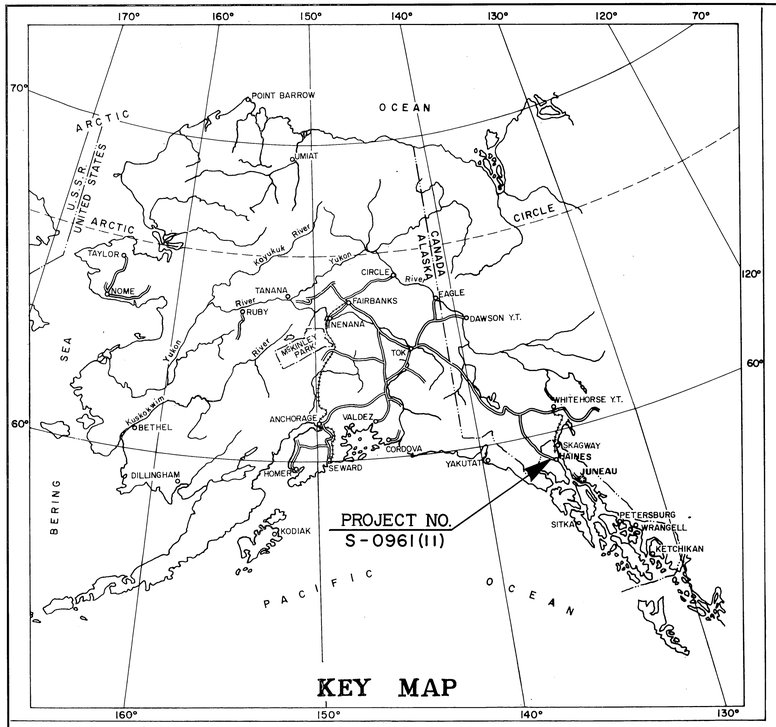
STATE	ROUTE DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0961(11)		1	34

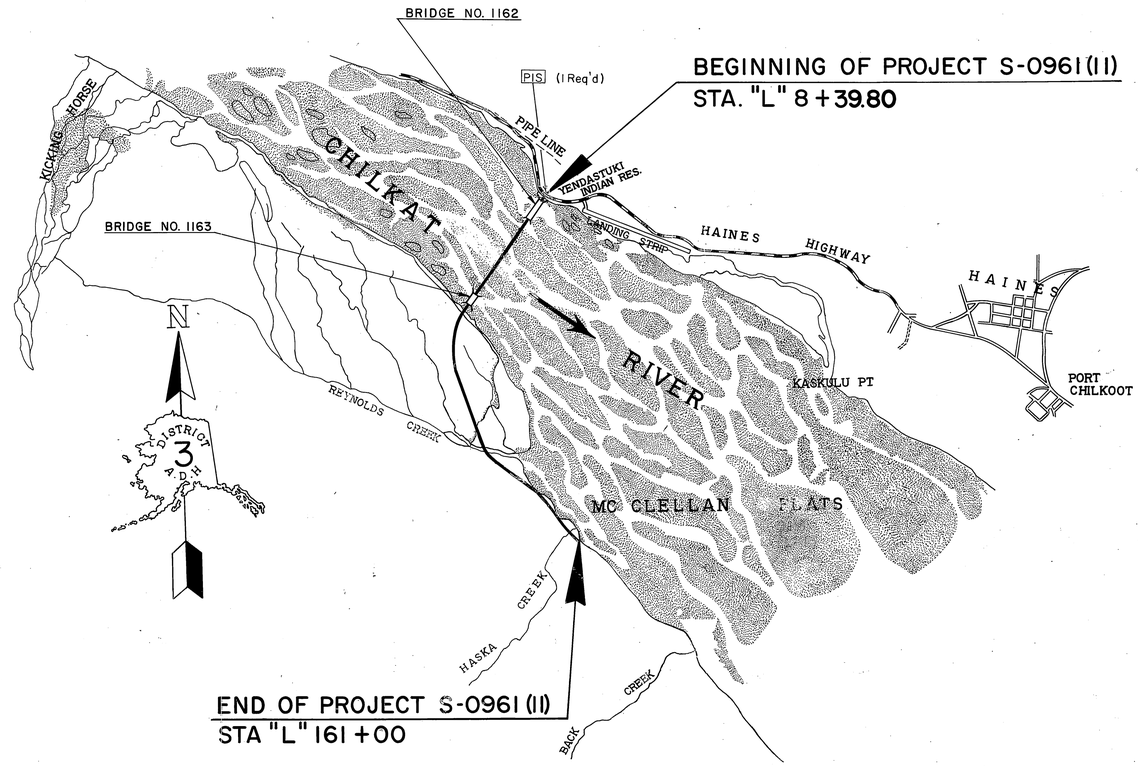
STATE OF ALASKA
DEPARTMENT OF HIGHWAYS

PLAN AND PROFILE
PROPOSED HIGHWAY PROJECT
S-0961(11)
HAINES TO JUNEAU I
CHILKAT RIVER CROSSING
GRADING, DRAINAGE & BRIDGE



KEY MAP

PIS PROJECT IDENTIFICATION SIGN



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	TYPICAL SECTIONS
3	ESTIMATE OF QUANTITIES
4	BEGINNING OF PROJECT, PLAN & PROFILE
5-8	PLAN & PROFILE
9	END OF PROJECT, PLAN & PROFILE
10	PLAN, HAINES HIGHWAY INTERSECTION
11	CULVERT DETAIL, STATION "L" 113+80
12	CULVERT DETAIL, STATION "L" 147+24
13	CULVERT DETAIL, STATION "L" 158+80
14	*NOT USED*
15	*NOT USED*
16-25	CHILKAT RIVER BRIDGE-NO. 1162
26-34	CHILKAT RIVER BRIDGE-NO. 1163
	THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT: A-1, D-1a, D-1b, D-7, M-1, (1&2), M-3, R-4, R-5, R-6, T-1, T-2, T-11, T-15, T-16(18.2), T-18, T-19, T-20

DESIGN DESIGNATION

ADT (1973)	= 130
ADT (1993)	= 630
DHV	= 95
D	= 40-60
T	= 10%
V	= 50 M.P.H.

PROJECT SUMMARY

WIDTH OF SUBGRADE	34'	
LENGTH OF GRADING	14,244.95' =	2.698 Mi.
LENGTH OF BRIDGES	1,015.25' =	0.192 Mi.
LENGTH OF PROJECT	15,260.20' =	2.890 Mi.

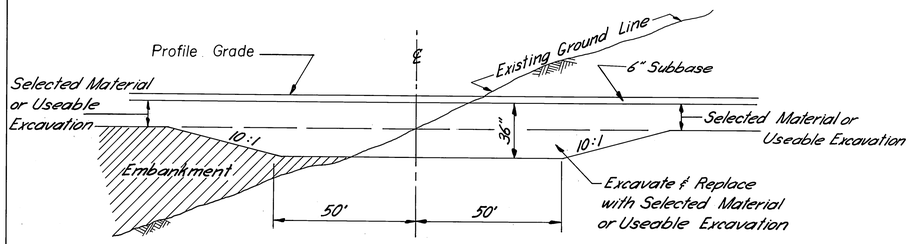
STATE OF ALASKA
DEPARTMENT OF HIGHWAYS

APPROVED

Warren E. Mill P.E. DATE 8/28/69
DISTRICT HIGHWAY ENG.
JUNEAU DISTRICT

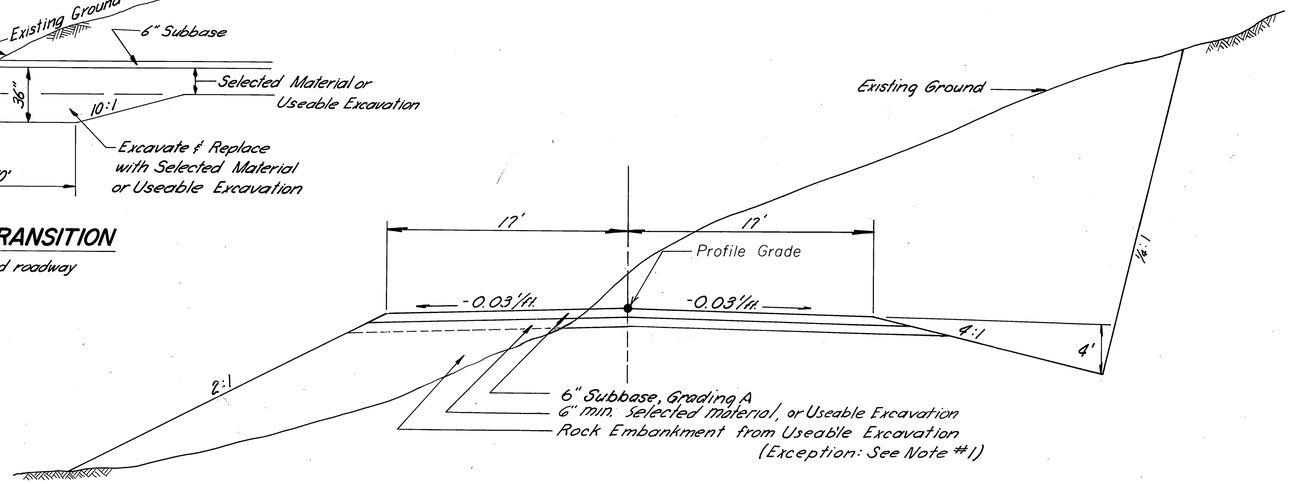
_____ DATE _____
COMMISSIONER OF HIGHWAYS

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0961(11)	1969	2	34

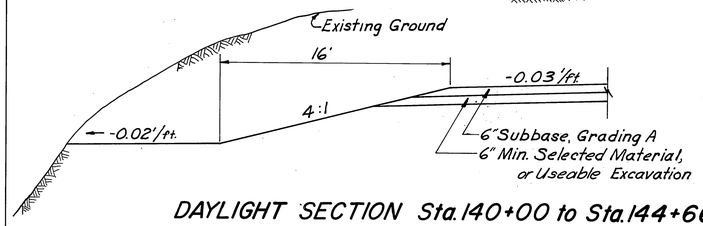


CUT & FILL LONGITUDINAL TRANSITION

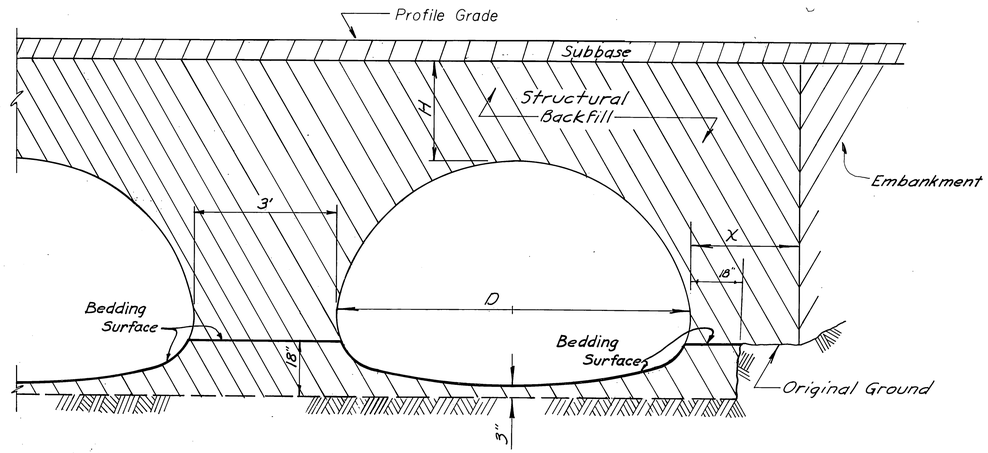
Note: Use only where natural ground and roadway grade intercept at 5% or more.



TYPICAL SECTION OF IMPROVEMENT



DAYLIGHT SECTION Sta.140+00 to Sta.144+66

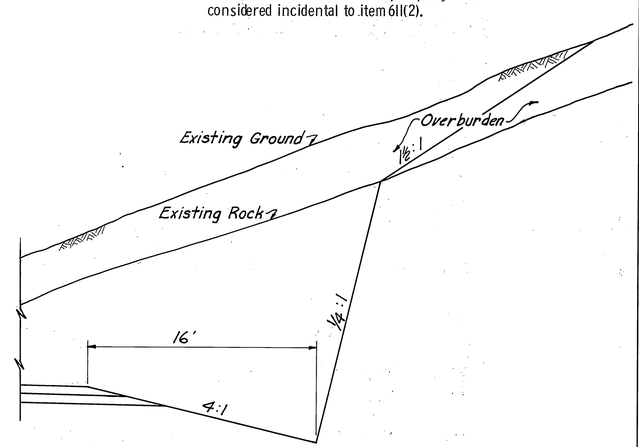


TYPICAL SECTION-STRUCTURAL EXCAVATION & STRUCTURAL BACKFILL FOR STRUCTURAL PLATE PIPE ARCHES.

X = ½D or 3' Max.
H = Bottom of Subbase to Top of Arch.

GENERAL NOTES

1. Embankment from Sta. "L" 8+27.18 to Sta. "L" 10+30 shall be constructed of borrow.
2. Clearing limits shall be 10 feet beyond slope limits in cuts and 5 feet beyond slope limits in fills, except from station "L" 58+00 right to station "L" 110+00 right where clearing limits shall be confined to slope limits.
3. Culvert lengths and locations are approximate only and are subject to revisions.
4. Grades and alignment shown on these plans are subject to minor revisions.
5. All waste and/or surplus material encountered on this project shall be disposed of by the contractor at locations of his choice and as approved by the engineer. There is no payment for haul or overhaul of any material on this project.
6. Superelevations shall be rotated about the centerline of roadway. Full superelevation shall be attained at the P.C. and P.T. and carried throughout the curve. The superelevation runoff distance shall be 200 feet in advance of the P.C. and 200 feet past the P.T.
7. At the option of the contractor, corrugated aluminum pipe or galvanized steel pipe may be furnished for pay item No.(603-26g).
8. Removal and disposal of concrete pump house right of station "L" 157+25 shall be incidental to item No. 201(3), clearing and grubbing.
9. Installation of culverts and pipe arches shall be made after embankment has been completed to an elevation as indicated in structural excavation typical sections.
10. Excavations of material for Rip Rap key shall be considered incidental to item 611(2).



SLOPE TREATMENT IN AREAS OF EXCESSIVE OVERBURDEN

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0961 (11)		3	34

CULVERT SUMMARY

STATION	Structure Excavation	Structural Backfill	603 (266) 24" Pipe Conduit	610(1C) Structural Plate Pipe Arch 6'-9" Span 4'-11" Rise	610(1K) Structural Plate Pipe Arch 9'-4" Span 6'-3" Rise	610(2Z) Structural Plate Pipe Arch 14'-1" Span 8'-9" Rise	613(2) Culvert Marker Posts	REMARKS
	C.Y.	Ton		L.F.	L.F.	L.F.	Ea.	
"L" 68+56	28	38	62'				2	
"L" 113+80	2311	1820				352	2	
"L" 129+23	33	47	72'				2	
"L" 147+24	324	362		112			2	Construct Outlet Ditch
"L" 152+00	40	56	76'				2	
"L" 158+80	686	774			148		2	Construct Outlet Ditch
TOTAL			210	112	148	352	12	

BEAM TYPE GUARDRAIL

Station	to	Station	Lt. or Rt.	Lin Ft.	Type
"L" 9+55	to	"L" 10+30	Rt.	75	II
"L" 9+80	to	"L" 10+30	Lt.	50	II
"L" 17+67.42	to	"L" 18+17.42	Rt.	50	II
"L" 17+67.42	to	"L" 18+42.42	Lt.	75	II
"L" 45+45	to	"L" 46+20	Rt.	75	II
"L" 45+70	to	"L" 46+20	Lt.	50	II
"L" 48+97.83	to	"L" 49+47.83	Rt.	50	II
"L" 48+97.83	to	"L" 49+72.83	Lt.	75	II

SURVEY MONUMENTS & CASES

Station	Survey Monuments	Monument Cases	Loc.
"L" 20+00 P.O.T.	1	1	℄
"L" 30+00 P.O.T.	1	1	℄
"L" 40+00 P.O.T.	1	1	℄
"L" 46+20 P.O.T.	1	1	℄
"L" 55+68.93 P.C.	1	1	℄
"L" 65+00 P.O.C.	1	1	℄
"L" 75+00 P.O.C.	1	1	℄
"L" 83+18.98 P.T.	1	1	℄
"L" 90+00 P.O.T.	1	1	℄
"L" 100+00 P.O.T.	1	1	℄
"L" 111+98.18 P.C.	1	1	℄
"L" 120+33.18 P.T.	1	1	℄
"L" 130+00 P.O.T.	1	1	℄
"L" 139+14.03 P.C.	1	1	℄
"L" 142+00 P.O.C.	1	1	℄
"L" 144+14.03 P.T.	1	1	℄
"L" 150+00 P.O.T.	1	1	℄
"L" 153+78.45 P.C.	1	1	℄
"L" 156+94.34 P.T.	1	1	℄
"L" 158+00 P.O.T.	1	1	℄
"L" 161+00 P.O.T.	1	1	℄
TOTAL	21	21	

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM	UNIT	SHEET NUMBERS: Sheet 4	Sheet 5	Sheet 6	Sheet 7	Sheet 8	Sheet 9	Bridge Totals	ROADWAY TOTALS	GRAND TOTALS
1	Furnishing & Maintaining Engineering Facilities	L.S.								All Req'd	All Req'd
110(1)	Mobilization	L.S.								All Req'd	All Req'd
201(3)	Clearing & Grubbing	Acre			4.12	4.87	6.42	2.91		18.32	18.32
201(7)	Selective Tree Removal	Ea.					20	20		40	40
203(3)	Unclassified Excavation	C.Y.	121,546					31,235		152,781	152,781
203(5)	Borrow	Ton	5,867					830	13,716	6697	20,413
111(1)	Temporary Erosion & Pollution Controll	Cont Sum								All Req'd	All Req'd
112(1)	Training Programs IWA FHWA Order Interim 7-2(2)	Cont Sum								All Req'd	All Req'd
307(1)	Subbase, Grading A	Ton	14,619					1,995		16,614	16,614
601(11)	Class A Concrete	L.S.							All Req'd		All Req'd
602(1)	Reinforcing Steel	L.S.							All Req'd		All Req'd
603(266)	24" Pipe Conduit	L.F.			62		72	76		210	210
606(2)	Beam Type Guardrail, Type II Post	L.F.	250	250						500	500
610(2C)	Structural Plate Pipe-Arch, 6'-9" Span 4'-11" Rise	L.F.					112			112	112
610(2K)	Structural Plate Pipe-Arch, 9'-4" Span 6'-3" Rise	L.F.						148		148	148
610(2Z)	Structural Plate Pipe-Arch, 14'-1" Span 8'-9" Rise	L.F.				352				352	352
611(1)	Riprap, Class II	C.Y.	2300	3010					5,310		5310
613(2)	Culvert Marker Posts	Ea.			2	2	4	4		12	12
613(3)	Guide Posts	Ea						26		26	26
614(1)	Survey Monuments	Ea	1	4	3	3	5	5		21	21
614(2)	Monument Cases	Ea	1	4	3	3	5	5		21	21
615(1)	Standard Signs	Ea	14	2		2	1	1		20	20
630(4)	Cast in Place Concrete Piles, Furnished & Driven	L.F.	8,805	2,870					11,675		11,675
630(10)	Load Test	Ea.	4	1					5		5
632(1)	Prestressed Concrete Structural Members	Ea.	40	15					55		55
633(1)	Structural Steel, Furnished, Fabricated & Erected	L.S.							All Reqd		All Reqd
634(1)	Steel Beam Bridge Railing	L.F.	1473	554					2,027		2,027

Station	Distance From ℄ Left	Right	Type	Legend	Remarks	Size Sq. Feet	Post No & Size	Post Embedment A	E
8+90	29'		R1-1.30	Stop		6.25	1-2"PT	5.5'	4.5'
10+20		29'	T1-1.0	Chilkat River	+6-4½ letters	8.00	1-2"PT	5.5'	4.5'
17+77	29'		T1-1.0	Chilkat River	+6-4½ letters	8.00	1-2"PT	5.5'	4.5'
19+75	29'		W3-1.36	Stop Ahead		9.00	1-2"PT	5.5'	4.5'
20+00		29'	R2-1(50).30	Speed Limit 50		7.50	1-2"PT	5.5'	4.5'
46+10		29'	T1-1	Chilkat River	6-4½ letters	8.00	1-2"PT	5.5'	4.5'
49+07	29		T1-1	Chilkat River	6-4½ letters	8.00	1-2"PT	5.5'	4.5'
113+00		29'	T1-1	Reynolds Creek	6-4½ letters	9.00	1-2"PT	5.5'	4.5'
114+68	29		T1-1	Reynolds Creek	6-4½ letters	9.00	1-2"PT	5.5'	4.5'
149+00		29	W14-4.36	Road ends 1000 Ft.		9.00	1-2"PT	5.5'	4.5'
150+00	29		R2-1(50).30	Speed Limit 50		7.50	1-2"PT	5.5'	4.5'
161+05	0		W14-3.30	End	Mount Under W14-3.30	6.25	1-2"PT	5.5'	4.5'
161+05	0		Type IV	Object Marker	Section T-9	2.25			
Haines Hwy. 217+63		22	W1-2R.36	↱		9.00	1-2"PT	5.5'	4.5'
Haines Hwy. 217+63		22	W13-1.18	35 M.P.H.	Mount Under W1-2R	2.25			
Haines Hwy 220+06		22	W2-2.36	⊣		9.00	1-2"PT	55'	4.5'
Haines Hwy. 221+25	22		D2-1.0	Haines 3	6-4½ letters	9.00	1-2"PT		
Haines Hwy. 223+25		22	D1-12.0	Haines 3→					
				←Haines Jct. 154	6-4½ letters	17.00	2-2"PT	5.5'	4.5'
Haines Hwy. 226+56	22		W2-2.36	⊣		9.00	1-2"PT	5.5'	4.5'
Haines Hwy. 226+30		22	D2-2.0	Canadian Border 37					
				Haines Jct. 154	6-4½ letters	16.00	1-2"PT	5.5'	4.5'
Haines Hwy 228+79	22		W1-26.36	↰		9.00	1-2"PT	5.5'	4.5'
				35 MPH	Mount Under W1-26	2.25			

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0961(11)	1969	4	34

Horizontal Control: Geodetic bearing base computed from U.S.C. & G.S. data for triangulation stations "REEN" and "KOCH".

Vertical Control: U.S.C.&G.S. Bench Mark 5(1945) Located on large boulder 270 yards north along shoreline from wharf at Port Chilkoot Barracks and 57 1/2 feet northwest of centerline of road leading to wharf. Elevation of B.M. is 27.60 M.L.L.W.

ALASKA STATE PLANE CO-ORDINATE SYSTEM
ZONE 1
"L" 8+27.18 B.O.P.
N 2,713,989.89 E 2,334,893.32
SCALE FACTOR=0.9999505
NOTE: All distances shown are ground distances

PLAN
SURVEYED
PLOTTED
NOTE BOOK ALIGNMENT CHECKED
RT. OF WAY CHECKED
NO.

BY DATE

PROFILE
SURVEYED
PLOTTED
NOTE BOOK GRADES CHECKED
R.P. NOTE
STRUCTURE NOTATNS CHK'D
NO.

BY DATE

Sta. "L" 8+27.18 = Sta. 223+31.72 HAINES HWY.

BEGINNING OF PROJECT S-0961 (11) Sta. "L" 8+39.80

N 70° 46' 46" W — To Haines — R/W — R/W — 220 — See Intersection detail sheet #10 — 225 — R/W — N 08° 48' 46" W — R/W

RIVER CHANNEL — CHILKAT EAST

R1-1 — T1-1 — T1-1 — W3-1 — 20 — 10 — 200' — 300' — 100' — 100'

R/W — R/W — TI-1 — S 35° 47' 44" W ~ 4279.18' — MATCH LINE "L" 88+00

Note:
Bridge #1162
See Detail Sheets# 16 to 25

Embankment Equation:
Emb. = (Exc. − Waste)(Grading Factor) + (Borrow)(Weight Conversion Factor).

El. 34.97 — Sta. 9+80 El. 35.33 100' U.C. — Begin Bridge Sta. 10+30 El. 35.33 — End Bridge Sta. 17+47.42 El. 35.33 — El. 35.33 400' U.C. — El. 28.50 400' U.C.

N.P.S.D. = 6.10'

Profile Grade

+0.90% — 0.000% — −1.70% — 0.000%

Balance #1 See Sheet 6

Emb. = 1789 cu yd — Emb. = 19,399 cu yd

60 — 40 — 30 — 20 — 10 — 0

10+00 — 15+00 — 20+00 — 25+00 — 28+00

PLATE 1, PLAN-PROFILE

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0961(II)	1969	5	34

MATCH LINE "L" 28+00
MATCH LINE "L" 58+00
R/W
R/W
100'
100'
S 35° 47' 44" W ~ 4729.18'
30
35
40
45
50
55
Note:
Bridge #1163
See Detail Sheets #26 to 34
"L" 56+68.98 P.C.
RIVER
CHANNEL
CHILKAT
WEST
T1-1
T1-1
200'
300'
100'
100'
50'
50'
PLAN
NOTE BOOK
NO.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
BY
DATE
PROFILE
NOTE BOOK
NO.
SURVEYED
PLOTTED
GRADES CHECKED
B. M.S NOTED
STRUCTURE NOTATIONS CHKD.
N.P.S.D. = 610'
N.P.S.D. = 610'
El. 35.33
400' V.C.
El. 35.33
400' V.C.
Profile Grade
0.000 %
+1.708 %
0.000 %
-1.708 %
0.000 %
Existing Ground
El. 28.50
400' V.C.
Begin Bridge
Sta. 46+20.00 El. 35.33
End Bridge
Sta. 48+97.83 El. 35.33
El. 28.50
400' V.C.
40
30
20
10
0
Bal. #1 See Sheet #6
Emb. = 26,079 cu.yd.
Emb. = 14,327 cu.yd.
28+00
30+00
35+00
40+00
45+00
50+00
55+00
58+00

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0961(11)	1969	6	34

"L"
Δ=55°00'00"
D=2°00' Lt.
T=1491.32'
L=2750.00'
S=0.04'/ft.

MATCH LINE "L" 68+00

60

"L" 68+56
Install 24"x52' pipe Conduit
Ditch in and out

70

R/W

50'

50'

80

"L" 83+88.88 P.O.T.

S 19° 12' 16" E ~ 2879.20'

MATCH LINE "L" 88+00

R/W

"L" 70+60.30 P.O.T.

T.B.M. #2 Spike in 10" Cottonwood tree
100' Rt. Sta. "L" 59+50 El. = 25.50

T.B.M. #3 Spike in 6" Birch tree
100' Lt. Sta. "L" 80+00 El. 23.99

40
30
20
10
0

Elev. 25.50
1.0 VC

0.000%

Profile Grade

-0.050%

Existing Ground

Balance # 1

Unclassified Exc.*	121,546 cu.yd.
Borrow	5867 Tons
Subbase	14,619 Tons

* Includes 1,257 cy Waste

Emb. = 24,232 cu.yd.

68+00 60+00 65+00 70+00 75+00 80+00 85+00 88+00

PLAN
SURVEYED
PLOTTED
NOTE BOOK
NO.
ALIGNMENT CHECKED
RT. OF WAY CHECKED
BY
DATE

PROFILE
SURVEYED
PLOTTED
GRADES
NOTE BOOK
NO.
HECKED
STRUCTURE NOTATIONS CHKD
BY
DATE

K&E PLATE 1, PLAN-PROFILE
KEUFFEL & ESSER CO.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0961(11)	1969	7	34

PLAN — SURVEYED, PLOTTED, ALIGNMENT CHECKED, GRADES CHECKED, B. Ms NOTED, STRUCTURE NOTATIONS CHKD, BY, DATE, NOTE BOOK, NO.

PROFILE — SURVEYED, PLOTTED, GRADES CHECKED, B. Ms NOTED, STRUCTURE NOTATIONS CHKD, BY, DATE, NOTE BOOK, NO.

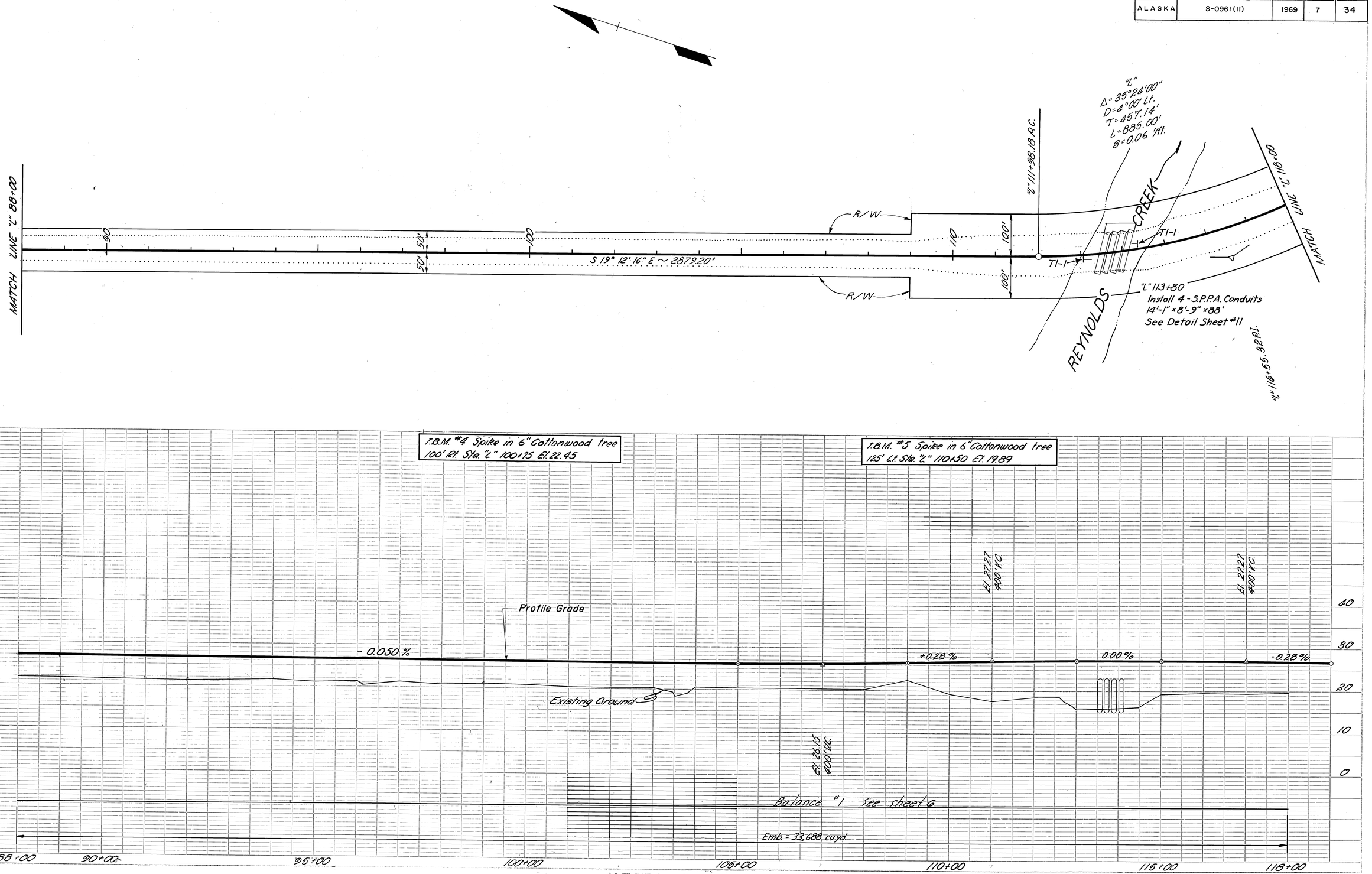


PLATE 1, PLAN-PROFILE
KEUFFEL & ESSER CO.

48 7034 HERCULENE® DRAFTING FILM
MADE IN U.S.A.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0961(11)	1969	8	34

MATCH LINE "L" 116+00

℄ "L" 120+83.18 P.T.

"L" 129+23 Install 24"x72' Pipe Conduit

℄ "L" 139+14.03 P.C.

℄ "L" 141+66.61 P.T.

℄ "L" 144+14.03 P.T.

MATCH LINE "L" 148+00

"L" 146+00 to 147+50 Construct Special Ditch Rt. See Detail Sheet #9

"L" 147+24 Install dual 6'-9"x4'-11"x56' Pipe Arch Conduit Construct Outlet Ditch See Detail Sheet #12

"L"
Δ= 20°00'00"
D= 4°00' Ft.
T= 262.58'
L= 500.00'
S= 0.06' /ft.

S 54° 36' 16" E ~1830.85

S 34° 36' 16" E ~956.42'

Ditch to Drain

toe rock bluff

R/W

Permit

Daylight Section

Construction Easement

25'

120'

100'

180

140

130

50'

75'

I.B.M. #6 Spike in Rock Crevice
90' Rt. Sta. "L" 125+75 El. 20.82

I.B.M. #7 P.K. nail in Rock Crevice
90' Rt. Sta. "L" 132+00 El. 23.31

El. 27.27
400' V.C.

El. 26.15
400' V.C.

El. 26.79
400' V.C.

El. 41.00
500' V.C.

-0.28%

+0.053%

+1.579%

-1.368%

-1.10%

Profile Grade

Existing Ground

W.P.S.O. = 480'

Balance #1 See sheet 6

Balance #2 See sheet 5

Emb. = 32,119 cuyd.

Emb. = 654 cuyd.

SPECIAL DITCH Right

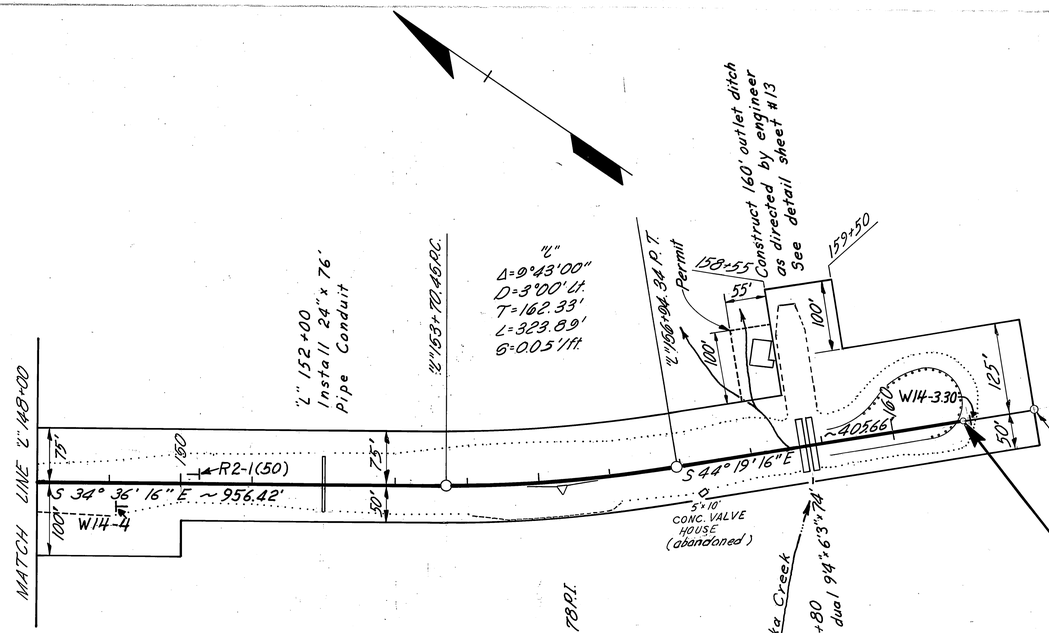
118+00 120+00 125+00 130+00 135+00 140+00 145+00 148+00

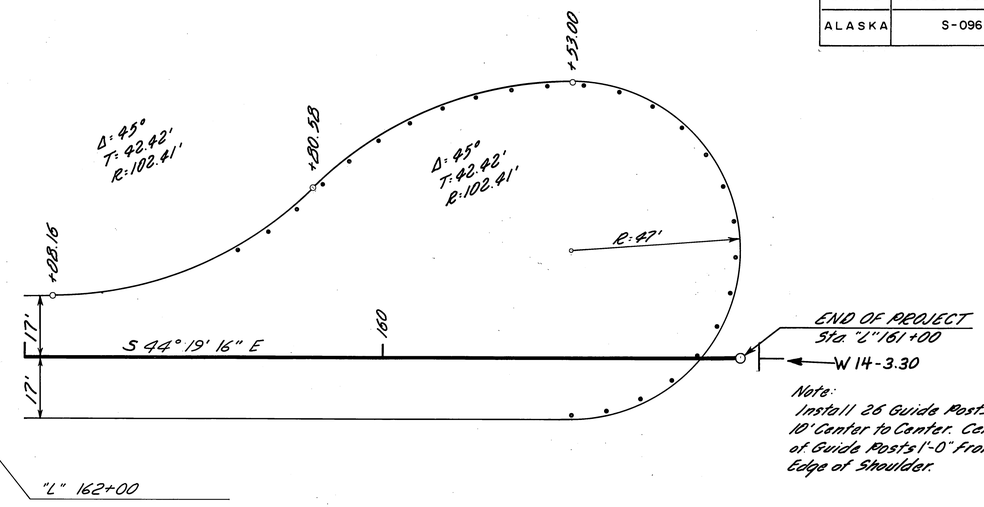
PLATE 1, PLAN-PROFILE
KEUFFEL & ESSER CO.

48 7024 HERCULENE DRAFTING FILM

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0961 (11)	1969	9	34

PLAN — SURVEYED / PLOTTED / NOTE BOOK / NO. — ALIGNMENT CHECKED / PT. OF WAY CHECKED / DATE / BY



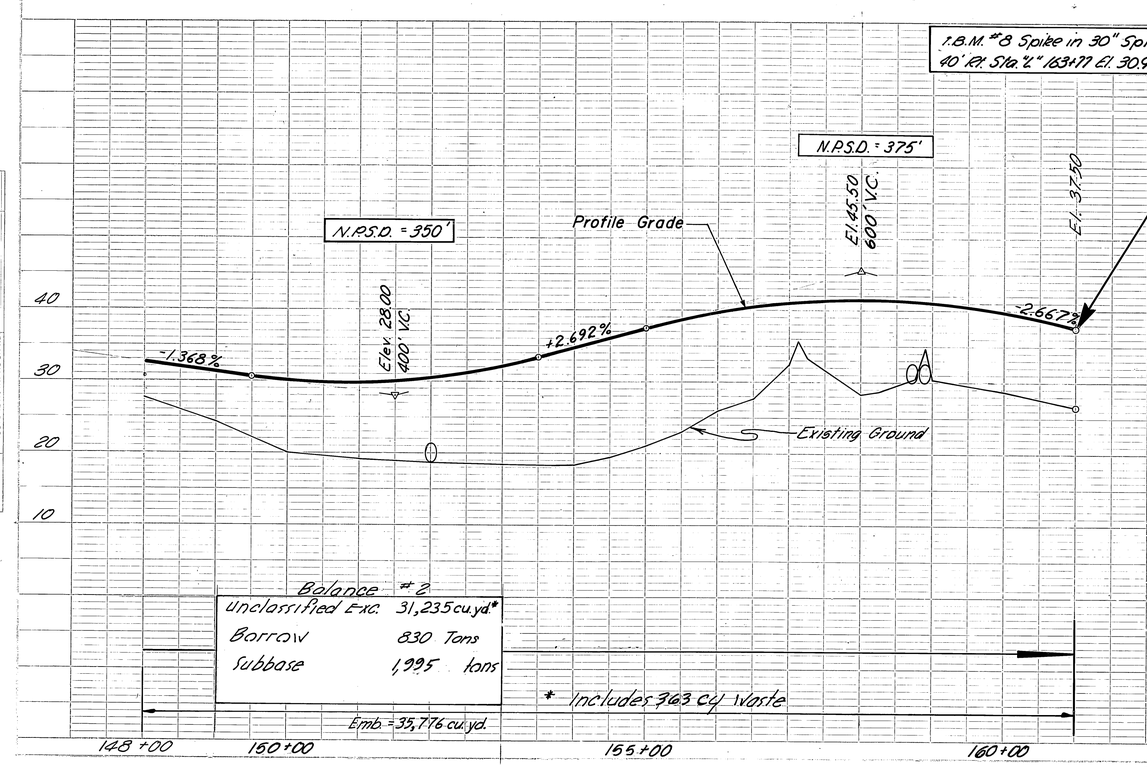


Note:
Install 26 Guide Posts, 10' Center to Center. Center of Guide Posts 1'-0" From Edge of Shoulder.

CUL DE SAC DETAIL

END OF PROJECT
S-0961 (11)
STATION "L" 161+00

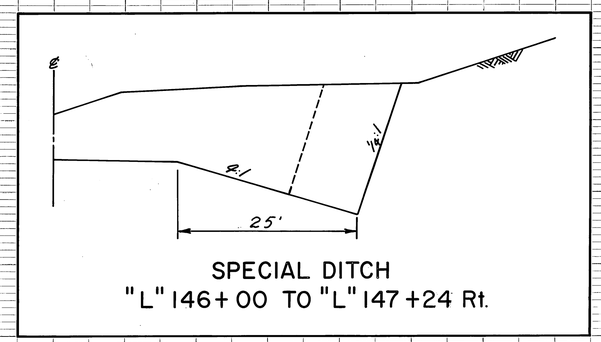
PROFILE — SURVEYED / PLOTTED / GRADES CALCULATED / NOTE BOOK / NO. — STRUCTURES MATERIALS CHKD / DATE / BY



Balance # 2	
Unclassified Exc.	31,235 cu.yd.*
Borrow	830 Tons
Subbase	1,995 tons

* Includes 363 c.y. Waste

Emb. = 35,776 cu.yd.



SPECIAL DITCH
"L" 146+00 TO "L" 147+24 Rt.

PLATE 1, PLAN-PROFILE
KOUFFEL & ESSER CO.

48 7024 HERCULENE ® DRAFTING FILM MADE IN U.S.A.

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0961(11)		10	34

INTERSECTION DETAIL

HAINES HIGHWAY

CHILKAT RIVER

10+30

10+00

S 35° 47' 44" W

12' 12'

9+00

"L" 8+20.00
17' Rt

"L" 8+20.00
17' Lt.

"L" 8+56.50
22' Rt

R=25'

R=25'

"L" 8+63.68
30± Lt.

67.0'

44.5'

"L" 8+39.80
72± Rt.

match exist.

match exist.

B.O.P. "L" 8+39.80

225

Cliff

Rock

"L" 8+22.18 = 225+31.22

Δ = 61° 58'
D = 12°
L = 516.4'
T = 286.7'

225+79.0 P.T.

N 08° 48' 46" W

220

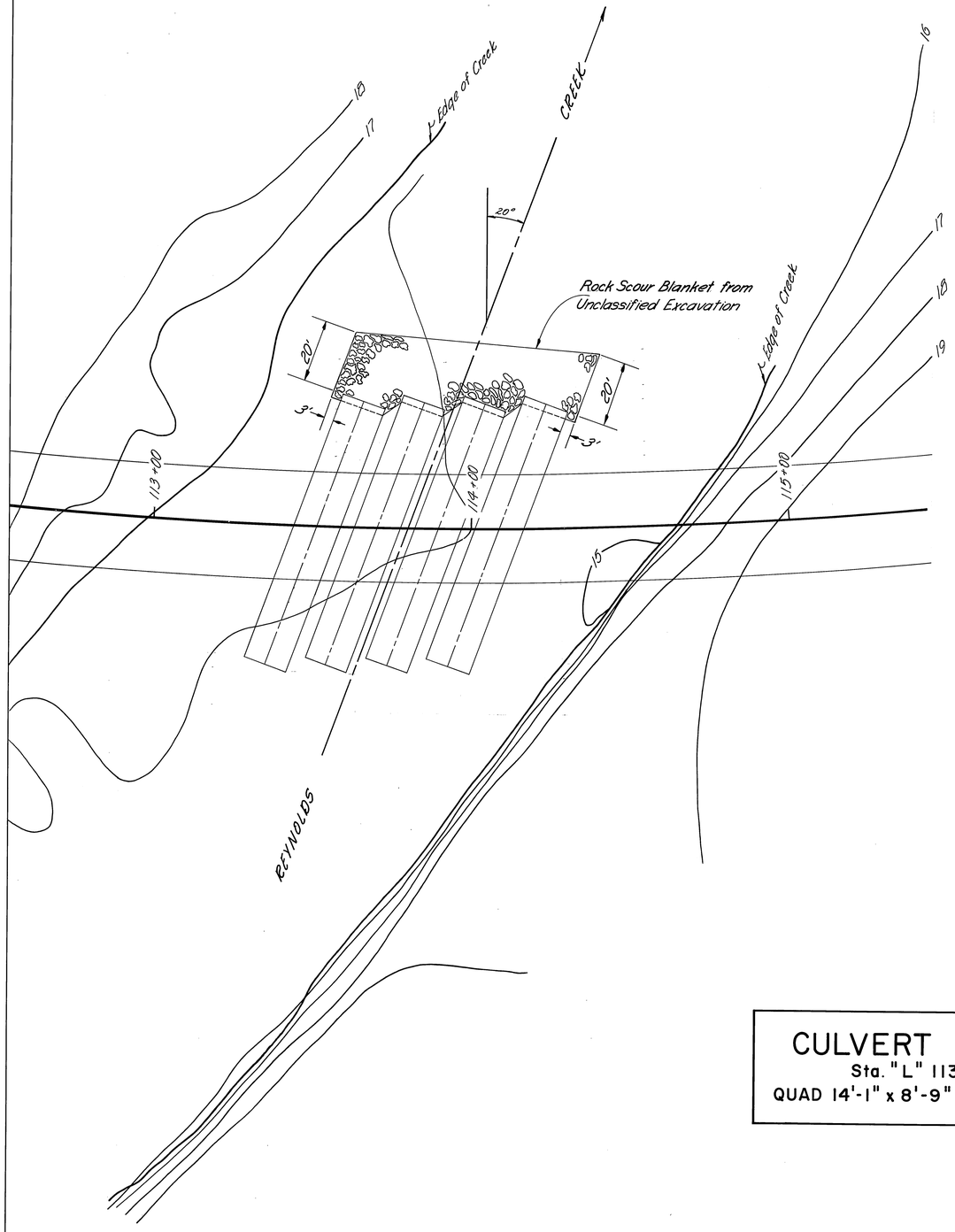
N 70° 46' 46" W

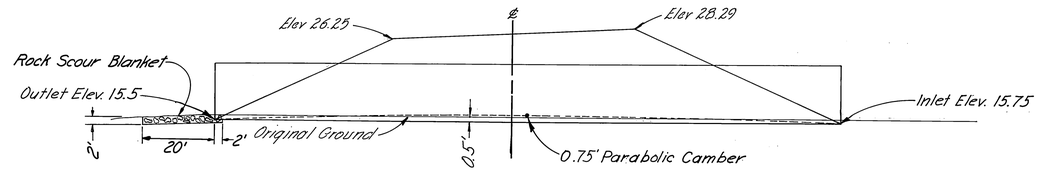
220+62.8 P.C.

To Haines

N

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0961(11)	1969	11	34





SECTION

HYDROLOGIC & HYDRAULIC DATA

Drainage Area:	6 sq. mi.
Design Flood Frequency:	50 yrs.
Design Discharge:	2700 cfs.
Design Highwater:	Elev. 25.0
Discharge Capacity:	2700 cfs.
Other Factors:	Design discharge includes estimate of overflow from Chilkat and Kicking Horse.

CULVERT DETAIL

Sta. "L" 113+80

QUAD 14'-1" x 8'-9" x 88' S.P.P.A

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0961 (11)	1969	12	34

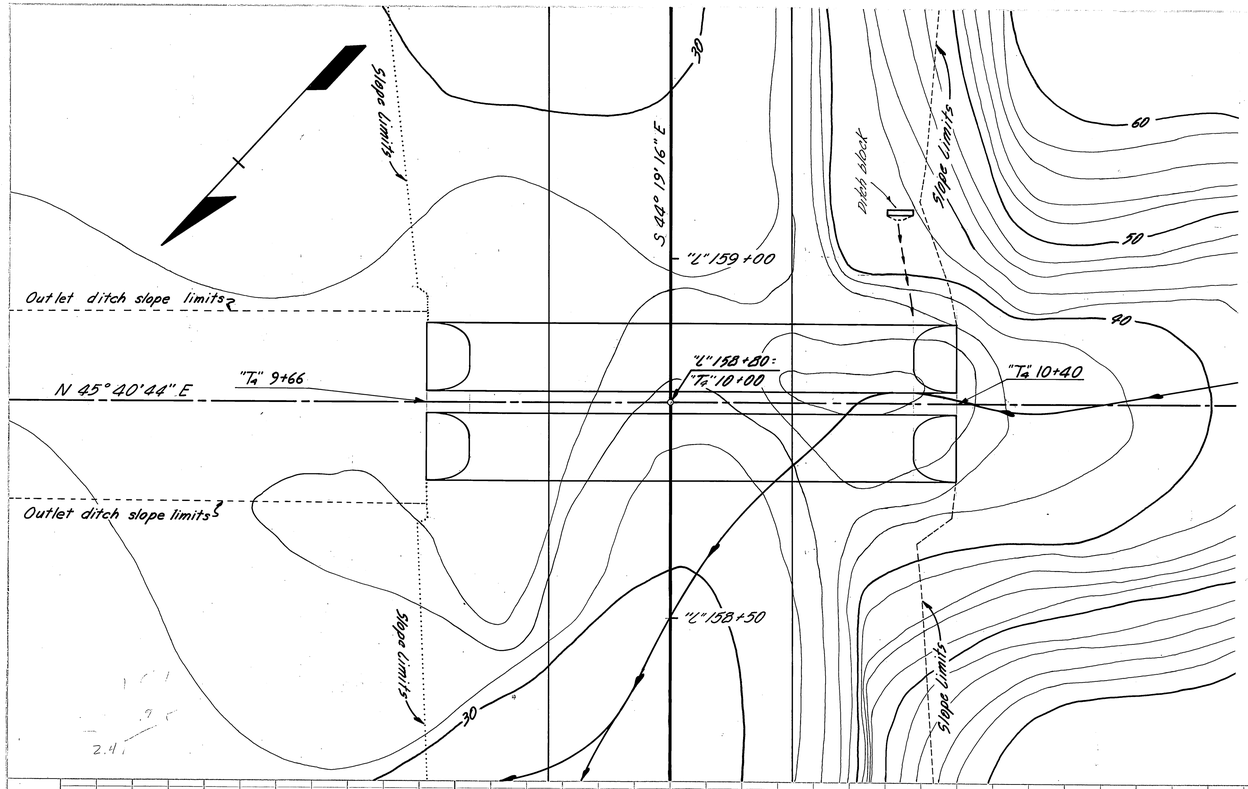
HYDROLOGIC & HYDRAULIC DATA
Drainage Area: 342 Acres
Design Flood Frequency: 50 yrs.
Design Discharge: 484 cfs.

CULVERT DETAIL
STA "L" 147+24
DUAL 6'-9" x 4'-11" x 56' PIPE ARCH CONDUIT

Dike
Slope Limits
"L" 147+36.40
"T3" 1+28
"L" 147+00
"L" 147+24
"T3" 1+00
S 34° 36' 16" E
"L" 146+55.41
"T3" 0+72
N 70° 23' 44" E
15°
3'
Outlet ditch slope limits
Rock Scour Blanket from Unclassified Excavation
Slope Limits
30
40
50
Note: Ditch out as staked by the Engineer. Ditch length approximately 65'
10'
1½:1
OUTLET DITCH DETAIL
℄ Elev. 33.83
2:1
4:1
-3.00%
Outlet Ditch Flowline
Outlet Elev. 25.5
Rock Scour Blanket
Inlet Elev. 27.5
20
2'
Elev. 32.4
Construction of dike from Unclassifed Excavation
DIKE DETAIL
STA. "L" 147+35 RT.
"T3" 0+50
"T3" 1+00
"T3" 1+50
PLAN
NOTE BOOK
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
PROFILE
GRADES CHECKED
B. M.S NOTED
STRUCTURE NOTATIONS CHKD
BY
DATE

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0961(11)	1969	13	34

PLAN — SURVEYED; PLOTTED; ALIGNMENT CHECKED; QUANTITIES CHECKED; NOTE BOOK; NO.; RT. OF WAY CHECKED; STRUCTURE NOTATIONS CHKD; BY; DATE



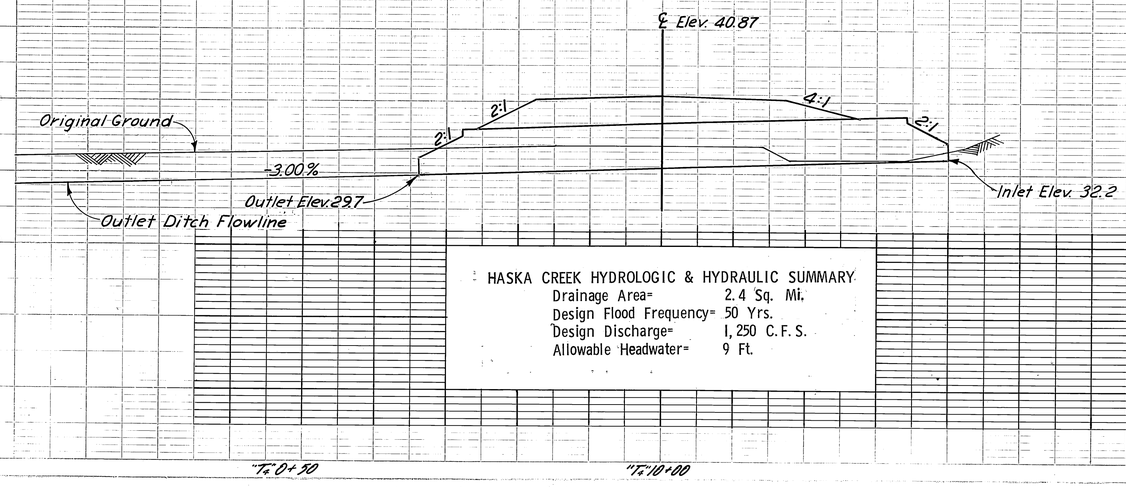
PROFILE — SURVEYED; PLOTTED; QUANTITIES CHECKED; NOTE BOOK; NO.; ALIGNMENT NOTED; STRUCTURE NOTATIONS CHKD; BY; DATE

CULVERT DETAIL

STA "L" 158 + 80

DUAL 9'-4" x 6'-3" x 74'

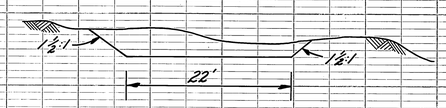
STRUCTURAL PLATE PIPE ARCH CONDUIT



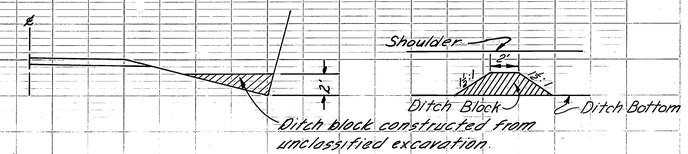
HASKA CREEK HYDROLOGIC & HYDRAULIC SUMMARY

Drainage Area=	2.4 Sq. Mi.
Design Flood Frequency=	50 Yrs.
Design Discharge=	1,250 C.F.S.
Allowable Headwater=	9 Ft.

Note: Construct outlet ditch as staked by the Engineer. Length of ditch approximately 160'±



TYPICAL SECTION
OUTLET DITCH



DITCH BLOCK DETAIL
Sta. "L" 159 + 07 RT.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	S-0961(11)	1969	14	34

5 INCH, SERIES E CAPITALS; ----- INCH LOWER CASE

Letter	Q		O		A		D				E		N		D		S		
Letter Width	3.36		3.50		4.19		3.36				3.05		3.36		3.36		3.36		
Space Width		.94		.94		.94						.94		1.17		.94			
Cumulative Width	3.36	4.30	7.80	8.74	12.93	13.87	17.23				3.05	3.99	7.35	8.52	11.88	12.82	16.18		

5 INCH, SERIES E CAPITALS; ----- INCH LOWER CASE

Letter	I		5		O		O				F		T						
Letter Width	1.20		3.36		3.50		3.50				3.05		3.05						
Space Width		1.17		.94		.94		2.25				.62							
Cumulative Width	1.20	2.37	5.73	6.67	10.17	11.11	14.61	16.85			19.91	20.53	23.58						

6 INCH, SERIES E CAPITALS; 6 INCH LOWER CASE (4.5 INCH LOOP HEIGHT)

Letter	C		a		n		a		d		a								
Letter Width	4.78		3.87		3.84		3.87		3.81		3.87								
Space Width		1.50		1.50		1.50		1.50		1.50		3.63							
Cumulative Width	4.78	6.28	10.15	11.65	15.49	16.99	20.86	22.36	26.17	27.67	31.54	35.17							

6 INCH, SERIES E CAPITALS; 6 INCH LOWER CASE (4.5 INCH LOOP HEIGHT)

Letter	B		o		r		d		e		r				3		7		
Letter Width	4.78		3.93		2.94		3.81		3.84		2.94				4.78		4.78		
Space Width		1.50		1.50		1.50		1.50		1.50						1.55			
Cumulative Width	39.95	41.45	45.38	46.88	49.82	51.32	55.13	56.63	60.47	61.97	64.91				4.78	6.33	11.11		

6 INCH, SERIES E CAPITALS; 6 INCH LOWER CASE (4.5 INCH LOOP HEIGHT)

Letter	M		i		l		e		s										
Letter Width	5.53		1.20		1.20		3.84		3.75										
Space Width		3.25		3.07		2.44		1.69											
Cumulative Width	5.53	8.78	9.98	13.05	14.25	16.69	20.53	22.22	25.97										

4 INCH, SERIES C CAPITALS

Letter	R		E		Y		N		O		L		D		S				
Letter Width	2.19		2.00		2.50		2.19		2.31		2.00		2.19		2.19				
Space Width		0.84		0.45		0.67		0.84		0.84		0.67		0.67					
Cumulative Width	2.19	3.03	5.03	5.48	7.98	8.65	10.84	11.68	13.99	14.83	16.83	17.50	19.69	20.36	22.55				

4 INCH, SERIES C CAPITALS

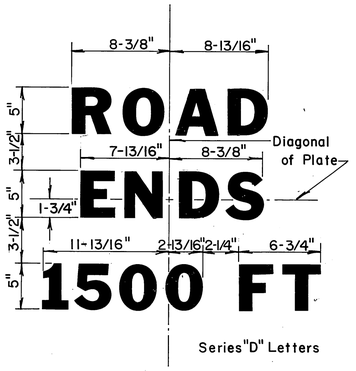
Letter	C		R		E		E		K										
Letter Width	2.19		2.19		2.00		2.00		2.19										
Space Width		0.67		0.84		0.67		0.67											
Cumulative Width	2.19	2.86	5.05	5.89	7.89	8.56	10.56	11.23	13.42										

6 INCH, SERIES E CAPITALS; 6 INCH LOWER CASE (4.5 INCH LOOP HEIGHT)

Letter	H		a		i		n		e		s				3				
Letter Width	4.78		3.87		1.20		3.84		3.84		3.75				4.78				
Space Width		2.75		3.07		3.07		2.44		1.69						1.55			
Cumulative Width	4.78	7.53	11.40	14.47	15.67	18.74	22.58	25.02	28.86	30.55	34.30				20.78	22.33			

6 INCH, SERIES E CAPITALS; 6 INCH LOWER CASE (4.5 INCH LOOP HEIGHT)

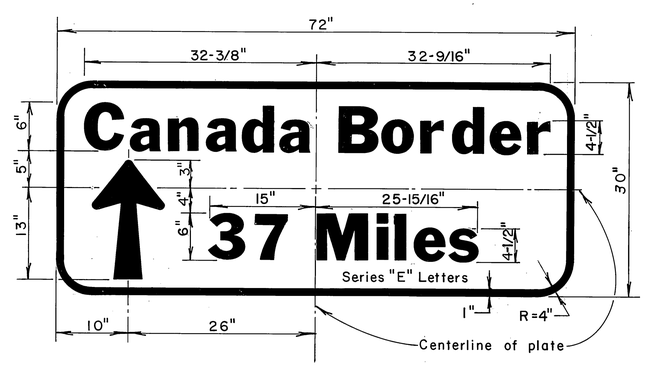
Letter	M		i		l		e		s										
Letter Width	5.53		1.20		1.20		3.84		3.75										
Space Width		3.25		3.07		2.44		1.69											
Cumulative Width	27.86	31.11	32.31	35.38	36.58	39.02	42.86	44.55	48.30										



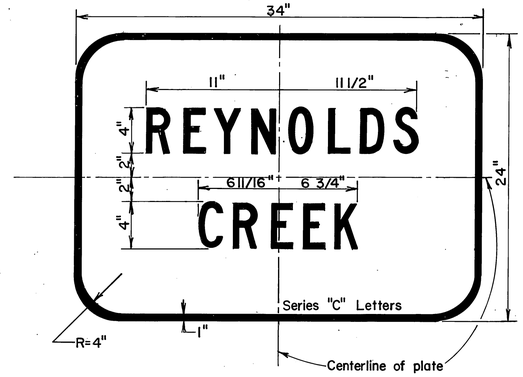
Series "D" Letters

For Plate Details See W3-3

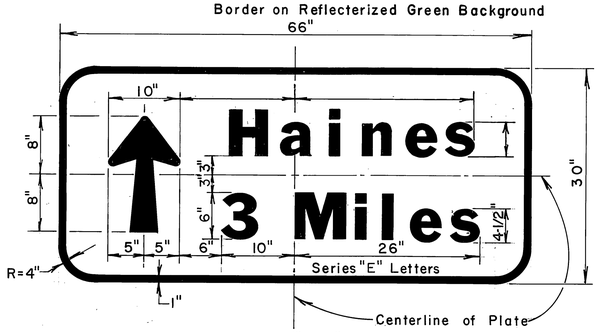
W8-10 36" x 36"



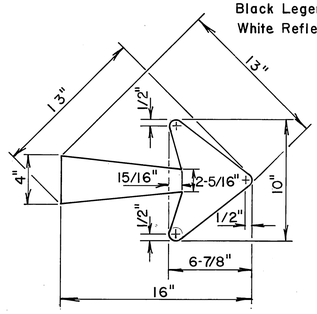
72" x 30"
D1
White Reflecterized Arrow, Legend and Border on Reflecterized Green Background



D5-1 34" x 24"
Black Legend & Border on White Reflecterized Background



66" x 30"
D1
White Reflecterized Arrow, Legend and Border on Reflecterized Green Background



TYPE B ARROW

SPECIAL STANDARD SIGN DETAILS

STATE	PROJECT NO.	YEAR	SHEET NO.
ALASKA	S-0961(11)	1969	15

4 Inch, Series "C" Capitals

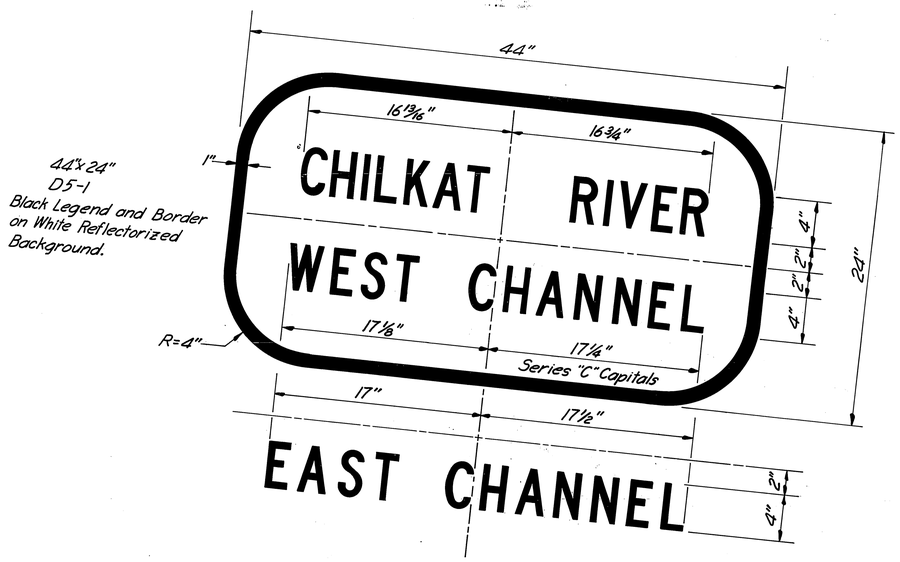
Letter	C		H		I		L		K		A		T		R		I		V		E		R
Letter Width	2.19		2.19		0.56		2.00		2.19		2.50		2.00		2.19		0.56		2.44		2.00		2.19
Letter Space		0.67		0.84		0.84		0.67		0.45		0.22		4.00		0.84		0.67		0.67		0.67	
Cumulative	2.19	2.86	5.05	5.89	6.45	7.29	9.29	9.96	12.15	12.60	15.10	15.32	17.32	21.32	23.51	24.35	24.91	25.58	28.02	28.69	30.69	31.36	33.55

2 Inch, Series "C" Capitals

Letter	W		E		S		T		C		H		A		N		N		E		L	
Letter Width	3.00		2.00		2.19		2.00		2.19		2.19		2.50		2.19		2.19		2.00		2.00	
Letter Space		0.22		0.67		0.67		4.00		0.67		0.67		0.67		0.84		0.84		0.67		
Cumulative	3.00	3.22	5.22	5.89	8.08	8.75	10.75	14.75	16.94	17.61	19.80	20.47	22.97	23.64	25.83	26.67	28.86	29.70	31.70	32.37	34.37	

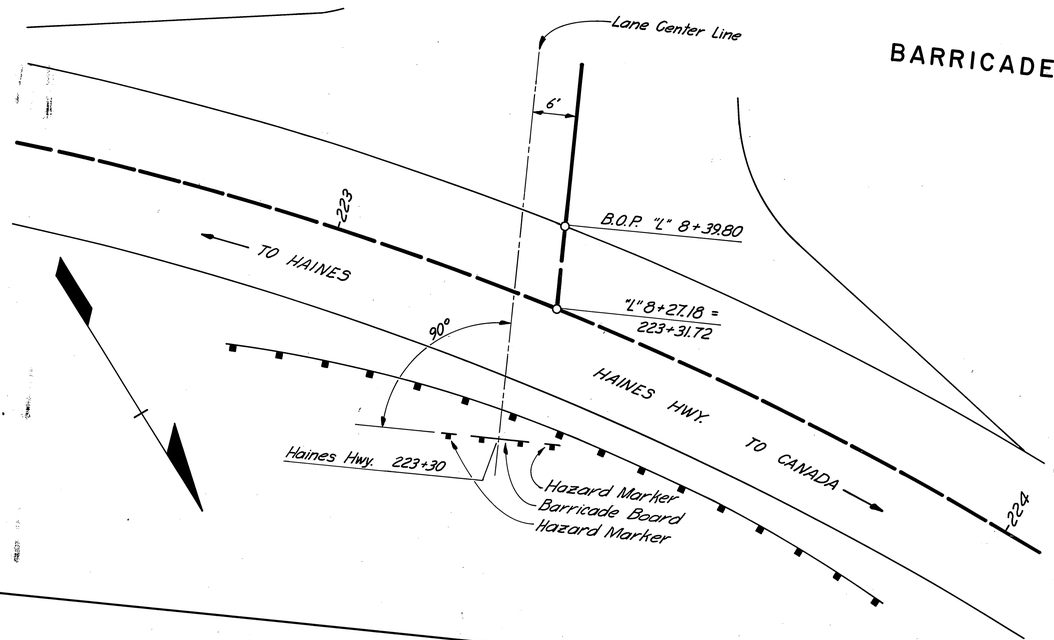
4 Inch, Series "C" Capitals

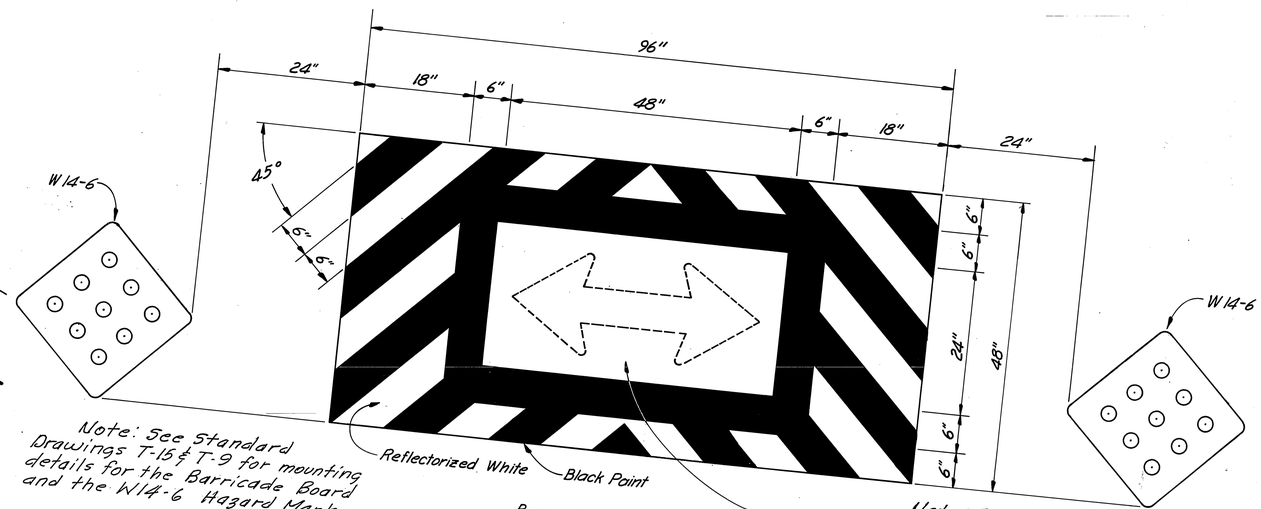
Letter	E		A		S		T		C		H		A		N		N		E		L	
Letter Width	2.00		2.50		2.19		2.00		2.19		2.19		2.50		2.19		2.19		2.00		2.00	
Letter Space		0.84		0.67		0.67		4.00		0.67		0.67		0.67		0.84		0.84		0.67		
Cumulative	2.00	2.84	5.34	6.01	8.20	8.87	10.87	14.87	17.06	17.73	19.92	20.59	23.09	23.76	25.95	26.79	28.98	29.82	31.82	32.49	34.49	



44"x24"
D5-1
Black Legend and Border on White Reflectorized Background.

BARRICADE DETAIL





Note: See Standard Drawings T-15 & T-9 for mounting details for the Barricade Board and the W14-6 Hazard Markers.

Barricade Board
5 Ply, 3/4" High Density Plywood

Note: The Barricade Board and associated mounting hardware will not be measured for payment. It will be considered incidental to pay item 615(1).