TIMBER CRUISE REPORT
OF THE
OLD WRANGELL INSTITUTE PROPERTY

Prepared for:
The City of Wrangell

Prepared by:
Curran Consulting, Inc.
December 15, 1995

INTRODUCTION

The City of Wrangell has the opportunity to acquire the Old Wrangell Institute property, approximately 4 miles southeast of Wrangell on the Zimovia Highway. Part of their decision to accept the property will be based on the volume and value of the existing timber on that property. This timber is located in Lot 26, U.S. Survey 3403, as part of the Wrangell Institute property. This timber cruise report only addresses the timber in Tract 26.

TIMBER DESCRIPTION

There are approximately 93 acres of merchantable timber on this property, with the acreage being determined by our field cruise grid. This timber is a mixed stand of Western Hemlock, Sitka Spruce, Western Red Cedar, and Alaska Yellow Cedar.

The age of the timber is medium to old growth. We took core samples of the timber using an increment borer to determine the age and computed the Sitka spruce to be at least 200 years old, with the other species being even older. The wood is tight grained and has over 12 growth rings per inch in the outer 1/3 of the cylinder. This is especially important in determining the value of the spruce. From our core samples we classified the Sitka spruce as "old growth", rather than "second growth".

The quality of the timber is also mixed. There is not a lot of clear, high grade lumber in the spruce due to knots and limbs. However, the spruce is round, sound, and tall and is excellent medium value timber. The hemlock is generally of poor quality and quite defective. The hemlock constitutes approximately 60% of the total volume and 50% of the hemlock was considered to be utility grade only. The red and yellow cedar are of medium quality, but constitute only 4% of the total volume.

TERRAIN AND LOGGING CONDITIONS

The terrain on this property is flat to mildly sloping ground, especially on the southern half of the property, but it gets steeper with slopes over 30% in the northern portion of the property. The amount of snow on the ground made it difficult to determine the soil conditions, but it seems to be sandy loam without much evidence of rock outcrops. There are quite a few small creeks bisecting this property and some low, wet areas in the southwestern portion of this tract. Institute Creek and the creek for Rainbow Falls are

in the upper northwest portion of the property and they are in very steep, rocky ravines. Road access across these ravines may be difficult.

This property has relatively good logging conditions. With proper road access at least 60% of the terrain could be shovel logged. A swing yarder or similar high lead logging system could be used for removing the rest of the timber. Logging road construction should be relatively easy, except for crossing the two ravines already mentioned. It would be best to examine the road construction possibilities after the snow is gone, to get a better idea of rock sources, culverts, etc.. Helicopter logging could be a viable logging method, especially in the low volume timber type and for the areas between the two ravines.

MEASUREMENT STANDARDS

We used the variable plot cruising method and a 40 B.A.F. prism to determine the "in", or measurable trees, on each plot. All the trees were measured by diameter, form and height, and the Atterbury Cruise System was used to generate the volumes. Each log segment was given a sort and grade code and the necessary defect deductions were made. The minimum log parameters were 12 feet in length and 6 inches at the small end diameter. 93 plots were established on a 2X5 chain (132' x 330') grid using cardinal bearings. We achieved a basal sampling error of 5.4% at one standard deviation.

OBSERVATIONS

- The southeast property corner was found and used for control, however the property lines will need to be re-established and marked with flagging and paint.
- No eagle trees or anadromous fish creeks were identified, but this will need to be verified in the spring after all the snow is gone.
- There is a powerline right-of-way angling through the northern portion of the property that has been cut and is approximately 200 ft. wide.
- The Rainbow Falls trail goes through the northern edge of the property. A buffer along this trail might be considered. The U.S. Forest Service should be contacted about this.

LAND USE

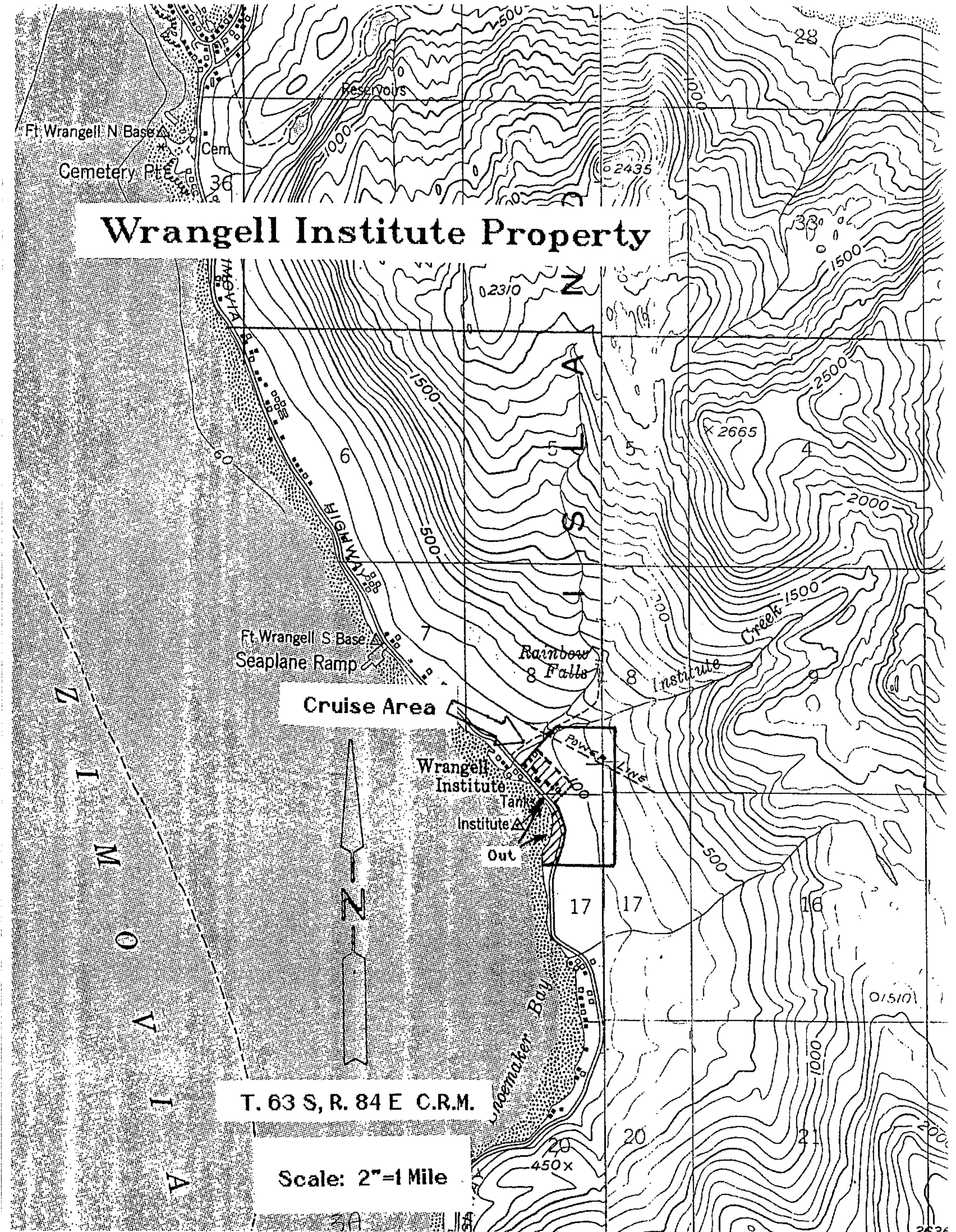
The timber mix, ground conditions, and accessibility are favorable enough to produce multiple considerations for the use of the land and harvest of the timber. Therefore, the City of Wrangell should consider the end uses of this property, and manage and/or sell the timber accordingly.

This timber cruise represents the total merchantable volume on this property, without any reductions for buffers, leave areas, or partial cut logging methods. Proper acreage and volume reductions should be made if any other options are considered.

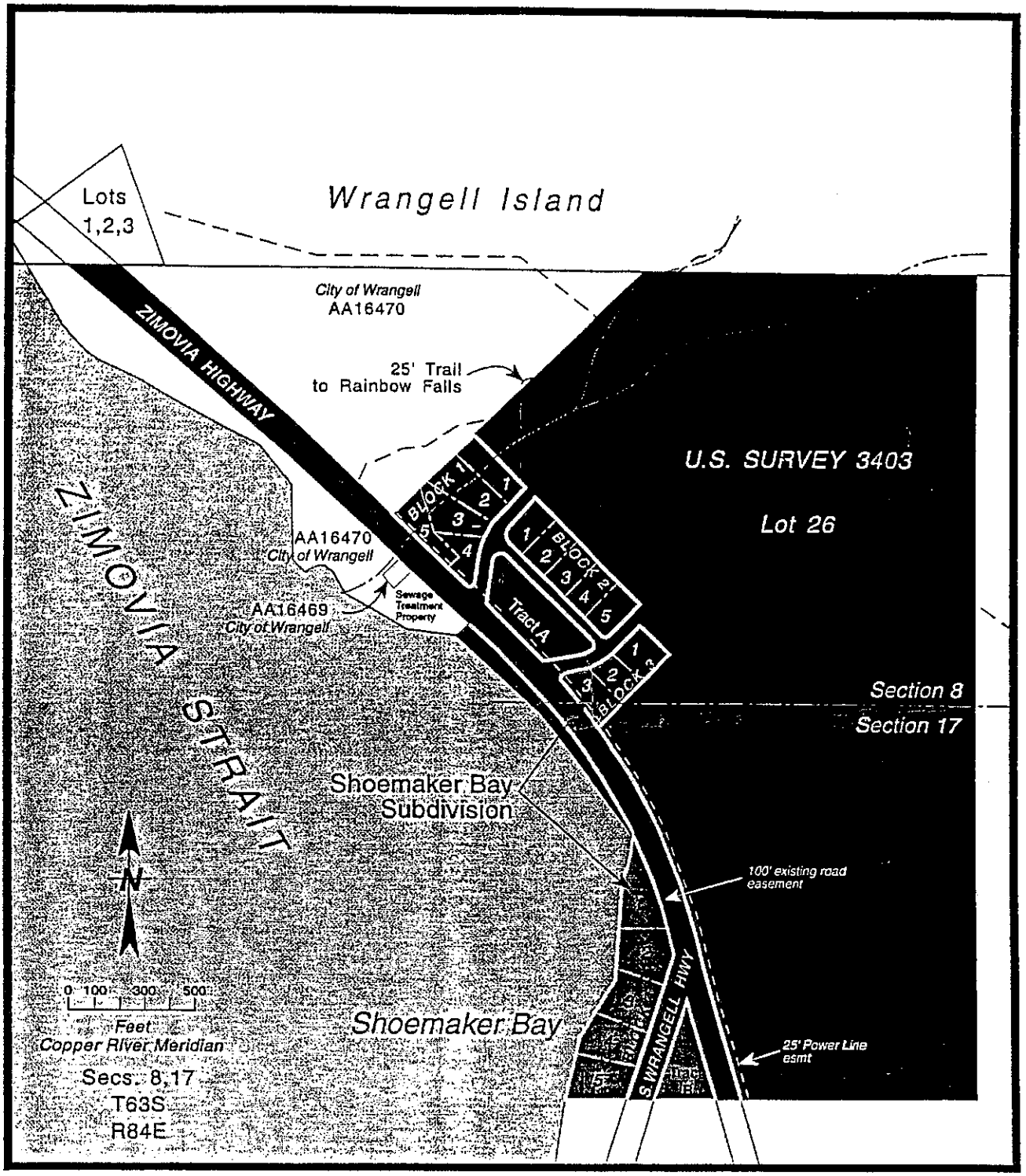
SUMMARY

There are 93 acres of merchantable timber in Lot 26 of the Old Wrangell Institute property. There are approximately 2.1 million board feet of net sawlog plus net utility volume. The Sitka Spruce volume is about 750 MBF (thousand board feet) and comprises 37% of the total volume.

The overall quality of the timber is better than marginal and definitely has economic value. It is hoped that this cruise will assist the City of Wrangell in their decision making process.



Wrangell Institute Property
Reservoirs
Ft. Wrangell N Base
Cem
Cemetery Pt.
Cruise Area
Wrangell Institute
Tank
Institute
Out
Ft. Wrangell S Base
Seaplane Ramp
Rainbow Falls
Institute Creek
Power Line
HIGHWAY
Shoemaker Bay
ZIMOVIA
T. 63 S, R. 84 E C.R.M.
Scale: 2"=1 Mile
N


Lots
1,2,3
Wrangell Island
City of Wrangell
AA16470
ZIMOVIA HIGHWAY
25' Trail
to Rainbow Falls
U.S. SURVEY 3403
Lot 26
BLOCK 1
BLOCK 2
BLOCK 3
Tract A
AA16470
City of Wrangell
AA16469
City of Wrangell
Sewage
Treatment
Property
ZIMOVIA STRAIT
Section 8
Section 17
Shoemaker Bay
Subdivision
100' existing road
easement
S WRANGELL HWY
25' Power Line
esmt
N
0 100 300 500
Feet
Shoemaker Bay
Copper River Meridian
Secs. 8,17
T63S
R84E

Sort Guidelines for the City of Wrangell

Spruce Logs

Sort Code/Symbol	Description	Minimum Length	Minimum Diameter
51-52/E	High Grade Spruce Clean appearing #2 and better. Reasonably straight, with clear cuttings. #2 saw 18"-23" should be of prime quality. Maximum twist 2" per foot, max. defect 15%.	13'	18"
54/S	Red Spruce Good appearing #3 saw or better. Knot spacing very important with 4' of clear cuttings between knots on 50% of log. Max deductions 35%.	13'	18"
57/B	Shop Spruce Should have clear cutting in one quadrant minimum. Total deductions not more than 50%.	12'	24"
53/J	Japan Spruce Round clean #2 and better quality, reasonably straight with no hooked butt or sap. Max defect 25%, 6" & 7" logs minimum length of 32'.	20'	6"-17"
58/D	China Spruce #3 mill or better, relatively round and clean. No rough tops. max deduction 35%.	13'	12"
39/A	Korea Spruce #3 or better, no rough tops. max deduction 50%. (Lowest quality export sort).	12'	6"
59/U	Spruce Pulp Minimum 50% net utility scale.	12'	6"
55/F 56/G	Second Growth Spruce Fast Growth, no rough tops, no sap fairly straight. Max defect 20%.	20'	8" - 11" 12" & up

Sort Guidelines for City of Wrangell

Hemlock Logs

Sort Code/Symbol	Description	Minimum Length	Minimum Diameter
21/I	High Grade Hemlock Smooth, clean #2 mill and better straight, maximum twist 2" per foot, maximum defect 15%.	20'	12"
24/R	Red Hemlock Next sort down from High Grade. good appearing #2 and better. Reasonably straight, no pistol butt. Max defect 25%.	20'	12"
27/T	Shop Hemlock Logs should yield high grade cuttings for equivalent of one quadrant, max defect 50%.	13'	20"
23/N	Japan Hemlock Smooth, clean, and straight. One sort above 28 sort. Max defect 25%.	26'	8" - 11"
28/H	China Hemlock Good appearing #3 or better. no rough tops or pistol butt. Max defect 25%, bark seams 1/3 length of log.	20'	8" & up
25/W	Korea Hemlock #3 and better, some good #4's. Max defect 25%. Lowest quality export hemlock sort.	12'	6"
29/U	Hemlock Pulp Minimum 50% net utility scale.	12'	6"

Sort Guidelines for City of Wrangell

Red Cedar Logs

Sort code/Symbol	Description	Minimum Length	Minimum Diameter
41/L	High Export Clean, smooth #3 saw or better. Green round logs and high quality slabs. Max 3"/ft twist.	20'	24"
44/M	Medium Export Good appearing #3 saw or better Green round sawable logs.	20'	16"
46/C	Domestic Cedar Must be suitable for shingles or sawlogs. No excessive sweep or twist. all cedar logs that don't fall into export sorts.	12'	6"

Yellow Cedar Logs

84/A	High Export Good sawlog quality. No excessive twist or sweep, max defect 35%. Limited amount of blue stain allowed, depending on size of log.	13'	6"
85/Z	Low Export Blue stain allowed, but still sawlog quality. Max defect 50%, no excessive twist or sweep.	13'	6"

S P E C I E S T A B L E(ZA)

DATE: 12/15/95

01 SE ALASKA

--- SPECIES --- CODE	ABR	DESC.	BARK THICK RATIO	"Ao" CONST	AVE F.F @16	MIN DIA	MIN LGT	MAX LGT	TRIM	SCALE RULE BD	SCALE RULE CU	YLD TAB REF	COM PON ENT	LBS PER M,C
1	SS	SPRCE OG	0.962	0.593	0.90	6	12	40	0.8	W	S	WH	50 C	
2	WH	HMLK OG	0.944	0.593	0.90	6	12	40	0.8	W	S	WH	50 C	
3	RC	R CDR OG	0.951	0.337	0.80	6	12	40	0.8	W	S	WH	50 C	
4	YC	Y CDR OG	0.941	0.337	0.87	6	12	40	0.8	W	S	DF	50 C	
5	MH	MT HM OG	0.944	0.593	0.85	6	12	40	0.8	W	S	WH	50 C	
6	WS	WHT SPRC	0.962	0.593	0.90	6	12	40	0.8	W	S	WH	50 C	
8	SF	PS FIR	0.919	0.593	0.90	6	12	40	0.8	W	S	WH	50 C	
10	LP	LP PINE	0.870	0.623	0.88	6	12	40	0.8	W	S	LP	50 C	
11	S	SPRC SG	0.962	0.593	0.90	6	12	40	0.8	W	S	WH	50 C	
12	HM	HMLK SG	0.944	0.593	0.90	6	12	40	0.8	W	S	WH	50 C	
13	CR	R CDR SG	0.951	0.337	0.90	6	12	40	0.8	W	S	WH	50 C	
14	CY	Y CDR SG	0.940	0.337	0.90	6	12	40	0.8	W	S	WH	50 C	
15	MT	MT HM SG	0.944	0.593	0.90	6	12	40	0.8	W	S	WH	50 C	
20	PB	P BIRCH	0.953	0.593	0.90	6	12	40	0.8	W	S	RA	50 H	
21	RA	RD ALDER	0.953	0.593	0.90	6	12	40	0.8	W	S	RA	50 H	
22	CW	COTTNWD	0.940	0.593	0.90	6	12	40	0.8	W	S	RA	50 H	
23	CS	COTTNSG	0.940	0.593	0.90	6	12	40	0.8	W	S	RA	50 H	
901	SSC	SPRCE CU	0.962	0.593	0.90	6	12	40	0.8	W	S	WH	50 C	
902	WHC	HMLK CU	0.944	0.593	0.90	6	12	40	0.8	W	S	WH	50 C	
903	RCC	R CDR CU	0.951	0.337	0.80	6	12	40	0.8	W	S	WH	50 C	
904	YCC	Y CDR CU	0.941	0.337	0.87	6	12	40	0.8	W	S	DF	50 C	

OG - Old Growth
SG - Second Growth
CU - Standing Dead

S O R T T A B L E(ZB)

01 SE ALASKA

CODE	ABB.	DESCRIP.	GRADED/ FIBRE	MINIMUM DIAMETER	MINIMUM LENGTH	MAXIMUM BUTT SIZE	MINIMUM VOL M,C	LBS PER M,C	CORDS PER M,C,T
0	CU	CULL							
A	SS	KOREA		6	12				
B	SS	SHOP		24	12				
C	RC	DOMESTIC		6	12				
D	SS	CHINA		12	13				
E	SS	HI GRADE		18	13				
F	S	FAST GRO		8	20				
G	S	FAST GRO		12	20				
H	WH	CHINA		8	20				
I	WH	HI GRADE		12	20				
J	SS	JAPAN		6	20				
L	RC	HIGH EXP		24	20				
M	RC	MED EXP		16	20				
N	WH	JAPAN		8	26				
R	WH	RED SORT		12	20				
S	SS	RED SORT		18	13				
T	WH	SHOP		20	13				
U	PU	PULP		6	12				
W	WH	KOREA		6	12				
Y	YC	HIGH EXP		6	13				
Z	YC	LOW EXP		6	13				

G R A D E T A B L E(ZC) DATE: 12/15/95

01 SE ALASKA

CODE	ABB.	DESCRIP.	GRADED/ FIBRE	MINIMUM DIAMETER	MINIMUM LENGTH	MAXIMUM BUTT SIZE	MINIMUM VOL M,C	LBS PER M,C	CORDS PER M,C,T
0	CU	CULL							
1	1S	1 SAW		24	12				
2	2S	2 SAW		12	12				
3	3S	3 SAW		6	12				
4	4S	4 SAW		6	12				
5	SM	SP MILL		16	12				
6	P	PEELER		24	12				
7	SL	SELECT		30	12				
9	U	UTILITY		6	12				
A	CP	C PEELER		10	17				
B	CS	C SAW		6	12				

TYPE REPORT(FJ)
SPP, SORT, GRADE, LEN % - BDFT

CURRAN CONSULTING, INC. Plots 93 BFT:W PAGE 1
PROJECT WRANGELL TRACT: WRANGELL SCHOOL Trees 336 CUB:S DATE: 12/16/95
TWP 63S RGE 84E SEC 17 TY 0099 AC 93.00 MC JT JF TIME: 03:24pm

SP	SORT	GRADE	PCT BDFT / ACRE BDFT	GROSS	NET	TOT MBF	%BDFT/AC BY GROSS LEN. 12-20	21-28	29-34	35-40	AV LN	BDFT/ LOG	LOGS ACRE
RC	DOMESTIC	3 SAW	82	794	729	68			32	68	36	117	6
RC	DOMESTIC	4 SAW	12	109	107	10	7	61	32		24	38	3
RC	MED EXP	3 SAW	7	62	58	5			100		34	370	
RC	CULL	CULL		403									
RC	TOTAL		4	1367	895	83	1	7	37	55	32	98	9
RCC	DOMESTIC	3 SAW	100	87	70	7			100		33	310	
RCC	CULL	CULL		61									
RCC	TOTAL			148	70	7			100		33	310	0
SS	KOREA	2 SAW	4	308	281	26		42		58	35	459	1
SS	KOREA	3 SAW	10	843	787	73	6	19		74	36	206	4
SS	SHOP	1 SAW	1	154	97	9		42	58		30	1159	
SS	CHINA	2 SAW	44	3711	3465	322		6	1	93	38	735	5
SS	HI GRADE	1 SAW	1	99	79	7				100	36	1570	
SS	HI GRADE	SP MILL	2	173	167	16		43	57		30	1103	
SS	RED SORT	2 SAW	2	199	177	16		100			26	1131	
SS	RED SORT	SP MILL	3	279	260	24			26	74	34	850	
SS	PULP	2 SAW	3	327	247	23	13	19		68	29	762	
SS	PULP	3 SAW	7	651	563	52	2	35	29	33	32	119	5
SS	PULP	4 SAW	1	117	113	10		87	13		25	47	2
SS	PULP	UTILITY	20	1917	1564	145	13	12	36	40	34	448	3
SS	CULL	CULL		286									
SS	TOTAL		36	9063	7800	725	4	17	13	67	34	374	21
SSC	SHOP	1 SAW	14	79	39	4		100			26	530	
SSC	PULP	UTILITY	86	309	241	22		20		80	37	587	
SSC	TOTAL		1	388	280	26		31		69	35	578	0
WH	CHINA	2 SAW	12	1614	1472	137			18	82	36	304	5
WH	CHINA	3 SAW	2	247	236	22				100	38	126	2
WH	HI GRADE	2 SAW	1	86	68	6				100	36	670	
WH	HI GRADE	SP MILL	1	132	114	11		46		54	31	398	
WH	RED SORT	2 SAW	5	610	581	54				100	36	423	1
WH	RED SORT	SP MILL	1	80	66	6				100	36	450	
WH	SHOP	2 SAW		82	50	5				100	36	550	
WH	PULP	2 SAW	3	518	407	38		12		88	35	364	1
WH	PULP	3 SAW	12	1688	1459	136	1	15	32	52	34	76	19
WH	PULP	4 SAW	4	452	443	41	21	72	7		23	30	15
WH	PULP	UTILITY	42	6151	5048	469	4	13	23	60	33	128	39

TYPE REPORT(FJ)
SPP, SORT, GRADE, LEN % - BDFT

CURRAN CONSULTING, INC. Plots 93 BFT:W PAGE 2
PROJECT WRANGELL TRACT: WRANGELL SCHOOL Trees 336 CUB:S DATE: 12/16/95
TWP 63S RGE 84E SEC 17 TY 0099 AC 93.00 MC JT JF TIME: 03:24pm

SP	SORT	GRADE	PCT BDFT / ACRE BDFT	GROSS	NET	TOT MBF	%BDFT/AC BY GROSS LEN. 12-20	21-28	29-34	35-40	AV BDFT/ LOGS / LN	LOG	LOGS / ACRE
WH	KOREA	2 SAW	1	211	176	16		28		72	35	174	1
WH	KOREA	3 SAW	15	2072	1805	168		2	5	93	38	113	16
WH	CULL	CULL		944									
WH	TOTAL		54	14888	11925	1109	3	12	17	69	33	119	100
WHC	PULP	2 SAW	9	89	71	7				100	40	670	
WHC	PULP	3 SAW	12	113	92	9			77	23	35	192	
WHC	PULP	UTILITY	79	840	630	59		14	18	68	32	144	4
WHC	CULL	CULL		735									
WHC	TOTAL		4	1778	792	74		11	23	65	32	160	5
YC	HIGH EXP	2 SAW	41	49	38	4		100			26	200	
YC	HIGH EXP	3 SAW	51	50	47	4				100	40	170	
YC	LOW EXP	3 SAW	8	9	8	1		100			22	40	
YC	CULL	CULL		75									
YC	TOTAL			184	93	9		49		51	31	141	1
YCC	PULP	UTILITY	100	39	33	3	100				20	60	1
YCC	CULL	CULL		38									
YCC	TOTAL			77	33	3	100				20	60	1
TYPE	TOTAL		100	27892	21889	2036	3	13	16	67	33	160	137

TYPE REPORT(FO)
SPP, SORT ,LOGS, TONS, CCF, MBF

CURRAN CONSULTING, INC. Plots 93 BFT:W PAGE 1
PROJECT WRANGELL TRACT: WRANGELL SCHOOL Trees 336 CUB:S DATE: 12/16/95
TWP 63S RGE 84E SEC 17 TY 0099 AC 93.00 MC JT JF TIME: 05:14pm

SPECIES	SORT	LOGS	TONS	CUNITS GROSS	CUNITS NET	MBF GROSS	MBF NET
R CDR OG	DOMESTIC	838		268	268	84	78
	MED EXP	15		13	13	6	5
	CULL			93		37	
R CDR OG	TOTAL	853		374	281	127	83
R CDR CU	DOMESTIC	21		21	21	8	7
	CULL			14		6	
R CDR CU	TOTAL	21		35	21	14	7
SPRCE OG	KOREA	412		238	238	107	99
	SHOP	8		22	22	14	9
	CHINA	439		596	596	345	322
	HI GRADE	19		38	38	25	23
	RED SORT	43		67	67	44	41
	PULP	1018		568	568	280	231
	CULL			35		27	
SPRCE OG	TOTAL	1938		1564	1528	843	725
SPRCE CU	SHOP	7		12	12	7	4
	PULP	38		56	56	29	22
SPRCE CU	TOTAL	45		68	68	36	26
HMLK OG	CHINA	624		388	388	173	159
	HI GRADE	36		36	36	20	17
	RED SORT	142		119	119	64	60
	SHOP	8		13	13	8	5
	PULP	6941		2175	2169	819	684
	KOREA	1576		597	596	212	184
	CULL			168		88	
HMLK OG	TOTAL	9328		3496	3322	1385	1109
HMLK CU	PULP	460		228	227	97	74
	CULL			147		68	
HMLK CU	TOTAL	460		375	227	165	74
Y CDR OG	HIGH EXP	44		25	25	9	8
	LOW EXP	18		4	4	1	1
	CULL			24		7	
Y CDR OG	TOTAL	61		52	29	17	9
Y CDR CU	PULP	52		8	8	4	3

TYPE REPORT(FO)
SPP, SORT ,LOGS, TONS, CCF, MBF

CURRAN CONSULTING, INC. Plots 93 BFT:W PAGE 2
PROJECT WRANGELL TRACT: WRANGELL SCHOOL Trees 336 CUB:S DATE: 12/16/95
TWP 63S RGE 84E SEC 17 TY 0099 AC 93.00 MC JT JF TIME: 05:14pm

SPECIES	SORT	LOGS	TONS	CUNITS GROSS	CUNITS NET	MBF GROSS	MBF NET
Y CDR CU	CULL			10		4	
Y CDR CU	TOTAL	52		18	8	7	3
TYPE TOTAL		12757		5982	5483	2594	2036

TYPE REPORT(FN)
SPP, GRADE ,LOGS, TONS, CCF, MBF

CURRAN CONSULTING, INC. Plots 93 BFT:W PAGE 1
PROJECT WRANGELL TRACT: WRANGELL SCHOOL Trees 336 CUB:S DATE: 12/16/95
TWP 63S RGE 84E SEC 17 TY 0099 AC 93.00 MC JT JF TIME: 05:14pm

SPECIES	GRADE	LOGS	TONS	CUNITS GROSS	CUNITS NET	MBF GROSS	MBF NET
R CDR OG	3 SAW	592		250	250	80	73
	4 SAW	261		31	31	10	10
	CULL			93		37	
R CDR OG	TOTAL	853		374	281	127	83
R CDR CU	3 SAW	21		21	21	8	7
	CULL			14		6	
R CDR CU	TOTAL	21		35	21	14	7
SPRCE OG	1 SAW	12		37	37	24	16
	2 SAW	540		730	730	423	388
	3 SAW	795		334	334	139	126
	4 SAW	223		33	33	11	10
	SP MILL	43		63	63	42	40
	UTILITY	324		332	332	178	145
	CULL			35		27	
SPRCE OG	TOTAL	1938		1564	1528	843	725
SPRCE CU	1 SAW	7		12	12	7	4
	UTILITY	38		56	56	29	22
SPRCE CU	TOTAL	45		68	68	36	26
HMLK OG	2 SAW	793		603	603	290	256
	3 SAW	3441		1089	1088	373	325
	4 SAW	1388		130	129	42	41
	SP MILL	40		36	36	20	17
	UTILITY	3665		1469	1465	572	469
	CULL			168		88	
HMLK OG	TOTAL	9328		3496	3322	1385	1109
HMLK CU	2 SAW	10		16	16	8	7
	3 SAW	44		26	26	11	9
	UTILITY	406		186	185	78	59
	CULL			147		68	
HMLK CU	TOTAL	460		375	227	165	74
Y CDR OG	2 SAW	18		10	10	5	4
	3 SAW	44		18	18	6	5
	CULL			24		7	
Y CDR OG	TOTAL	61		52	29	17	9
Y CDR CU	UTILITY	52		8	8	4	3

TYPE REPORT(FN)
SPP, GRADE ,LOGS, TONS, CCF, MBF

CURRAN CONSULTING, INC. Plots 93 BFT:W PAGE 2
PROJECT WRANGELL TRACT: WRANGELL SCHOOL Trees 336 CUB:S DATE: 12/16/95
TWP 63S RGE 84E SEC 17 TY 0099 AC 93.00 MC JT JF TIME: 05:14pm

SPECIES	GRADE	LOGS	TONS	CUNITS GROSS	CUNITS NET	MBF GROSS	MBF NET
Y CDR CU	CULL			10		4	
Y CDR CU	TOTAL	52		18	8	7	3
TYPE TOTAL		12757		5982	5483	2594	2036

TYPE REPORT(FL)
SPP, SORT, GRADE, DIB % - BDFT

CURRAN CONSULTING, INC. Plots 93 BFT:W PAGE 1
PROJECT WRANGELL TRACT: WRANGELL SCHOOL Trees 336 CUB:S DATE: 12/16/95
TWP 63S RGE 84E SEC 17 TY 0099 AC 93.00 MC JT JF TIME: 03:24pm

SP	SORT	GRADE	PCT BDFT	BDFT / ACRE GROSS	NET	TOT MBF	%BDFT/AC BY DIB @ S.E. 06-11	12-17	18-23	24-99	AV BDFT/ LN	LOGS LOG	ACRE
RC	DOMESTIC	3 SAW	82	794	729	68	64	20	7	9	36	117	6
RC	DOMESTIC	4 SAW	12	109	107	10	89	11			24	38	3
RC	MED EXP	3 SAW	7	62	58	5		100			34	370	
RC	CULL	CULL		403									
RC	TOTAL		4	1367	895	83	63	24	5	8	32	98	9
RCC	DOMESTIC	3 SAW	100	87	70	7		21	79		33	310	
RCC	CULL	CULL		61									
RCC	TOTAL			148	70	7		21	79		33	310	0
SS	KOREA	2 SAW	4	308	281	26		45	43	12	35	459	1
SS	KOREA	3 SAW	10	843	787	73	31	45	24		36	206	4
SS	SHOP	1 SAW	1	154	97	9				100	30	1159	
SS	CHINA	2 SAW	44	3711	3465	322		13	35	52	38	735	5
SS	HI GRADE	1 SAW	1	99	79	7				100	36	1570	
SS	HI GRADE	SP MILL	2	173	167	16				100	30	1103	
SS	RED SORT	2 SAW	2	199	177	16				100	26	1131	
SS	RED SORT	SP MILL	3	279	260	24			26	74	34	850	
SS	PULP	2 SAW	3	327	247	23				100	29	762	
SS	PULP	3 SAW	7	651	563	52	34	50	10	6	32	119	5
SS	PULP	4 SAW	1	117	113	10	90	10			25	47	2
SS	PULP	UTILITY	20	1917	1564	145	8	13	20	59	34	448	3
SS	CULL	CULL		286									
SS	TOTAL		36	9063	7800	725	9	18	25	48	34	374	21
SSC	SHOP	1 SAW	14	79	39	4				100	26	530	
SSC	PULP	UTILITY	86	309	241	22		19	31	50	37	587	
SSC	TOTAL		1	388	280	26		16	27	57	35	578	0
WH	CHINA	2 SAW	12	1614	1472	137		86	14		36	304	5
WH	CHINA	3 SAW	2	247	236	22	100				38	126	2
WH	HI GRADE	2 SAW	1	86	68	6			100		36	670	
WH	HI GRADE	SP MILL	1	132	114	11			100		31	398	
WH	RED SORT	2 SAW	5	610	581	54		47	53		36	423	1
WH	RED SORT	SP MILL	1	80	66	6			100		36	450	
WH	SHOP	2 SAW		82	50	5				100	36	550	
WH	PULP	2 SAW	3	518	407	38		55	29	16	35	364	1
WH	PULP	3 SAW	12	1688	1459	136	70	22	8		34	76	19
WH	PULP	4 SAW	4	452	443	41	100				23	30	15
WH	PULP	UTILITY	42	6151	5048	469	34	39	24	4	33	128	39

TYPE REPORT(FL)
SPP, SORT, GRADE, DIB % - BDFT

CURRAN CONSULTING, INC. Plots 93 BFT:W PAGE 2
PROJECT WRANGELL TRACT: WRANGELL SCHOOL Trees 336 CUB:S DATE: 12/16/95
TWP 63S RGE 84E SEC 17 TY 0099 AC 93.00 MC JT JF TIME: 03:24pm

SP	SORT	GRADE	PCT BDFT	BDFT / ACRE GROSS	NET	TOT MBF	%BDFT/AC BY DIB @ S.E. 06-11	12-17	18-23	24-99	AV BDFT/ LN	LOGS LOG	/ ACRE
WH	KOREA	2 SAW	1	211	176	16		100			35	174	1
WH	KOREA	3 SAW	15	2072	1805	168	73	25	2		38	113	16
WH	CULL	CULL		944									
WH	TOTAL		54	14888	11925	1109	40	39	19	3	33	119	100
WHC	PULP	2 SAW	9	89	71	7			100		40	670	
WHC	PULP	3 SAW	12	113	92	9	16	84			35	192	
WHC	PULP	UTILITY	79	840	630	59	19	41	29	12	32	144	4
WHC	CULL	CULL		735									
WHC	TOTAL		4	1778	792	74	17	42	32	9	32	160	5
YC	HIGH EXP	2 SAW	41	49	38	4		100			26	200	
YC	HIGH EXP	3 SAW	51	50	47	4	100				40	170	
YC	LOW EXP	3 SAW	8	9	8	1	100				22	40	
YC	CULL	CULL		75									
YC	TOTAL			184	93	9	59	41			31	141	1
YCC	PULP	UTILITY	100	39	33	3	100				20	60	1
YCC	CULL	CULL		38									
YCC	TOTAL			77	33	3	100				20	60	1
TYPE	TOTAL		100	27892	21889	2036	28	31	21	20	33	160	137

PROJECT REPORT(LA)
CATALOG

CURRAN CONSULTING, INC.
PROJECT WRANGELL
TWP 63S RGE 84E SEC 17

Tract:

DATE: 12/16/95
TIME: 03:24pm

TYPE NO	ACRES	SP	YRS	D4H	FF	BOL HGT	BA/A SQFT	TREE /AC	LOGS /AC	AVE CF	LOG BF	-PER ACRE- CF	BF	---TOTAL--- CUNITS	MBF
0099	93.00														
		RC	200	18.1	80	45	16.3	9.1	9	33	98	302	895	281	83
		RCC	200	21.9	85	54	1.2	0.5	0	99	310	22	70	21	7
		SS	200	25.5	86	73	36.6	10.3	21	79	374	1643	7800	1528	725
		SSC	200	36.6	85	75	1.8	0.2	0	151	578	73	280	68	26
		WH	200	17.5	85	50	126.9	75.7	100	36	119	3572	11925	3322	1109
		WHC	200	20.5	85	47	12.8	5.6	5	49	160	244	792	227	74
		YC	200	14.1	81	38	2.5	2.3	1	47	141	31	93	29	9
		YCC	200	13.5	86	35	1.2	1.2	1	15	60	8	33	8	3
		TYPE		18.7	84	51	199.2	104.9	137	43	160	5895	21889	5483	2036
PR	93.00														
		RC		18.1	80	45	16.3	9.1	9	33	98	302	895	281	83
		RCC		21.9	85	54	1.2	0.5	0	99	310	22	70	21	7
		SS		25.5	86	73	36.6	10.3	21	79	374	1643	7800	1528	725
		SSC		36.6	85	75	1.8	0.2	0	151	578	73	280	68	26
		WH		17.5	85	50	126.9	75.7	100	36	119	3572	11925	3322	1109
		WHC		20.5	85	47	12.8	5.6	5	49	160	244	792	227	74
		YC		14.1	81	38	2.5	2.3	1	47	141	31	93	29	9
		YCC		13.5	86	35	1.2	1.2	1	15	60	8	33	8	3
		PROJ						104.9	137	43	160	5895	21889	5483	2036

TYPE REPORT(IA)
STAND TABLE BY D4H CLASS - TOP

CURRAN CONSULTING, INC. Plots 93 BFT:W PAGE 1
PROJECT WRANGELL TRACT: WRANGELL SCHOOL Trees 336 CUB:S DATE: 12/16/95
TWP 63S RGE 84E SEC 17 TY 0099 AC 93.00 MC JT JF TIME: 03:24pm

	TOTALS	D 4 H REF 00-09	10-13	14-17	18-21	22-25	26-29	30-33	34-37	38+
R CDR OG										
TOT HGT	67		59	59	69	75	94			104
TREES/AC	9.1		2.2	2.2	2.5	1.5	0.5			0.2
BA/AC	16.3		1.3	2.8	4.8	4.1	1.9			1.3
CUFT/AC	302		22	40	98	57	49			36
BDFT/AC	895		88	101	245	151	159			150
BDFT%	4		0	0	1	1	1			1
LOGS/AC	9		2	2	3	1	1			0
TONS/AC										
POLES/AC										
R CDR CU										
TOT HGT	88			84				101		
TREES/AC	0.5			0.4				0.1		
BA/AC	1.2			0.6				0.7		
CUFT/AC	22							22		
BDFT/AC	70							70		
BDFT%	0							0		
LOGS/AC	0							0		
TONS/AC										
POLES/AC										
SPRCE OG										
TOT HGT	95		48	65	96	99	119	121	133	139
TREES/AC	10.3		1.7	1.6	2.2	1.3	1.0	0.7	0.6	1.3
BA/AC	36.6		1.1	2.4	4.7	3.9	4.0	3.5	4.4	12.5
CUFT/AC	1643		24	69	166	158	184	158	227	658
BDFT/AC	7800		67	227	623	649	827	734	1208	3464
BDFT%	36		0	1	3	3	4	3	6	16
LOGS/AC	21		2	2	4	3	2	2	2	4
TONS/AC										
POLES/AC										
SPRCE CU										
TOT HGT	94							117		76
TREES/AC	0.2							0.1		0.1
BA/AC	1.8							0.6		1.2
CUFT/AC	73							27		46
BDFT/AC	280							99		181
BDFT%	1							0		1
LOGS/AC	0							0		0
TONS/AC										
POLES/AC										
HMLK OG										
TOT HGT	66	40	52	60	75	86	94	96	106	117
TREES/AC	75.7	5.5	15.7	24.6	16.6	8.2	3.5	1.2	0.4	0.1
BA/AC	126.9	2.4	12.2	31.3	32.7	24.4	13.7	6.2	2.3	1.7
CUFT/AC	3572	33	236	748	901	806	470	232	86	60
BDFT/AC	11925	150	674	1987	2964	2892	1727	959	318	254
BDFT%	54	1	3	9	14	13	8	4	1	1
LOGS/AC	100	5	15	29	26	15	6	2	1	0
TONS/AC										

TYPE REPORT(IA)
STAND TABLE BY D4H CLASS - TOP

CURRAN CONSULTING, INC. Plots 93 BFT:W PAGE 2
PROJECT WRANGELL TRACT: WRANGELL SCHOOL Trees 336 CUB:S DATE: 12/16/95
TWP 63S RGE 84E SEC 17 TY 0099 AC 93.00 MC JT JF TIME: 03:24pm

	TOTALS	REF	D 4 H 00-09	10-13	14-17	18-21	22-25	26-29	30-33	34-37	38+
HMLK CU											
TOT HGT	69			44	60	61	80	84	100	110	
TREES/AC	5.6			1.1	1.1	0.7	1.7	0.6	0.3	0.1	
BA/AC	12.8			0.6	1.2	1.3	5.2	2.3	1.7	0.6	
CUFT/AC	244			10	28	17	86	46	40	17	
BDFT/AC	792			34	71	55	261	156	141	75	
BDFT%	4			0	0	0	1	1	1	0	
LOGS/AC	5			1	1	1	1	1	0	0	
TONS/AC											
POLES/AC											
Y CDR OG											
TOT HGT	58			53		79	73				
TREES/AC	2.3			1.8		0.3	0.2				
BA/AC	2.5			1.3		0.6	0.6				
CUFT/AC	31					16	15				
BDFT/AC	93					47	45				
BDFT%	0					0	0				
LOGS/AC	1					0	0				
TONS/AC											
POLES/AC											
Y CDR CU											
TOT HGT	46			30	64						
TREES/AC	1.2			0.6	0.6						
BA/AC	1.2			0.6	0.6						
CUFT/AC	8				8						
BDFT/AC	33				33						
BDFT%	0				0						
LOGS/AC	1				1						
TONS/AC											
POLES/AC											
TYPE											
TOT HGT	69	40	52	61	76	85	97	105	122	129	
TREES/AC	104.9	5.5	23.2	30.5	22.2	12.9	5.5	2.4	1.1	1.7	
BA/AC	199.2	2.4	17.2	38.8	44.1	38.2	21.9	12.6	7.3	16.8	
CUFT/AC	5895	33	291	893	1198	1121	749	480	330	800	
BDFT/AC	21889	150	864	2420	3935	3998	2869	2004	1600	4049	
BDFT%	100	1	4	11	18	18	13	9	7	18	
LOGS/AC	137	5	20	35	34	20	10	5	3	5	
TONS/AC											
POLES/AC											

TYPE REPORT(KC)
STATISTICAL SUMMARY

CURRAN CONSULTING, INC. Plots 93 BFT:W PAGE 1
PROJECT WRANGELL TRACT: WRANGELL SCHOOL Trees 336 CUB:S DATE: 12/16/95
TWP 63S RGE 84E SEC 17 TY 0099 AC 93.00 MC JT JF TIME: 03:24pm

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	93	336	3.6		
CRUISE	91	336	3.7	9759	3.4
COUNT					
BLANKS	2				
100%					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVE D4H	BOLE LEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
SPRCE OG	64	10.3	25.5	73	36.6	9063	7800	1682	1643
HMLK OG	215	75.7	17.5	50	126.9	14888	11925	3759	3572
R CDR CU	2	0.5	21.9	54	1.2	148	70	38	22
HMLK CU	22	5.6	20.5	47	12.8	1778	792	403	244
R CDR OG	24	9.1	18.1	45	16.3	1367	895	402	302
Y CDR CU	2	1.2	13.5	35	1.2	77	33	19	8
Y CDR OG	4	2.3	14.1	38	2.5	184	93	56	31
SPRCE CU	3	0.2	36.6	75	1.8	388	280	73	73
TOTAL	336	104.9	18.7	51	199.2	27892	21889	6432	5895

SD:1	COEFF. VAR.%	S.E.%	SAMPLE TREES-BF LOW	AVE	HIGH	# OF TREES REQ. - INF. POP. 5%	10%	15%
SPRCE OG	276.4	15.1	247	291	335			
HMLK OG	174.4	9.5	169	187	204			
R CDR CU	1833.0	100.0		2	4			
HMLK CU	576.7	31.5	10	15	19			
R CDR OG	623.1	34.0	9	13	18			
Y CDR CU	1833.0	100.0	0	0	0			
Y CDR OG	1313.1	71.6	0	1	2			
SPRCE CU	1077.0	58.8	4	11	17			
TOTAL	152.9	8.3	477	520	563	633	209	99

SD:1	COEFF. VAR.%	S.E.%	BASAL AREA/ACRE LOW	AVE	HIGH	# OF PLOTS REQ. - INF. POP. 5%	10%	15%
SPRCE OG	186.2	19.3	29.5	36.6	43.6			
HMLK OG	63.7	6.6	118.5	126.9	135.2			
R CDR CU	680.6	70.6	0.4	1.2	2.1			
HMLK CU	212.1	22.0	10.0	12.8	15.7			
R CDR OG	300.2	31.1	11.2	16.3	21.3			
Y CDR CU	964.4	100.0		1.2	2.4			
Y CDR OG	477.4	49.5	1.3	2.5	3.7			
SPRCE CU	550.7	57.1	0.8	1.8	2.8			
TOTAL	52.4	5.4	188.4	199.2	210.0	104	27	12