

CITY ENGINEERING
410 Cushman Street
Fairbanks Alaska

TITLE Highway - Airport Lay
COMPUTED BY: R.D.
CHECKED BY: _____

DATE 10-26-67
FIELD BOOK NO _____
SHEET _____ OF _____ SHEETS

STATION	DISTANCE	BEARING					N. OR S.		E. OR W.		LAT.	DEP.	D. M. D.	DOUBLE AREA		COORDINATES		
		N/S	DEG	MIN	SEC	E/W	COSINE	SINE	NORTH	SOUTH				NORTH	EAST			
51 1/4 E. (random pt. or survey)	405.910	S	78°	29'	18"	E	.19956746	.97788409	-81.006	+392.745					290,175	597	287,014	819
51 1/4 E. (random pt. or survey)	360.162	S	78°	29'	28"	E	.19951996	.97789376	-71.860	+352.920					290,094	593	287,412	867
51 1/4 E. (random pt. or survey)	392.797	N	0°	31'	01"	E	.99975930	.00902226	+392.781	+3.589					290,022	733	287,765	484
51 Airport E. (random pt. or survey)	22.461	N	0°	31'	01"	E	.99995930	.00902226	+22.460	+0.203					290,420	514	287,769	073
(random pt. or survey)	715.351	S	89°	58'	33"	W	.00042179	.99999999	-0.302	-715.351					290,442	774	287,769	276
(random pt. or survey)	269.934	S	8°	19'	50"	W	.98944866	.14488389	-262.086	-39.109					290,442	672	287,053	925
51 1/4 E. (random pt. or survey)		S	78°	29'	15"	E			0.013	-0.003					290,175	596	287,014	816
(random pt. or survey)		S	89°	58'	33"	W												
(random pt. or survey)	141.672	N	18°	23'	05"	E	.94896014	.31539601	+129.441	+44.133					290,442	672	287,053	925
51 1/4 E. (random pt. or survey)															290,577	113	287,098	608
															290,377	116	287,098	605

CITY ENGINEERING
 410 Cushman Street
 Fairbanks Alaska

TITLE Reckon
 COMPUTED BY: _____
 CHECKED BY: _____

DATE 10-19-67
 FIELD BOOK NO _____
 SHEET _____ OF _____ SHEETS

STATION	DISTANCE	BEARING					N. OR S COSINE	E. OR W. SINE	LAT.	DEP.	D. M. D.	DOUBLE AREA		COORDINATES	
		N/S	DEG	MIN	SEC	E/W						NORTH	SOUTH	NORTH	EAST
SI 14 E Oldman	405.840	S	78°	29'	38"	E	.19947245	.97990343	-80.954	+397.684					
SI 14 E Oldman	751.534	S	110°	46'	33"	W	.97895356	.20408316	-735.717	-153.375					
SI 15 E Oldman	405.836	N	78°	14'	16"	W	.20385059	.97900201	+82.730	-397.314		10.000			
SI 15 E Oldman	749.527	N	110°	46'	33"	E	.97895356	.20408316	+733.751	+152.916					
SI 14 E Oldman									-0.190	-0.039					
	252.226	N	110°	46'	33"	E	.97895356	.20408316	+246.918	+51.475					
	702.766	S	89°	50'	57"	E	.00263254	.99999653	-18.50	+702.764					
	397.870	S	0°	31'	43"	W	.99995744	.00922587	-397.852	-3.671					
	765.94	N	78°	29'	38"	W	.19947245	.97990343	+152.722	-750.568					
									+0.004	0.000					

*I believe this
 was a fused double as
 the points were
 set.*

CITY ENGINEERING
410 Cushman Street
Fairbanks Alaska

TITLE Perpet - 1/4
COMPUTED BY: SL
CHECKED BY: _____

DATE 11-7-67
FIELD BOOK NO _____
SHEET _____ OF _____ SHEETS

STATION	DISTANCE	BEARING					N. OF S COSINE	E. OR W. SINE	LAT.	DEP.	D. M. D.	DOUBLE AREA		COORDINATES			
		N/S	DEG	MIN	SEC	E/W						NORTH	SOUTH	NORTH	EAST		
51 1/4 E (Corner)														290,022	733	287,765	183
	397.797	N	0°	31'	01"	E											
51 Corner Quarry														290,420	514	287,769	023
	204.186	N	86°	47'	24"	E	.05599576	.99843101	+11.434	+203.866							
51 Station Quarry														290,431	948	287,972	939
	399.318	S	100°	48'	49"	E	.98224271	.18761766	-392.227	+74.918							
51 Station 1/4														290,039	721	288,047	857
	282.886	S	86°	33'	22"	W	.06007101	.99819411	-16.993	-282.375							
51 1/4 E (Corner)														290,022	728	287,765	482
51 Station Quarry														290,431	948	287,972	939
	261.058	N	86°	47'	45"	E	.05589411	.99843670	+11.572	+260.150							
51 Cushman Quarry														290,446	540	288,233	589

CITY ENGINEERING
410 Cushman Street
Fairbanks Alaska

TITLE Picket Subd. 14-17 on Laurent
 COMPUTED BY: ES
 CHECKED BY: _____

DATE 10-12-67
 FIELD BOOK NO _____
 SHEET _____ OF _____ SHEETS

STATION	DISTANCE	BEARING				N. CH'S COSINE	E. OR W. SINE	LAT.	DEP.	D. M. D.	DOUBLE AREA		COORDINATES			
		N/S	DEG	MIN	SEC						E/W	NORTH	SOUTH	NORTH	EAST	
St. Gilliam 172													286,315	252	286,627	539
	600.429	N	110	43'	47"	E	.97911748	.20329521	+587.971	+122.061						
St. Gilliam 164													288,793	143	286,747	
	550.131	N	110	46'	16"	E	.97897037	.20100277	+538.562	+112.223						
St. Gilliam 15													289,441	705	286,861	831
	740.670	N	110	46'	31"	E	.97895553	.20407367	+723.977	+152.922						
St. Gilliam 14													290,175	577	287,014	217
	465.910	S	100	29'	18"	E	.19956746	.97782409	-31.006	+377.747						
St. Laurent 14													290,094	273	287,412	563
	751.136	S	110	46'	34"	W	.97895257	.20408771	-235.620	-153.357						
15													289,358	973	287,257	204
	550.573	S	140	41'	42"	W	.97894467	.20412587	-538.618	-112.311						
16													288,820	355	287,176	893
	518.692	S	110	46'	29"	W	.97895751	.20406477	-507.777	-105.846						
17													288,312	578	287,041	047
	413.542	N	87	17'	43"	W	.00648171	.99997879	+2.681	-413.533						
St. Gilliam 17													288,315	257	286,627	514
		N	110	45'	40"	E										
									4.007	-.025						

CL $\frac{1}{12,000}$

CITY ENGINEERING
410 Cushman Street
Fairbanks Alaska

TITLE Karpuk Subdiv. 14-17 on Turned
COMPUTED BY: ASL
CHECKED BY: _____

DATE 10-12-61
FIELD BOOK NO _____
SHEET _____ OF _____ SHEETS

STATION	DISTANCE	BEARING				N. OR S. COSINE	E. OR W. SINE	LAT.	DEP.	D. M. D.	DOUBLE AREA		COORDINATES			
		N/S	DEG	MIN	SEC						E/W	NORTH	SOUTH	NORTH	EAST	
51 14th & Lawrence	360.162	S	78°	29'	28"	E	.19951996	.97989376	-71.860	+352.920			290,094	593	287,412	563
51 14th & Turner	212.602	S	11°	48'	19"	W	.97884855	.20458622	-208.105	-43.495			290,022	733	287,765	483
51 Turner & 15th (N)	480.900	S	11°	47'	35"	W	.97889217	.20437741	-470.749	-98.285			289,814	628	287,721	988
51 Turner & 15th (S)	57.548	S	11°	47'	13"	W	.97891396	.20427300	-58.292	-12.164			289,343	879	287,623	703
51 Turner & 16th	576.285	S	11°	45'	56"	W	.97897015	.20390755	-564.119	-117.497			289,285	587	287,611	539
51 Turner & 17th	420.331	S	11°	45'	50"	W	.97899608	.20387907	-411.502	-85.677			288,721	468	287,494	042
51 Turner & 17th	367.336	N	89°	35'	41"	W	.00707337	.99997499	+2.598	-367.320			288,309	966	287,408	345
51 Turner & 17th		N	11°	46'	32"	E							288,312	564	287,041	019
													288,312	564	287,041	019

CITY ENGINEERING
 410 Cushman Street
 Fairbanks Alaska

TITLE Reckert
 COMPUTED BY: SL
 CHECKED BY: _____

DATE 10-24-67
 FIELD BOOK NO _____
 SHEET _____ OF _____ SHEETS

STATION	DISTANCE	BEARING					N. OF S COSINE	E. OR W. SINE	LAT.	DEP.	D. M. D.	DOUBLE AREA		COORDINATES		
		N/S	DEG	MIN	SEC	E/W						NORTH	SOUTH	NORTH	EAST	
St 16 & Lawrence	360.978	S	74°	06'	12"	E	.27390327	.96175725	-98.872	+342.173			288,820	368	287,146	913
St 16 & Turner	576.225	N	110	45'	49"	E	.97899707	.20387433	+564.123	+117.477			288,721	496	287,494	086
St 15 & Turner													289,285	619	287,611	563
St 17 & Lawrence	367.336	S	89°	35'	45"	E	.00705398	.99997512	-2.591	+362.327			288,312	573	287,041	072
St 17 & Turner	420.331	N	110	45'	47"	E	.97899904	.20386483	+411.501	+85.691			288,309	982	287,408	399
St 16 & Turner													288,721	486	287,494	090
St Manning & Turner	444.157	S	100	49'	35"	E	.98230995	.18726226	-436.300	+83.174			289,814	628	287,721	988
St 15 & Mary Ann	184.689	S	79°	15'	14"	W	.18645735	.98246306	-34.436	-181.450			289,378	328	287,805	162
St 15 & Turner													289,343	872	287,623	712
													289,343	872	287,623	703

CITY ENGINEERING
410 Cushman Street
Fairbanks Alaska

TITLE High Point
COMPUTED BY: [Signature]
CHECKED BY: _____

DATE 10-24-67
FIELD BOOK NO _____
SHEET _____ OF _____ SHEETS

STATION	DISTANCE	BEARING					N. CH'S COSINE	E. OR W. SINE	LAT.	DEP.	D. M. D.	DOUBLE AREA		COORDINATES		
		N/S	DEG	MIN	SEC	E/W						NORTH	SOUTH	NORTH	EAST	
51 15 E (Mandem)	586.982	S	10°	47'	36"	E	.98230905	.18726702	-576.518	+109.922			288,378	<u>328</u>	287,805	<u>162</u>
51 16 E (Mandem)	428.609	S	79°	12'	30"	W	.18723844	.98231449	-80.252	-421.029			288,801	<u>730</u>	287,915	<u>084</u>
51 16 E (Lumber)													288,721	<u>428</u>	287,894	<u>055</u>
51 16 E (Mandem)	504.572	S	10°	47'	50"	E	.98229633	.18733369	-475.237	+94.523			288,801	<u>730</u>	287,915	<u>084</u>
51 17 E (Mandem)	259.008	N	89°	34'	36"	W	.00738849	.99997270	+1.914	-259.001			288,306	<u>091</u>	288,009	<u>607</u>
51 17 E (Mandem)	342.255	N	89°	40'	26"	W	.00569168	.99998380	+1.948	-342.249			288,308	<u>005</u>	287,750	<u>026</u>
51 17 E (Lumber)													288,309	<u>953</u>	287,108	<u>357</u>

CITY ENGINEERING
410 Cushman Street
Fairbanks, Alaska

TITLE Set 51's @ 1/4th E. of Lawrence
COMPUTED BY: SL
CHECKED BY: _____

DATE 12-14-67
FIELD BOOK NO _____
SHEET _____ OF _____ SHEETS

STATION	DISTANCE	BEARING					N. OF S COSINE	E. OR W. SINE	LAT.	DEP.	D. M. D.	DOUBLE AREA		COORDINATES		
		N/S	DEG	MIN	SEC	E/W						NORTH	SOUTH	NORTH	EAST	
51 15 th Lawrence	435.784	S	78°	14'	27"	E	.20379838	.97701288	-82.718	+377.366			289,441	555	286,861	867
115 th Lawrence	752.205	N	110°	46'	46"	E	.97894069	.20114486	+736.951	+153.681			289,358	837	287,259	233
211 th Lawrence	435.784	N	78°	13'	14"	W	.20414486	.97894069	+82.718	-377.366			290,095	788	287,412	914
51 14 th Lawrence	752.205	S	110°	46'	46"	W	.97894069	.20114486	-736.951	-153.681			290,177	648	287,015	578
51 12 th Lawrence													289,441	555	286,861	867
Distance #1 = $\sqrt{(-219.811)^2 + (-245.455)^2} = 321.90'$ $\tan \theta = \frac{-245.455}{-219.811} = 1.117$ $\theta = 44.20^\circ$																
51 Lawrence	337.905	S	78°	14'	07"	E	.20387331	.97702211	-82.718	+377.366						
51 12 th Lawrence	51.548	N	110°	47'	13"	E	.97894069	.20114486	+736.951	+153.681						
51 11 th Lawrence	435.784	N	110°	47'	35"	E	.97894069	.20114486	+736.951	+153.681						
51 Lawrence	512.202	N	110°	46'	19"	E	.97894069	.20114486	+736.951	+153.681						
51 14 th Lawrence		S	78°	14'	27"	W			-82.718	-377.366						
51 14 th Lawrence	752.205	S	110°	46'	46"	W	.97894069	.20114486	-736.951	-153.681						

CITY ENGINEERING
410 Cushman Street
Fairbanks Alaska

TITLE Pilot 14-15; (Williams) - Quinn
COMPUTED BY: [Signature]
CHECKED BY: _____

DATE 10-17-67
FIELD BOOK NO _____
SHEET _____ OF _____ SHEETS

STATION	DISTANCE	BEARING					N. OF S COSINE	E. OR W. SINE	LAT.	DEP.	D. M. D.	DOUBLE AREA		COORDINATES			
		N/S	DEG	MIN	SEC	E/W						NORTH	SOUTH	NORTH	EAST		
51 14 E (Quinn)	26.8		110	46'	34"									290.094	600	287.412	531
	751.436	S	110	46'	25"	W	.9896147	.20404519	-735.627	-153.327							
51 15 E (Quinn)														289.358	923	287.257	304
	105.88	N	78	14'	27"	W	.20379838	.97901288	82.719	-372.366							
51 15 E (Williams)														289.441	295	286.861	831
			110	46'	31"	E									692		538
51 14 E (Williams)									82.732	392.375							
							tan θ = 4.8031354										
							78° 14' 21"										
51 16 E (Williams)														288.903	143	286.747	603
	425.1	S	76	13'	53"	E	.20395976	.97897927	-32.775	+372.310							
51 16 E (Quinn)														288.820	368	287.146	913
	550.003	N	110	46'	39"	E	.97894762	.20411164	153.630	+112.303							
51 15 E (Quinn)														289.358	923	287.257	216
51 17 E (Williams)														288.315	252	286.627	539
	413.572	S	89	37'	44"	E	.00647707	.99977902	-2.679	+113.523							
51 17 E (Quinn)														288.312	573	287.041	072
	518.692	N	110	46'	28"	E	.97895850	.20405413	150.778	+105.844							
51 16 E (Quinn)														288.820	351	287.146	410