

SUMMARY OF QUANTITIES

LAKE COUNTY
S.H. 2 SEC. Q (PT.)

PAVEMENT CALCULATIONS

T-71 9'-7"-9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
 Pav't widening Length = 11,261.36 Lin. Ft. (See Sheet 2)
 DUAL TYPE $[(11,261.36 \times 11) \times 2] \div 9 = 27,527.8$ Sq. Yds.
 ADDITIONS - NONE
 DEDUCTIONS = 11.1 SQ.YDS.
 TOTAL UNDER DUALTYPE = 27,516.7 SQ.YDS.

TYPE T-71
 $(889.64 \times 11' - 11") \times 2 \div 9 = 2355.9$ SQ.YDS.
 ADDITIONS (SEE PAV'T TABLE) = 151.2 SQ.YDS.
 DEDUCTIONS - NONE
 TOTAL UNDER TYPE T-71 = 2507.1 SQ.YDS.

DUAL TYPE T-50 2 1/2" HOT MIXED HOT LAID ASPHALTIC CONCRETE SURFACE COURSE
 $(11,261.36 \times 22) \div 9 = 27,527.8$ Sq. Yds.

DUAL TYPE B-50 AREA OF BASE AND LEVELING COURSES
 Length = 11261.36 Lin. Ft. $(11261.36 \times 2) \div 9 = 2502.5$ Sq. Yds.
 Addition from 1st Summary Sheet 58.1 Sq. Yds.
 $2502.5 + 58.1 = 2560.6$ Sq. Yds.

DUAL TYPE B-50 3" HOT MIXED HOT LAID ASPHALTIC CONCRETE BASE COURSE
 AREA ABOVE $(2560.6 \times 3/36) = 213.4$ Cu. Yds.

DUAL TYPE B-50 2 1/2" HOT MIXED HOT LAID ASPHALTIC CONCRETE LEVELING COURSE
 AREA ABOVE = $2560.6 \times 5/2 \times 1/36 = 177.8$ CU.YDS.
 Addition from 1st Summary Sheet = 30 CU.YDS.
 Extra Leveling at 200 cy/Mile = $200 \times 2.133 = 426.6$ CU. YDS.
 $177.8 + 30 + 426.6 = 634.4$ CU. YDS.

DUAL TYPE I-19 1/4" INSULATION COURSE (SAME AS B-50 AREA OF BASE)

DUAL TYPE I-11 STONE CURB
 $11,261.36 \times 2$ L.F. = 22,522.72 L.F.
 $22,522.72 - 2527.25$ L.F. = 19,995.47 L.F.
 $19,995.47 - (87 \text{ BASINS} @ 3' = 261') = 19,734.47$ L.F.

TYPE T-71
 $889.64 \times 2 = 1779.28$ L.F.
 $1779.28 - 547.4 = 1231.88$ L.F.
 $1231.88 - 72$ (SEE SHEET 36) = 1303.88 L.F.
 $1303.88 - (5 \text{ BASINS} @ 3' = 15') = 1288.88$ L.F.

ITEM NO.	ROADSIDE IMPROVEMENT	TYPE T-71	DUAL TYPE	TOTAL	UNIT
E-305	SEEDING & PROTECTING ROADWAY AREAS	2386	30197	32583	Sq.Yds
L-9	10-6-4 COMMERCIAL FERTILIZER	430	5435	5865	LBS.
L-7	12" RIPRAP FOR TREE PROTECTION		2.6	2.6	Sq.Yds
L-8	AGGREGATE FOR TREE ROOT AERATION		102.3	102.3	CU.YDS.
L-17	PRUNING EXISTING TREES 12"		7	7	EACH
L-17	PRUNING EXISTING TREES 20"		7	7	EACH
L-17	PRUNING EXISTING TREES 30"		12	12	EACH
L-17	PRUNING EXISTING TREES 36"		10	10	EACH

Note: E-305 Areas - The quantities shown for Item E-305 were calculated by scaled dimensions of cross sections arriving at the correct yardage as follows
 $[(1st \text{ Width} \div 2 + 2nd \text{ Width}) \times \text{Length}] \div 9 = \text{Sq.Yds}$

DUAL TYPE E-11 WATER
 $11261.36 \times 25 \times .5 \times 10 \div 27 = 52,136$ GAL.
 EMB $\times 10 = 8617 \times 10 = 86,170$ GAL.
 TOTAL WATER FOR DUALTYPE = 138,306 GAL. OR 139 M. GAL.

TYPE T-71
 $889.64 \times 26.83 \times .5 \times 10 \div 27 = 4420$ GAL.
 EMB $\times 10 = 603 \times 10 = 6030$ GAL.
 TOTAL WATER FOR TYPE T-71 = 10,450 GAL. OR 11 M. GAL.

GENERAL SUMMARY

ITEM NO.	ROADWAY	TYPE T-71	DUAL TYPE	TOTAL	UNIT
E-1	Roadway Excavation. (Unclassified)	929	8369	9298	Cu. Yds.
E-4	Borrow. (Contractor to Furnish)		4531	4531	Cu. Yds.
E-8	Removal and Disposal of Existing Paved Gutter.		204	204	Lin. Ft.
E-8	Removal and Disposal of Existing Wearing Course.		389.2	389.2	Sq. Yds.
E-8	Removal and Disposal of Existing 2' x 8" Curb.		261.4	261.4	Lin. Ft.
E-8	Removal and Disposal of Existing Pavement.	322.2	783.2	1105.4	Sq. Yds.
E-8	Removal and Disposal of Existing Sidewalk.		316	316	Sq. Ft.
E-9	Removal of Trees and Stumps.	5	154	159	Each
E-10	Sealing (only) of Existing Pavement Edge	1779	46,770	48549	Lin. Ft.
E-11	Water.	11	139	150	M. Gals
E-12	Pipe Removed for Reuse 12"	439	1546	1985	Lin. Ft.
E-12	Pipe Removed for Reuse 15"		78	78	Lin. Ft.
E-12	Pipe Removed for Reuse 24"	26		26	Lin. Ft.
E-12	Pipe Removed and stored 6"		34	34	Lin. Ft.
E-12	Pipe Removed and stored 24"	34		34	Lin. Ft.
E-12	Pipe Removed and Disposed of 6"		22	22	Lin. Ft.
E-12	Pipe Removed and Disposed of 12"	293	1030	1323	Lin. Ft.
E-12	Pipe Removed and Disposed of 15"		62	62	Lin. Ft.
E-12	Pipe Removed and Disposed of 24"	40		40	Lin. Ft.
S-1	Concrete for Structures Class "C"	0.1	5.9	6	Cu. Yds.
I-5	24" x 12" Tee Pipe Special for Storm Sewer	1		1	Each
S-22	Removal of 2 Existing Headwalls	Lump(1)	Lump(1)	Lump	Lump
S-22	Removal of 10 Existing Inlets	Lump(2)	Lump(8)	Lump	Lump
S-22	Removal of 3 Existing Manholes	Lump		Lump	Lump
I-2	Storm Sewers 12"		3625	3625	Lin. Ft.
I-2	Storm Sewers 15"	103	2661	2824	Lin. Ft.
I-2	Storm Sewers 18"	288	1646	1934	Lin. Ft.
I-2	Storm Sewers 12" Pipe Under Pavement.		1860	1860	Lin. Ft.
I-2	Storm Sewers 24" Pipe Under Pavement.	32		32	Lin. Ft.
I-4	Pipe Underdrains - 6" Perforated Corrugated Metal Pipe		1968	1968	Lin. Ft.
I-5	Pipe Specials 12" x 6" Tee. for Storm Sewer under Pav't.		8	8	Each
I-5	Pipe Specials 12" x 6" Double Tees. for Storm Sewer under Pav't.		2	2	Each
I-5	Pipe Specials 12" x 6" Y. for Storm Sewer		1	1	Each
I-6	Relaying Pipe 12"	198	1787	1985	Lin. Ft.
I-6	Relaying Pipe 15"		78	78	Lin. Ft.
I-6	Relaying Pipe 24"	26		26	Lin. Ft.
I-8	Manholes - Special. as per plan	1	39	40	Each
I-8	Manholes - No. 1.	2	3	5	Each
I-8	Catch Basins No. 13X. as per plan	4	83	87	Each
I-8	Catch Basins No. 13Y. as per plan.		5	5	Each
I-8	Catch Basins No. 2-3.		1	1	Each
I-8	Standard No. 2 Catch Basin	2		2	Each
I-8	Standard No. 6 Catch Basin		1	1	Each
I-13	4" Concrete Sidewalk	1426.5	33861.5	35288	Sq. Ft.
I-15	Guard Rail, Removed and Rebuilt.	128		128	Lin. Ft.
I-17	Traffic Bound Side Approaches. (Aggregate) ^{80% No. 4} _{20% No. 7}	67.8	252.5	320.3	Cu. Yds.
I-10	Riprap Type "A" (Grouted)		5	5	Sq. Yds.

PAVEMENT

B-50	Hot Mixed Hot Laid Asphaltic Concrete Base		213.4	213.4	Cu. Yds.
B-50	Hot Mixed Hot Laid Asphaltic Concrete Leveling		634.4	634.4	Cu. Yds.
B-71	8" Reinforced Portland Cement Concrete Base		783.2	783.2	Sq. Yds.
T-50	2 1/2" Hot Mixed Hot Laid Asphaltic Concrete Surface ^{Type "B"}		27527.8	27527.8	Sq. Yds.
T-70	6" Portland Cement Concrete Pavement.	346.4	1637.4	1983.8	Sq. Yds.
T-71	9'-7"-9" Reinforced Portland Cement Concrete	2507.1	27,516.7	30023.8	Sq. Yds.
I-11	6" x 16" Sandstone Curb (Berea, Amherst or Equal)	1289	19734	21,023	Lin. Ft.
I-19	1/4" Insulation Course.		2560.5	2560.6	Sq. Yds.
S-5	1 1/2" Reinforced Concrete Approach Slab	95.3		95.3	Sq. Yds.

ROADWAY CONTINUED

E-2	Excavation for Structures. (Unclassified)		2.0	2.0	Cu. Yds.
E-3	Channel Excavation.		5.0	5.0	Cu. Yds.
E-12	Pipe Removal and Stored 12"		12	12.0	Lin. Ft.
I-5	Pipe Specials - 12" Stoppers.		4	4	Each
I-2	18" Pipe For Storm Sewer Outlets.		16	16	Lin. Ft.
S-22	Remove Portions of Existing Structure.		0.6	0.6	Cu. Yds.
I-2	12" Pipe For Storm Sewer Outlets.	16	20	36	Lin. Ft.
I-2	15" Pipe For Storm Sewer Outlets.		16	16	Lin. Ft.

STRUCTURES OVER 20 FT. SPAN
 For Estimated Quantities See Sheet No. 41