FAULT CURRENT CALCULATIONS

THE FOLLOWING IS THE SHORT CIRCUIT USED TO DETERMINED THE SIZED OF THE CIRCUIT BREAKERS INTERUPTING RATING.

WHERE:

TRANSFORMER IS: KVA=45

SECONDARY VOLTAGE IS: KV = 0.208

NAMEPLATE IMPEDANCE IS: Z = 3.1%

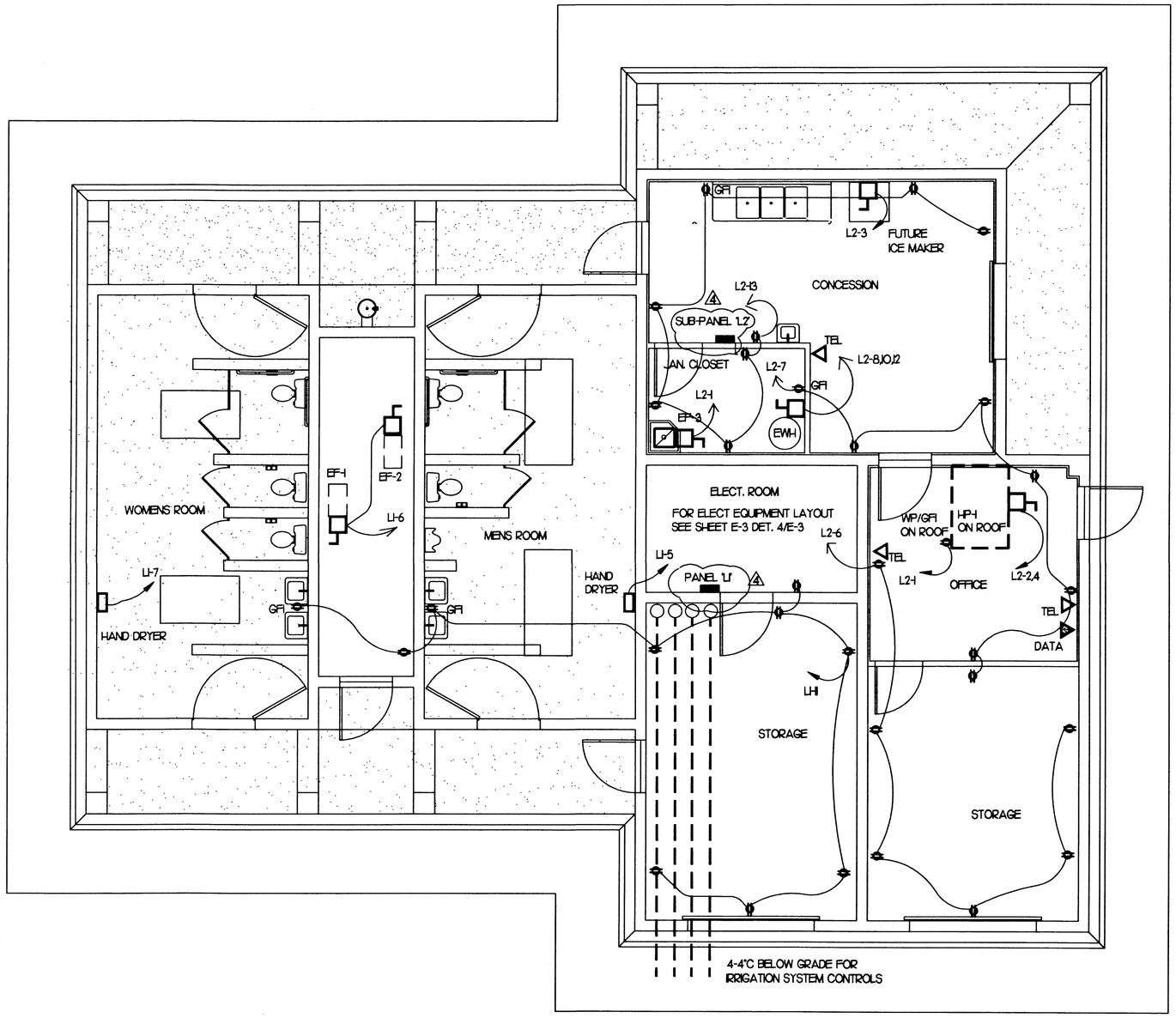
SOURCE IS ASSUMED INFINITE FOR WORST CASE FAULT.

$$ISC = \frac{KVA \times 100}{KV \times Z \times 1.73}$$

$$ICS = \frac{45 \times 100}{0.208 \times 3.10\% \times 1.73}$$

ICS = 4034 SHORT CIRCUIT AMPERES

MAXIMUM INTERUPTING RATING OF SERVICE SWITCHBOARD IS SPECIFIED AT 10,000 SYMMETRICAL AMPERES.



REVISIONS	DATE
4 REVISED PER CITY COMMENTS	1/98

DRAWN BY: H.L.
DESIGN BY: A.C.
W.A. #
DATE: 5-5-97
PLOT SCALE: 1/4"=1'-0"
FLD. BK.

ARCHITECTURAL SERVICES

CITY OF LAS VEGAS NEVADA

DEPARTMENT OF PUBLIC WORKS

PROJECT: Rainbow Park Toilet Building

SHEET TITLE: POWER FLOOR PLAN

SHEET NO. E-3

650.30-7

DRAWING NO. DWGNO

12130

FAULT CURRENT CALCULATIONS

THE FOLLOWING IS THE SHORT CIRCUIT USED TO DETERMINE THE SIZES OF THE CIRCUIT BREAKERS INTERRUPTING RATING.

WHERE

TRANSFORMER 2Φ — KVA=45

SECONDARY VOLTAGE 2Φ — KV = 0.208

NAMEPLATE IMPEDANCE 2% — Z = 3.0%

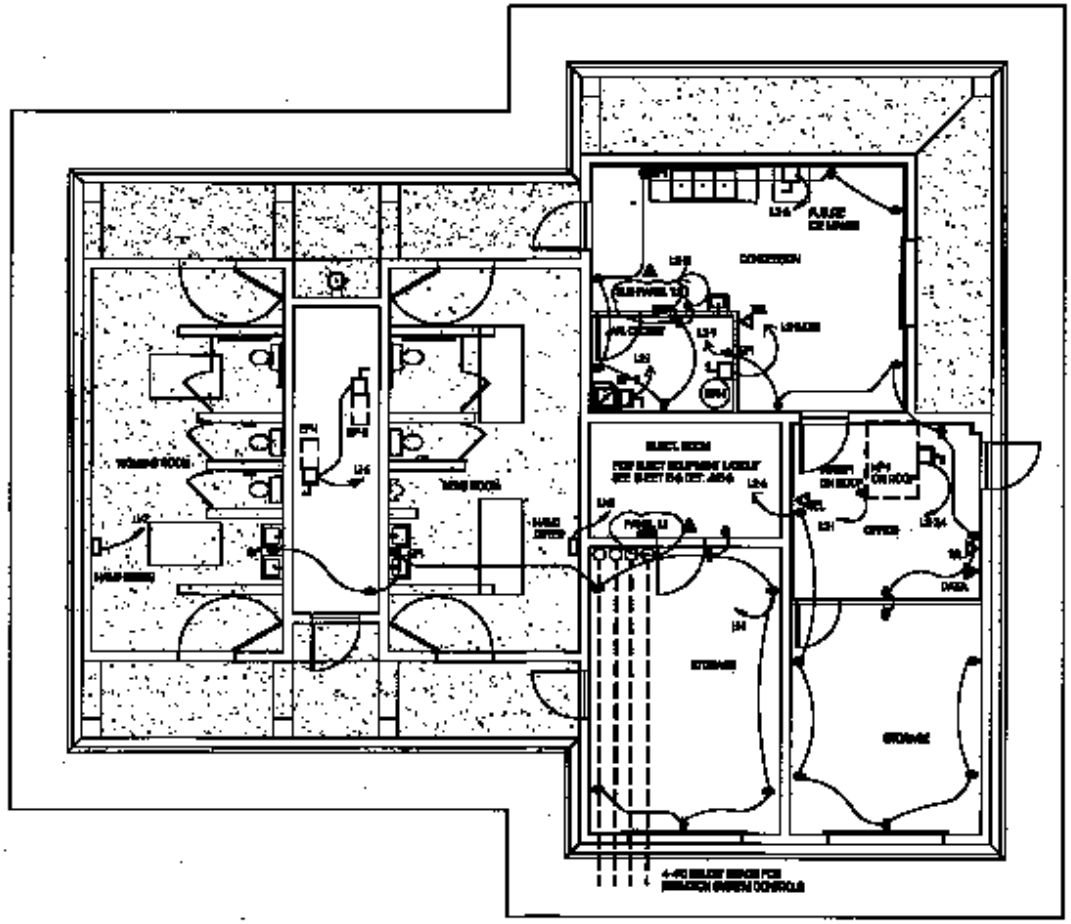
SOURCE IS ASSUMED INFINITE FOR WORST CASE FAULT.

$$I_{2\Phi} = \frac{KVA \times 1000}{KV \times Z \times 1.73}$$

$$I_{2\Phi} = \frac{45 \times 1000}{0.208 \times 3.0 \times 1.73}$$

$I_{2\Phi}$ = 4624 SHORT CIRCUIT AMPERES

MAXIMUM INTERRUPTING RATING OF SERVICE SWITCHBOARD IS SPECIFIED AT 10,000 SYMMETRICAL AMPERES.



DEPARTMENT OF PUBLIC WORKS

Rainbow Park
Toilet Building

POWER FLOOR PLAN

EB-3

ARCHITECTURAL SERVICES