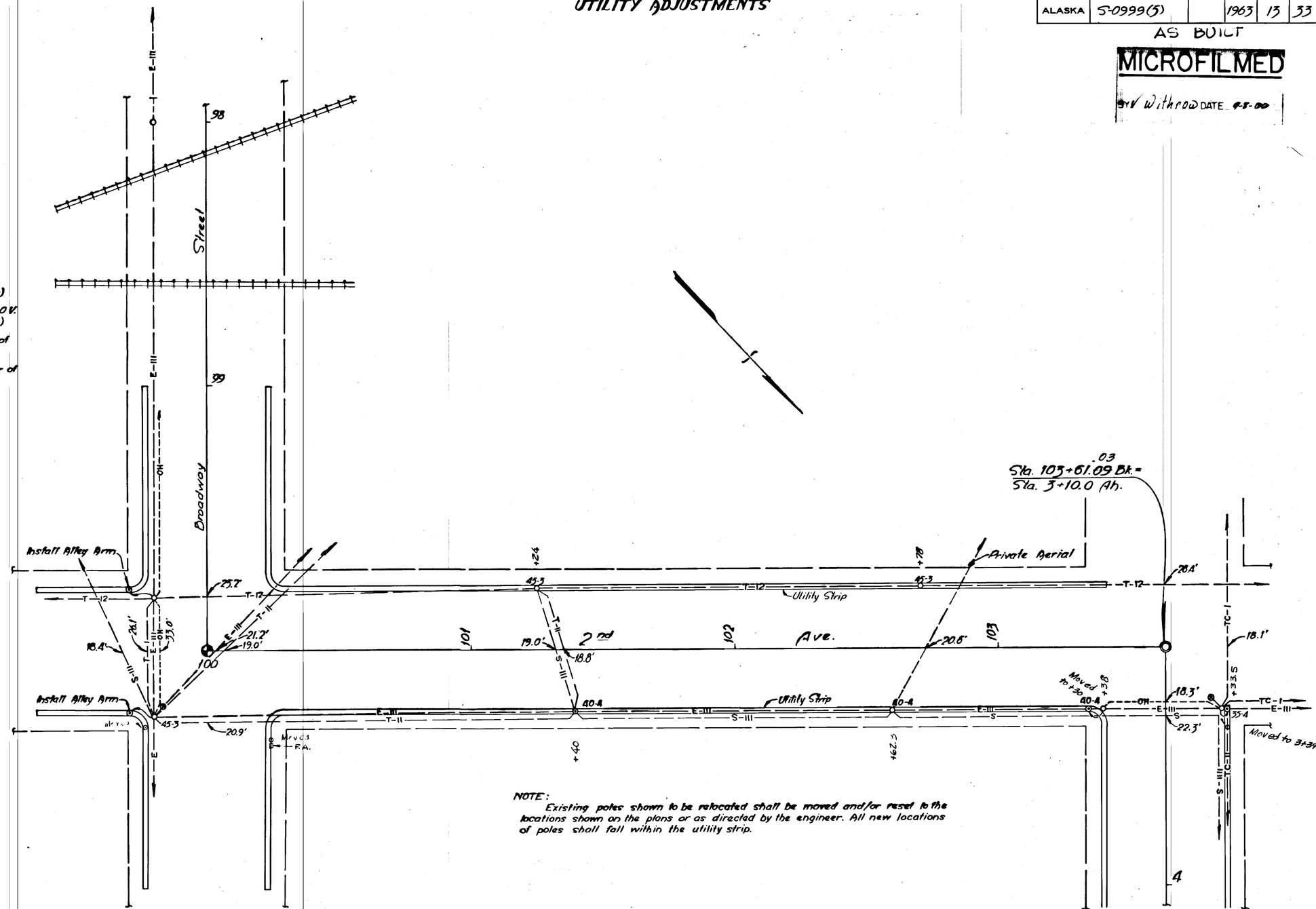
MICROFILMED

BY Withrow DATE 9-8-00

UTILITY ADJUSTMENTS

LEGEND

EXISTING CONSTRUCTION	NEW CONSTRUCTION	
——E-III——	None	Power line, primary, 3 phase, 2,400 V. (—— -III- ——, indicates number of conductors)
——S-III——	None	Power line, secondary, single phase, 120/240 V. (—— -III- ——, indicates number of conductors)
——T-II——	None	Telephone line (—— -II- ——, indicates number of conductors)
——TC-II——	None	Telephone cable (—— -II- ——, indicates number of cables)
O 35-3	None	Pole, height and class
------|	——→	Down guy and anchor
----OH——	None	Overhead guy or span guy
T	None	Telephone box
M	None	Meter box, street light circuit
FA	None	Fire alarm box
	None	Transformer, single phase
—⊕	None	Street light
	●	Existing pole relocated
18.4'		Indicates present height of vertical clearance from existing ground.



NOTE:
Existing poles shown to be relocated shall be moved and/or reset to the locations shown on the plans or as directed by the engineer. All new locations of poles shall fall within the utility strip.

J-6

STATE	ROUTE	SECTION	YEAR	SHEET NO.
ALASKA	S-0999(5)		1963	14

UTILITY ADJUSTMENTS

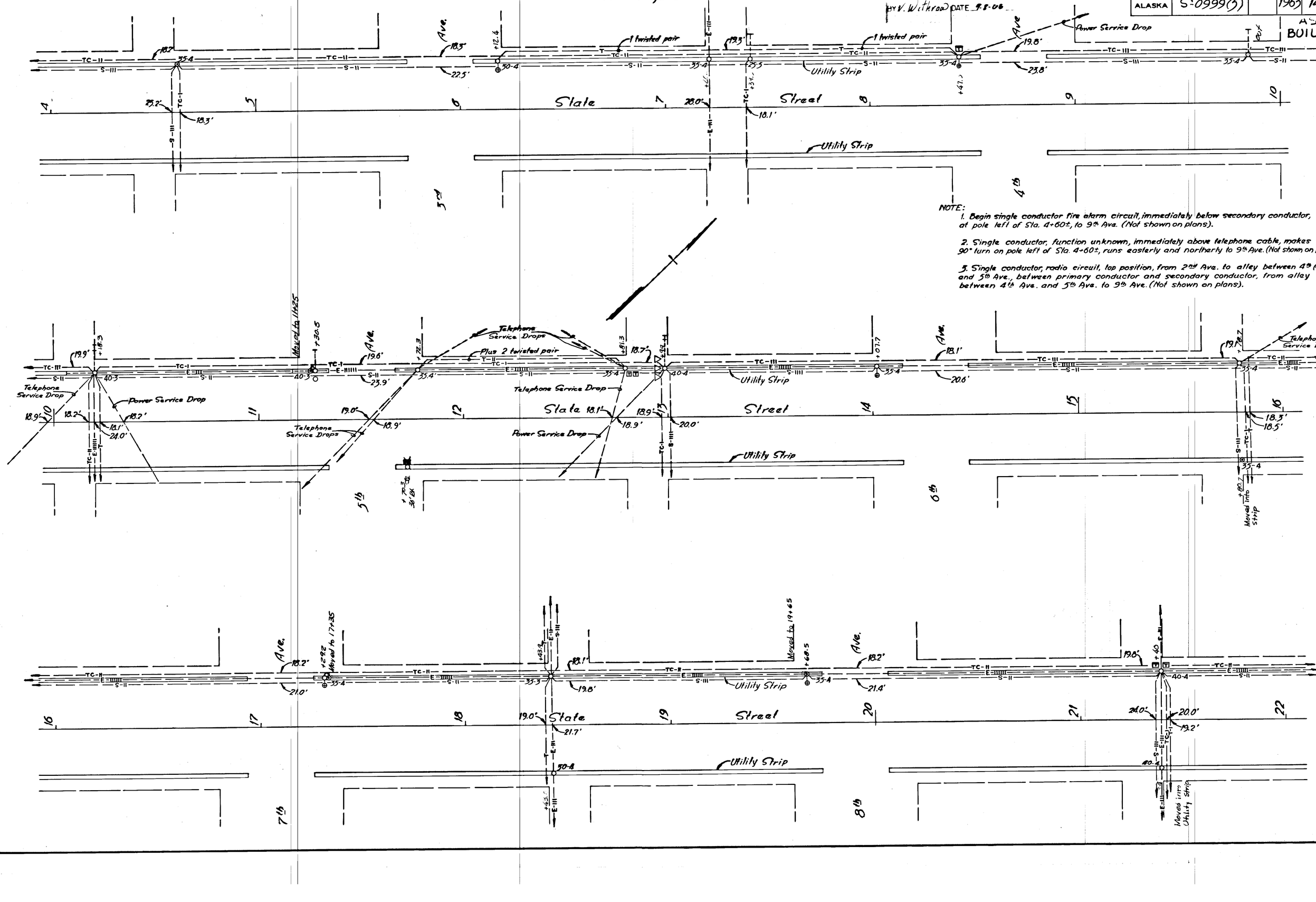
BY V. Withrow DATE 9-8-06

NOTE:

1. Begin single conductor fire alarm circuit, immediately below secondary conductor, at pole left of Sta. 4+60±, to 9th Ave. (Not shown on plans).

2. Single conductor, function unknown, immediately above telephone cable, makes 90° turn on pole left of Sta. 4+60±, runs easterly and northerly to 9th Ave. (Not shown on

3. Single conductor, radio circuit, top position, from 2nd Ave. to alley between 4th and 5th Ave., between primary conductor and secondary conductor, from alley between 4th Ave. and 5th Ave. to 9th Ave. (Not shown on plans).

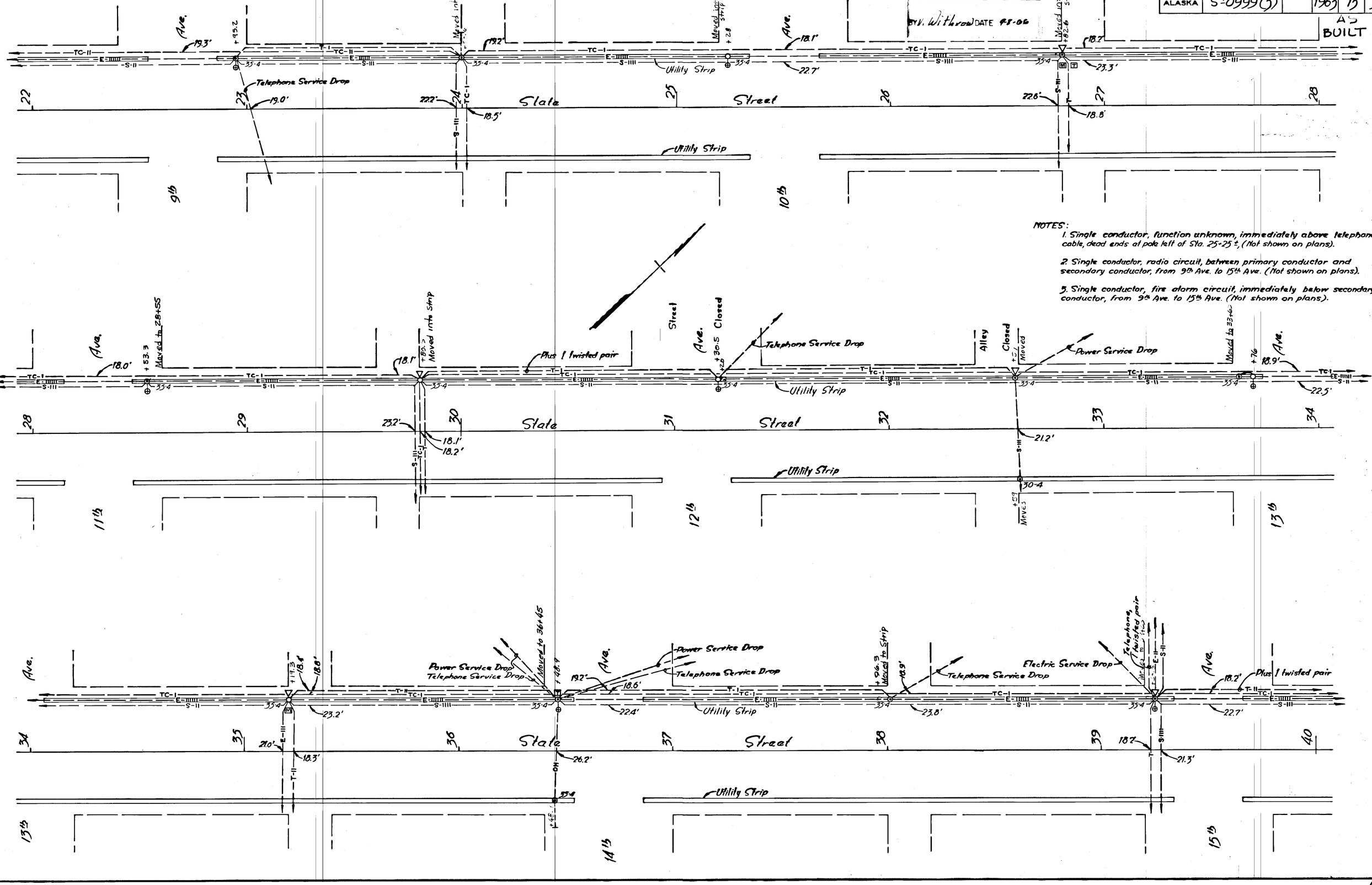


UTILITY ADJUSTMENTS

MICROFILMED
BY V. Withrow DATE 98-06

STATE	ROUTE	SECTION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0999(5)		1963	15	33

AS BUILT



NOTES:

1. Single conductor, function unknown, immediately above telephone cable, dead ends at pole left of Sta. 25+25 ±, (Not shown on plans).
2. Single conductor, radio circuit, between primary conductor and secondary conductor, from 9th Ave. to 15th Ave. (Not shown on plans).
3. Single conductor, fire alarm circuit, immediately below secondary conductor, from 9th Ave. to 15th Ave. (Not shown on plans).

J-9

STATE	ROUTE	SECTION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0999 (5)		1963	16	33

UTILITY ADJUSTMENTS

NOTES:

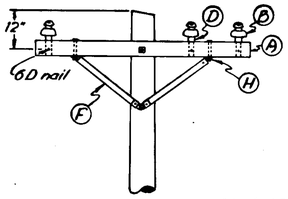
1. Single conductor, fire alarm circuit, immediately below secondary conductor, from 15th Ave. to 20th Ave. (Not shown on plans).
2. Single conductor, radio circuit, between primary conductor and secondary conductor from 15th Ave. to 20th Ave. (Not shown on plans).
3. Telephone cable and/or telephone lines may be raised vertically to a minimum distance of 3 feet, 4 inches below secondary conductor.

UTILITY ADJUSTMENTS

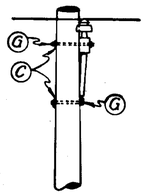
STATE	ROUTE	SECTION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0999(5)		1963	17	33

LINE CONSTRUCTION — 2400 VOLT

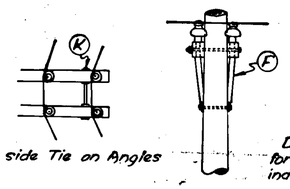
Number of Pin Positions used to be determined by Nº of conductors as shown on Distribution Plans.



1A & 1B



Note: 1A - 4 Pin, Single Arm
1B - 6 Pin, Single Arm
1AD - 4 Pin, Double Arm
1BD - 6 Pin, Double Arm



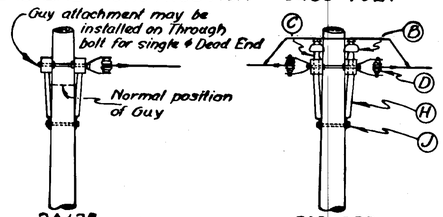
Use side Tie on Angles

Double Arm Construction for Crossings and Angles as indicated on Distribution Plans.

1AD & 1BD

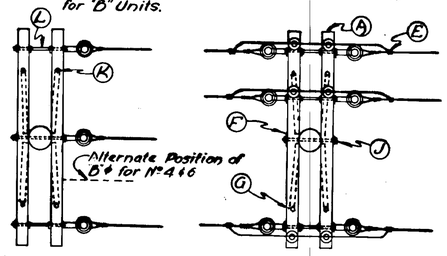
	ITEM	QUANTITY 1AB	QUANTITY AD-BD
A	Cross Arms, 4 Pin or 6 Pin (See Note)	1	2
B	Insulators, Pin Type – 2400 V.	3	6
C	Washers, Square	3	10
D	Pins, Insulator, Wood	3	6
E	Washers, Round	2	4
F	Braces, Cross Arm, 42" Span	1 Pr.	2 Pr.
G	Bolts, Through 5/8"	2	2
H	Bolts, Machine 1/2"	2	4
K	Bolts, Double Arming		2

DEAD END CONSTRUCTION — 2400 VOLT



2A & 2B 2AD & 2BD

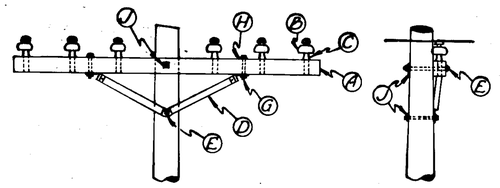
Note: A and B Units identical except use 6 Pin Cross Arm for "B" Units.



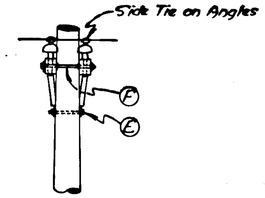
Note: Item D may be either spool & clevis or strain insulator & clevis. Add eye nut when using strain insulator.

	ITEM	2AB	AB-BD
A	Cross Arms, 4 Pin or 6 Pin (See Note)		6
B	Insulators, Pin Type, - 2400 V		6
C	Pins, Insulator, Wood		6
D	Insulated Clevis	3	6
E	Connectors, Solderless		6
F	Washers, Square	10	14
G	Washers, Round	4	4
H	Braces, Cross Arm, 42" Span	2 Pr.	2 Pr.
J	Bolts, Through	2	2
K	Bolts, Machine	4	4
L	Bolts, Double Arming	2	3

LINE CONSTRUCTION - 2-2400 V. CIRCUITS CROSSARM - 6 PINS



4B



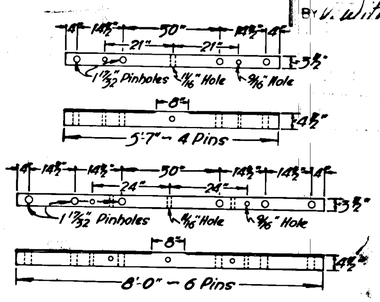
4BD

Double Arm Construction – Two 2400 V. Circuits for Crossings & Angles as indicated on Plans.

	ITEM	4B	4BD
A	Cross Arm, 6 Pin	1	2
B	Insulator, Pin Type	6	12
C	Pins, Insulator, Wood	6	12
D	Brace, Cross Arm, 48" Span	1 Pr.	2 Pr.
E	Bolt, Through, 5/8"	2	2
F	Bolt, Double Arming, 5/8"		2
G	Bolt, Machine, 1/2"	2	4
H	Washer, Round	2	4
J	Washer, Square	3	10

CROSSARM DETAILS

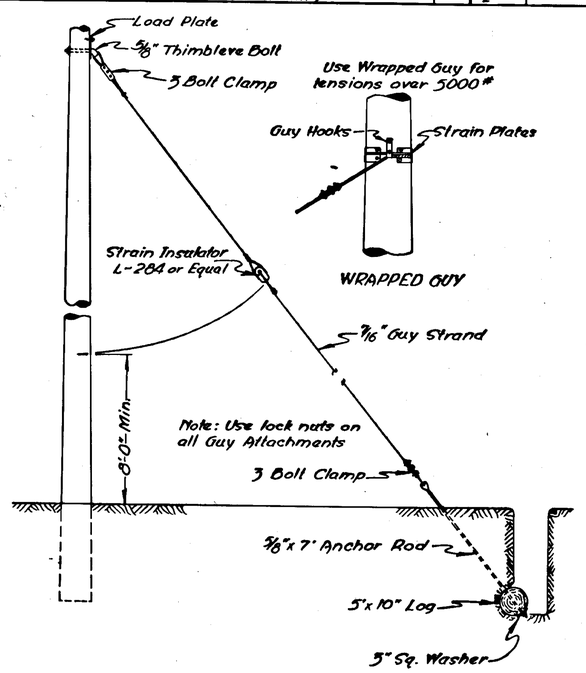
BY V. Withrow DATE 9-8-66



SAG CHART - FINAL SAG

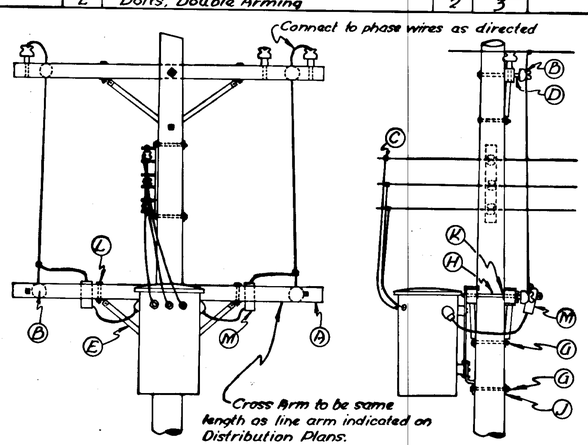
TEMP. DEGREE F.	SAG in Inches for Span Length of 100'	125'	140'	150'	160'	175'
0°	8	11	14	16	18	21
20°	9.5	13	17	19	21	24.5
40°	11	15.5	19.5	22	24.5	28
60°	12.5	18	22	25	28	32
80°	14	20	25	28	31.5	36

Note: For conductor size Nº 6 A.W.G. Copper to Nº 2/0 A.W.G. Copper & Nº 8 B.W.G. Galvanized Steel.



DOWN GUY & ANCHOR FOR HEAVY GUYING
(Tensions to 6250 Lbs.)

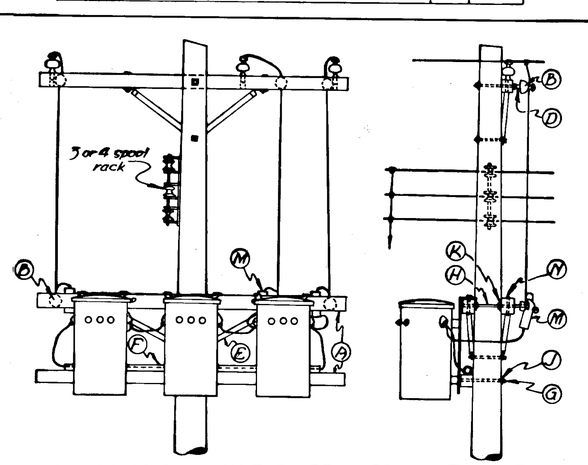
Unit Nº 14 with Eyebolt — Unit Nº 14W with Wrapped Guy



SINGLE POLE TRANSFORMER INSTALLATION CROSS ARM MOUNTED. FOR ONE - 10 TO 37½ KVA

Note: Assembly Nº 21A same as Nº 21 except install Transformer Arm 2'-0" below line arm & run secondary below Transformer.

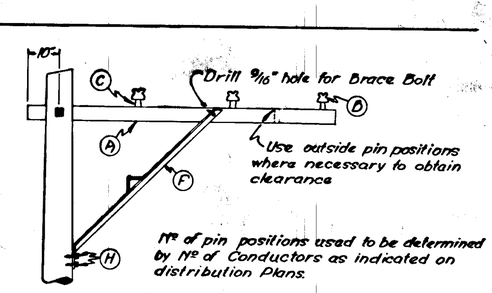
	ITEM	QUANTITY
A	Cross Arm, 6' or 8' (See Note)	2
B	Insulator, Pin Type	4
C	Connectors, Solderless	7
D	Pin, Transformer	4
E	Brace, Cross Arm, 42" Span	2 Pr.
G	Through Bolt 5/8"	2
H	Bolt, Double Arming	2
J	Washer, Square	11
K	Washer, Round	4
L	Bolt, Machine 1/2"	4
M	Fused Cutout	2



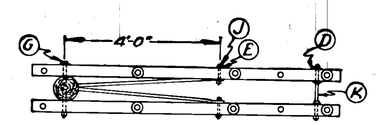
SINGLE POLE TRANSFORMER INSTALLATION FOR TWO or THREE - 5 TO 15 KVA TRANSFORMERS

Transformer Secondaries may be Delta or Wye connected, as indicated on Distribution Plans. — Note: Assembly Nº 22A same as Nº 22 except install Transformer Arm 2'-0" below line Arm & Run Secondary below Transformer.

	ITEM	QUANTITY
A	Cross Arm, 6 Pin	3
B	Insulator, Pin Type	7
C	Connector Solderless	7
D	Pin, Transformer	7
E	Brace, Cross Arm, 48" Span	2 Pr.
F	Fibre Conduit	
G	Through Bolt, 5/8"	3
H	Bolt, Double Arming	2
J	Washer, Square	13
K	Washer, Round	4
M	Fused Cutout	3
N	Bolt, Machine 1/2"	4



Unit 18B - Single Alley Arm



Unit 18BD - Double Alley Arm

ALLEY ARM CONSTRUCTION
(Using Std. 6 Pin Arm)

	ITEM	18B	18BD
A	Cross Arm, 6 Pin	1	2
B	Insulator, Pin Type	3	6
C	Pins, Insulator, Wood	3	6
D	Washers, Square	2	6
E	Washers, Round	1	2
F	Braces, Alley Arm - 3'	1	2
G	Bolts, Through, 3/8"	1	1
H	Lag Screws 1/2" x 4" Fetter Drive	2	4
J	Bolts, Machine 1/2"	1	2
K	Bolts, Double Arming		1

LIST OF CULVERTS AND MISCELLANEOUS WORK

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0999(5)	1963	18	33

STATION	DESCRIPTION	453(2E) 18" Bituminous Coated C.M.P 16 gage	453(2J) 42" Bituminous Coated C.M.P 12 gage	457(1) Removal of Culverts, Lin. Ft.	103(1) Excavation for Structures Cu. Yd.	521(1) Manhole Each	589(1) 12" Asbestos Cement Pipe. Lin. Ft.	REMARKS
20.87 TO 22	INSTALL 18" x 106' C.M.P., 52' RIGHT OF C-L.	106						
50	INSTALL 18" x 38' C.M.P., 25' LEFT OF C-L.	38						
+05	REMOVE 24" x 150' C.M.P.			150				
	INSTALL 42' x 78" C.M.P.		78					DITCH TO INLET END
+12 TO +40	INSTALL 18" x 232' C.M.P., 20' LEFT OF C-L.	232						
	STATION 3+20.87 TO STATION 18+56.57 TOTALS	376	78	150	10	1	970	
1+00 to +20	Install 12" x 970' Asbestos Cement Pipe						970	
+20	Construct Manhole 37' Lt.				10	1		

MICROFILMED

BY V. W. THROW DATE 9-8-00

J-5

LIST OF CULVERTS AND MISCELLANEOUS WORK

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0999 (5)	1963	19	33

103(1) 453(1A) 453(1E) 453(1G) 453(4C) 457(1) 460(16) 513(1) 520(4) 521(1) 521(2) 521(3) 521(7) 560(3)

STATION	DESCRIPTION	Excavation for Structures Cu. Yds.	8" Galvanized C.M.P. Lin. Ft.	18" Galvanized C.M.P. Lin. Ft.	24" Galvanized C.M.P. Lin. Ft.	Asbestos Bonded C.M.P. 24" Lin. Ft.	Removal of Culverts Lin. Ft.	24" Metal End Sections Each	Adjusting Fire Hydrants Each	8" Perforated Metal Pipe Lin. Ft.	Manholes Each	Inlets Each	Catch Basins Each	Adjusting Existing Manholes Each	Culvert Marker Posts Each	REMARKS
8+80 TO	INSTALL 8" x 100' PERFORATED UNDERDRAIN	109														
9+80	LT. AND RT.									200						
												1				
9+80	CONSTRUCT INLET RT.															
	INSTALL 18" x 56' CMP STORM SEWER	60		56												
														1		
00+00	ADJUST MANHOLE RT.															
									1							
00+22.4	ADJUST FIRE HYDRANT RT.															
													2			*ON SECOND AVE.
100+32	CONSTRUCT CATCH BASIN RT. AND LT.															
	INSTALL 18" x 42' CMP STORM SEWER	32		42												
												1	1			*ON BROADWAY ST.
100+80	CONSTRUCT INLET 20' RT. AND CATCH BASIN															
	20' LT.															
	INSTALL 18" x 102' CMP STORM SEWER	43		102												
100+32 TO 103+40	INSTALL 18" x 308' CMP STORM SEWER LT.	277		308												
100+32 TO 103+40	INSTALL 8" x 308' PERFORATED UNDERDRAIN LT. AND RT.	331								616						
													1			
103+40	CONSTRUCT CATCH BASIN LT.															
	INSTALL 24" x 50' CMP STORM SEWER	60			50											
															1	
103+40	LT. OF CATCH BASIN TO BAY, INSTALL															
	24" x 500' CMP STORM SEWER.	400				500									1	
	CONSTRUCT MANHOLE 265' LT.,										1				1	
								1								

BY D. Withrow DATE 9-8-66

LIST OF CULVERTS AND MISCELLANEOUS WORK

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0999 (5)	1963	20	33

STATION	DESCRIPTION	103(1) Excavation for Structures Cu. Yds.	453(1A) 8" Galvanized C.M.P. Lin. Ft.	453(1B) 18" Galvanized C.M.P. Lin. Ft.	453(1C) 24" Galvanized C.M.P. Lin. Ft.	453(1D) Asbestos Bonded C.M.P. 24" Lin. Ft.	457(1) Removal of Culverts Lin. Ft.	460(1C) 24" Metal End Sections Each	513(1) Adjusting Fire Hydrants Each	520(4) 8" Perforated Metal Pipe Lin. Ft.	521(1) Manholes Each	521(2) Inlets Each	521(3) Catch Basins Each	521(7) Adjusting Existing Manholes Each	560(3) Culvert Marker Posts Each	REMARKS
3+10	ADJUST MANHOLE Rt													1		MICROFILMED
3+40	CONST. INLET LT. AND CATCH BASIN RT.											1	1			
	INSTALL 18" x 42' CMP STORM SEWER	48		42												By: Withrow DATE 9-8-66
3+40 TO 47+00	INSTALL 8" x 4360' PERFORATED UNDERDRAIN RT.	2371								4360						
3+40 TO 47+50	INSTALL 8" x 4410 PERFORATED UNDERDRAIN LT.	2398								4410						
3+40 TO 17+40	INSTALL 24" x 1392' CMP STORM SEWER	1546			1392											
6+20	CONSTRUCT INLET LT. AND CATCH BASIN RT.											1	1			
	INSTALL 18" x 42' CMP STORM SEWER	40		42												
6+20.4	ADJUST FIRE HYDRANT								1							
8+65	ADJUST MANHOLE													1		
8+91	ADJUST FIRE HYDRANT								1							
9+00	CONSTRUCT CATCH BASIN RT. & INLET LT.	40		42								1	1			
	Install 18"x42' C.M.P. Storm Sewer															
11+20	ADJUST FIRE HYDRANT								1							
11+80	CONSTRUCT INLET LT. & CATCH BASIN RT.											1	1			
	INSTALL 18" x 42' CMP STORM SEWER	40		42												
12+91	ADJUST MANHOLE Rt.													1		

J-5

LIST OF CULVERTS AND MISCELLANEOUS WORK

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0999 (5)	1963	21	33

STATION	DESCRIPTION	203(1) Excavation for Structures Cu. Yds.	453(4) 8" Galvanized C.M.P. Lin. Ft.	453(5) 18" Galvanized C.M.P. Lin. Ft.	453(6) 24" Galvanized C.M.P. Lin. Ft.	453(9) Asbestos Bonded C.M.P. 24" Lin. Ft.	457(1) Removal of Culverts Lin. Ft.	460(6) 24" Metal End Sections Each	513(1) Adjusting Fire Hydrants Each	520(6) 8" Perforated Metal Pipe Lin. Ft.	521(1) Manholes Each	521(2) Inlets Each	521(3) Catch Basins Each	521(7) Adjusting Existing Manholes Each	560(3) Culvert Marker Posts Each	REMARKS
14+00	ADJUST FIRE HYDRANT RT.								1							
14+60	CONSTRUCT CATCH BASIN RT. & INLET LT.											1	1			
	INSTALL 18" x 42' CMP STORM SEWER	40		42												
17+40	CONSTRUCT INLET LT. & CATCH BASIN RT.											1	1			
	INSTALL 18" x 42' CMP STORM SEWER	40		42												
17+40 TO 31+40	INSTALL 18" x 1400' CMP STORM SEWER	1166		1400												
19+99	ADJUST MANHOLE RT.													1		
20+20	CONSTRUCT INLET LT. & CATCH BASIN RT.											1	1			
	INSTALL 18" x 52' CMP STORM SEWER	40		52												
20+21.7	ADJUST FIRE HYDRANT								1							
22+60	ADJUST MANHOLE RT.													1		
23+00	CONSTRUCT INLET LT. & CATCH BASIN RT.											1	1			
	INSTALL 18" x 42' CMP STORM SEWER	40		42												
25+80	CONSTRUCT INLET LT. AND CATCH BASIN RT.											1	1			
	INSTALL 18" x 42' CMP STORM SEWER	40		42												
25+82.4	ADJUST FIRE HYDRANT RT.								1							
26+75.0	ADJUST MANHOLE RT.													1		
28+20	ADJUST MANHOLE RT.													1		

BY L. Withrow DATE 9-8-06

J-

LIST OF CULVERTS AND MISCELLANEOUS WORK

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0999 (5)	1963	22	33

STATION	DESCRIPTION	1030(1) Excavation for Structures Cu. Yds.	4530(4) 8" Galvanized C.M.P. Lin. Ft.	4530(12) 18" Galvanized C.M.P. Lin. Ft.	4530(16) 24" Galvanized C.M.P. Lin. Ft.	4530(?) Asbestos Bonded C.M.P. 24" Lin. Ft.	4570(1) Removal of Culverts Lin. Ft.	4600(12) 24" Metal End Section Each	5130(1) Adjusting Fire Hydrants Each	5204(4) 8" Perforated Metal Pipe Lin. Ft.	5210(1) Manholes Each	5210(2) Inlets Each	5210(3) Catch Basins Each	5210(7) Adjusting Existing Manholes Each	5603(1) Culvert Marker Posts Each	REMARKS
+60	CONSTRUCT INLET LT. & CATCH BASIN RT.											1	1			
	INSTALL 18" x 42' CMP STORM SEWER	40		42												
												1	1			
+40	CONSTRUCT CATCH BASIN RT. & INLET LT.															
	INSTALL 18" x 42' CMP STORM SEWER	40		42												
														1		
+49	ADJUST MANHOLE RT.															
													2			
+20	CONSTRUCT CATCH BASIN LT. & RT.															
	INSTALL 18" x 106' CMP STORM SEWER	100		106												
+20 TO	INSTALL 18" x 1120' CMP STORM SEWER	622		1120												
+40																
														1		
+30	ADJUST MANHOLE RT.															
									1							
+58.8	ADJUST FIRE HYDRANT LT.															
														1		
+61	ADJUST MANHOLE RT.															
												1	1			
+00	CONSTRUCT INLET RT. AND CATCH BASIN LT.															
	INSTALL 18" x 42' CMP STORM SEWER	40		42												
7+10	*Remove and Dispose 6"x60's teel pipe*						60									
+10	ADJUST MANHOLE RT.													1		
				1												
+60	REMOVE AND DISPOSE 18" x 114' CMP						114									
												1	1			
+80	CONSTRUCT INLET RT. & CATCH BASIN LT.															
	INSTALL 18" x 42' CMP STORM SEWER	40		42												
														1		
+73	ADJUST MANHOLE RT.															
		1														

BY J. Withrow DATE 9-8-06

LIST OF CULVERTS AND MISCELLANEOUS WORK

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0999 (5)	1963	23	33

STATION	DESCRIPTION	103(1) Excavation for Structures Cu. Yds.	453(10) 8" Galvanized C.M.P. Lin. Ft.	453(11E) 18" Galvanized C.M.P. Lin. Ft.	453(16) 24" Galvanized C.M.P. Lin. Ft.	453 AG Asbestos Bonded C.M.P. 24" Lin. Ft.	457(1) Removal of Culverts Lin. Ft.	460(6) 24" Metal End Sections Each	513(1) Adjusting Fire Hydrants Each	520(4) 8" Perforated Metal Pipe Lin. Ft.	521(1) Manholes Each	521(2) Inlets Each	521(3) Catch Basins Each	521(7) Adjusting Existing Manholes Each	560(3) Culvert Marker Posts Each	453(10) 460(11) 36" Galvanized CMP Lin. Ft.	36" Metal End Sections Each	REMARKS
42+01.6	ADJUST FIRE HYDRANT LT.								1									
42+60	CONSTRUCT INLET RT. & CATCH BASIN LT.											1	1					
	INSTALL 18" x 42' CMP STORM SEWER	40		42														
45+40	CONSTRUCT INLET RT. & CATCH BASIN LT.											1	1					
	INSTALL 18" x 42' CMP STORM SEWER	40		42														
46+50	ADJUST MANHOLE RT.													1				
47+00 TO 48+50	INSTALL 8" x 150 CMP RT.	82	150															
47+50 TO 49+00	INSTALL 8" x 150' CMP LT.	82	150															
47+60.3	ADJUST FIRE HYDRANT LT.								1									
47+86	REMOVE AND DISPOSE 30" x 84' CMP						84											
	INSTALL 36" x 84' CMP SKEW 45° LT. AH.	47						2							2	84	2	
48+20	CONSTRUCT CATCH BASIN RT. AND LT.																	
	INSTALL 18" x 70' STORM SEWER	50		70									2					
48+20 TO 51+00	INSTALL 18" x 280' CMP STORM SEWER	125		280														
48+50 TO 53+20	INSTALL 8" x 470' PERFORATED UNDERDRAIN RT.	255								470								
49+00 TO 53+20	INSTALL 8" x 420' PERFORATED UNDERDRAIN LT	228								420								

MICROFILMED

BY L. Withrow DATE 9-8-06

J-

LIST OF CULVERTS AND MISCELLANEOUS WORK

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0999(5)	1963	24	33

STATION	DESCRIPTION	203(1) Excavation for Structures Cu. Yds.	453(A) 8" Galvanized C.M.P. Lin. Ft.	453(E) 18" Galvanized C.M.P. Lin. Ft.	453(F) 24" Galvanized C.M.P. Lin. Ft.	453(G) Asbestos Bonded C.M.P. 24" Lin. Ft.	457(1) Removal of Culverts Lin. Ft.	460(6) 24" Metal End Sections Each	513(1) Adjusting Fire Hydrants Each	520(6) 8" Perforated Metal Pipe Lin. Ft.	521(1) Manholes Each	521(2) Inlets Each	521(3) Catch Basins Each	521(4) Adjusting Existing Manholes Each	560(5) Culvert Marker Posts Each	453(11) 36" Galvanized C.M.P. Lin. Ft.	460(11) 36" Metal End Sections Each	REMARKS
49+30	ADJUST MANHOLE													1				
												1	1					
51+00	CONSTRUCT CATCH BASIN LT. & INLET RT.																	
	INSTALL 18" x 42' CMP STORM SEWER	40		42														
																		DITCH OUT TO CREEK
53+70	INSTALL 24" x 64' CMP	47			64			2							2			
	Total	11,079	300	4166	1506	500	258	3	10	10,476	1	18	24	15	4	84	2	

BY W. Witherow DATE 9-8-66

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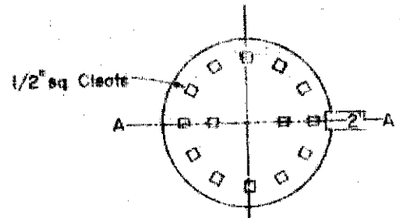
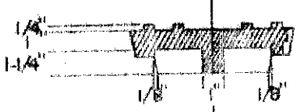
STATE		SHEET NO.	TOT SHE
ALASKA	999(5)	25	3

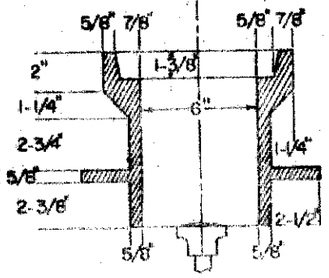
STANDARD BRASS CAP MONUMENT & MONUMENT CASE



PLAN VIEW-COVER

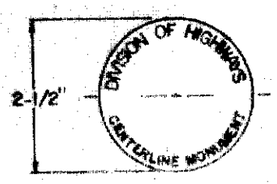


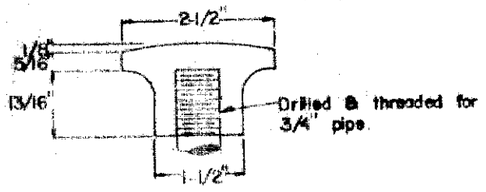
SECTION A-A



MONUMENT CASE

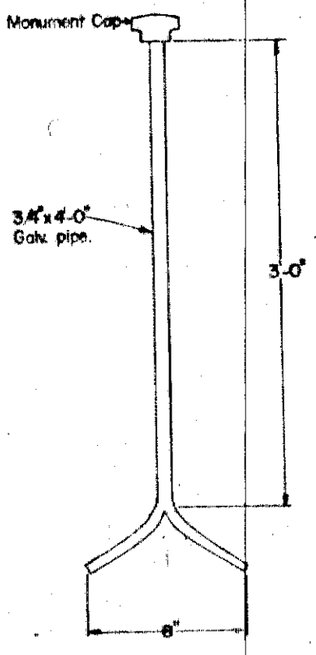
NOTE :
Where monument cases are to be placed in a bituminous paved or surfaced road, the top of the case shall be the same elevation as the top of the roadway.
Where monument cases are to be placed in a gravel surfaced roadway the top of the case shall be placed 1'-0" below the top of the surface of the roadway.





MONUMENT CAP

NOTE :
In solid rock, drill 2" ϕ hole a minimum of 1'-0", fill with mortar and set cap. 3/4"x9" galv pipe, designated length when set in mortar. The top of the monument shall be the same elevation as the bottom of the monument case.



SUMMARY OF BRASS CAP MONUMENTS & MONUMENT CASES

STATION	MON	MON CASE	REMARKS	STATION	MON.	MON CASE	REMARKS
100+00.0		1					
28+30.0		1					
TOTAL		2					

STATE	ROUTE	SECTION	DATE	SHEET NO.	TOTAL SHEETS
ALASKA	999(5)		1963	26	33

SUMMARY OF STANDARD SIGNS

STATION	Dist. from ℄ in ft. LEFT	Dist. from ℄ in ft. RIGHT	SIGN NO.	TYPE OF SIGN
09.51	18'		W 10-2	RAILROAD CROSS BUCK SIGN
35		18'	W 10-2	RAILROAD CROSS BUCK SIGN
65	18'		W 10-2	RAILROAD CROSS BUCK SIGN
00		23'	W 1-1	TURN SIGN
50	23'		W 10-2	RAILROAD ADVANCE WARNING
325 AHD.		28'	R 1-1	STOP SIGN
325 AHD.	21'		R 1-1	STOP SIGN
00	23'		W 1-1	TURN SIGN
61		23'	W 1-1	TURN SIGN
40	32.5'		R 1-1	STOP SIGN
89	28'		R 1-1	STOP SIGN
10	23		W 1-1	TURN SIGN
68	32.5'		R 1-1	STOP SIGN
19		32.5'	R 1-1	STOP SIGN
49	32.5'		B1-1	STOP SIGN
91		32.5'	R 1-1	STOP SIGN
29	32.5'		R 1-1	STOP SIGN
71		32.5'	R 1-1	STOP SIGN
09	32.5'		R 1-1	STOP SIGN
51		32.5'	R 1-1	STOP SIGN
89	32.5'		R 1-1	STOP SIGN
31		32.5'	R 1-1	STOP SIGN
69	32.5'		R 1-1	STOP SIGN
11		32.5'	R 1-1	STOP SIGN
49	32.5'		R 1-1	STOP SIGN
91		32.5'	R 1-1	STOP SIGN
29	32.5'		R 1-1	STOP SIGN
09	32.5		R 1-1	STOP SIGN
51		32.5'	R 1-1	STOP SIGN
00		23'	W 9-1	SCHOOL SIGN
50		23'	W 9-2	SCHOOL CROSSING
50	23'		W 9-2	SCHOOL CROSSING
69	325'		R 1-1	STOP SIGN

STATION	Dist. from ℄ in ft. LEFT	Dist. from ℄ in ft. RIGHT	SIGN NO.	TYPE OF SIGN
33+70	23'		W 9-1	SCHOOL SIGN
39+29	32.5'		R 1-1	STOP SIGN

BY L. Withrow DATE 9-8-06