Maximum Pulling Tension Allowable
To Avoid Exceeding SWP limits

COMPUTED OSD DATE 10/5/85
CHECKED WEC DATE 10/7/85

Assume 300 lbs/ft SWP limit for power and control cables.

Assume 100 lbs/ft SWP limit for instrumentation cables

Example #1; 3/4" conduit; 1 cable

$$P = \frac{T}{R}$$

P = sidewall pressure
T = pulling tension out of bend
R = radius of bend

$\therefore T = PR$

$$T = 300\left(\frac{4.5-.41}{12}\right) = 102^{\#}; \quad T = 100\left(\frac{4.5-.41}{12}\right) = 34^{\#}$$

Example #2; 3/4" conduit; 2 cables

$$P = \frac{W_c T}{2R}; \quad W_c = 1.4$$ (conservative value assumed for screening calculations)

$$T = \frac{2PR}{W_c} = \frac{(2)(300)(4.5-.41)}{1.4\,(12)} = 146^{\#}; \quad T = \frac{(2)(100)(4.5-.41)}{1.4\,(12)} = 49^{\#}$$

Maximum Pulling Tension Allowable

To Avoid Exceeding SWP Limits

COMPUTED DJT DATE 10/5/85
CHECKED WEC DATE 10/7/85

Example #3; 3/4" conduit; 3 cables (cradle formation)

$$P = \frac{L}{3}(3W_c - 2)\frac{T}{R}$$

$$T = \frac{3PR}{(3W_c-2)} = \frac{(3)(300)(.34)}{[3(1.4)-2]} = 139^{\#}; \quad T = \frac{(3)(100)(.34)}{[3(1.4)-2]} = 46^{\#}$$

Example #4; 1" conduit; 4 cables

$$P = (W_c - 1)\frac{T}{R}$$

$$T = \frac{PR}{W_c - 1} = \frac{300(.435)}{1.4-1} = 326^{\#}; \quad T = \frac{100(.435)}{1.4-1} = 109^{\#}$$

Example #5 1" conduit; 5 cables

$$P = X\frac{T}{R}$$; X = .70 from table 3.2.1.6.4 (GL38)

$$T = \frac{PR}{.70} = \frac{300(.435)}{.70} = 186^{\#}; \quad T = \frac{100(.435)}{.70} = 62^{\#}$$

Maximum Pulling Tension Allowable

To Avoid Exceeding SWP Limits

COMPUTED DBZ DATE 10/5/85

CHECKED WEC DATE 10/7/85

300# and 100#

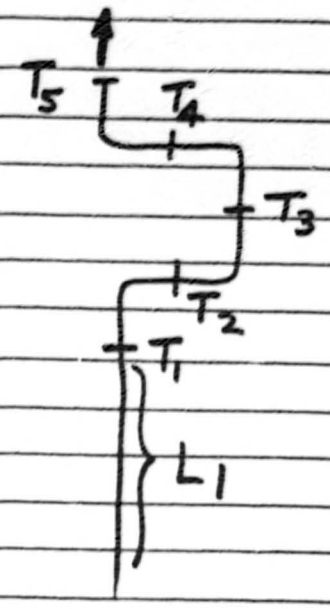
# of cables	Conduit size						
	3/4"	1"	1½"	2"	3"	4"	5"
1 (300#/ft)	102#	132#	186#	213#	288#	351#	537#
(100#/ft)	34#	44#	62#	71#	96#	117#	179#
2 "	146#	186#	266#	302#	409#	499#	767#
"	49#	62#	89#	101#	136#	166#	256#
3 "		178#	254#	288#	391#	477#	732#
"		59#	85#	96#	130#	159#	244#
4 "		326#	465#	529#	716#	874#	1343#
"		109#	155#	176#	239#	291#	448#

Screening Calculations

3/4" conduit; 1 cable

COMPUTED [illegible] DATE 10/5/85
CHECKED JRB DATE 10-7-85

$a = (90° \times 0.01745) = 1.571$ rAd.
$R = 0.34'$ (inside radius)
$e = 2.72$
$W_c = 1$ (for 1 cable)
$K = 0.3$



$$T_5 = T_4 e^{Ka} - \frac{WR}{1+K^2}\left[2K \sin a - (1-K^2 W_c^2)(e^{Ka} - \cos a)\right]$$

$$T_5 = T_4 e^{(.3)(1.57)} - \frac{W(.34)}{1+.09}\left[.6 - (1-.09)(e^{(.3)(1.57)} - 0)\right]$$

$$T_5 = (1.6)T_4 - \frac{(.34)W}{1.09}\left[.6 - (.91)(1.6)\right] = \underline{\underline{1.6T_4 + .267W}}$$

$\therefore T_3 = \underline{\underline{1.6T_2 + .267W}}$ also

$$T_4 = T_3 e^{Ka} + \frac{WR}{1+K^2}\left[2Ke^{Ka} \sin a + (1-K^2W_c^2)(1-e^{Ka}\cos a)\right]$$

$$T_4 = 1.6T_3 + \frac{(.34)W}{1.09}\left[.96 + (1-.09)(1)\right] = \underline{\underline{1.6T_3 + .583W}}$$

$\therefore T_2 = \underline{\underline{1.6T_1 + .583W}}$ also

3/4" conduit; 1 cable

COMPUTED ODJ DATE 10/5/85
CHECKED JRB DATE 10-7-85

$T_1 = WL_1(\sin a + K \cos a) + \text{prior tension} = WL_1$

$T_2 = 1.6T_1 + .583W$

$T_3 = 1.6T_2 + .267W = 1.6(1.6T_1 + .583W) + .267W = 2.56T_1 + 1.2W$

$T_4 = 1.6T_3 + .583W = 1.6(2.56T_1 + 1.2W) + .583W = 4.1T_1 + 2.5W$

$T_5 = 1.6T_4 + .267W = 1.6(4.1T_1 + 2.5W) + .267W = \underline{\underline{6.56T_1 + 4.27W}}$

$T_5 = 6.56T_1 + 4.27W = 6.56(WL_1) + 4.27W$

$WL_1 = \dfrac{T_5 - 4.27W}{6.56}$; $T_5 = 102^{\#}$ (300#/ft SWP)

$T_5 = 34^{\#}$ (100#/f SWP)

$L_1 = \dfrac{102^{\#} - 4.27W}{6.56W} = \dfrac{15.55}{W} - .65$ for 300#/ft SWP

$L_1 = \dfrac{34^{\#} - 4.27W}{6.56W} = \dfrac{5.18}{W} - .65$ for 100#/f SWP

1" conduit; 1 cable

COMPUTED [illegible] DATE 10/5/85
CHECKED JRB DATE 10-7-85

$T_5 = 1.6T_4 - \frac{W(.44)}{1.09}(-.856) = 1.6T_4 + .342W$

$\therefore T_3 = 1.6T_2 + .342\ W$ also

$T_4 = 1.6T_3 + \frac{(.44)W}{1.09}(1.87) = 1.6T_3 + .748W$

$T_2 = 1.6T_1 + .748\ W$

$T_1 = WL_1(\sin a + K\cos a) + \text{prior tension} = WL_1$

$T_2 = 1.6T_1 + .748W$

$T_3 = 1.6T_2 + .342\ W = 1.6(1.6T_1 + .748W) + .342W = 2.56T_1 + 1.54W$

$T_4 = 1.6T_3 + .748\ W = 1.6(2.56T_1 + 1.54W) + .748W = 4.1T_1 + 3.21W$

$T_5 = 1.6T_4 + .342W = 1.6(4.1T_1 + 3.21W) + .342W = 6.56T_1 + 5.48W$

$T_5 = 6.56WL_1 + 5.48W$; $T_5 = 132^{\#}$ @ $300^{\#}/ft$ SWP

$T_5 = 44^{\#}$ @ $100^{\#}/ft$ SWP

$L_1 = \frac{132 - 5.48W}{6.56W} = \frac{20.12}{W} - .835$ for $300^{\#}/ft$ SWP

$L_1 = \frac{44 - 5.48W}{6.56W} = \frac{6.63}{W} - .835$ for $100^{\#}/ft$ SWP

$\frac{1}{2}$" conduit; 1 cable

COMPUTED OBJ DATE 10/5/85
CHECKED JRB DATE 10-7-85

$$T_5 = 1.6T_4 - \frac{W(.62)}{1.09}(-.856) = 1.6T_4 + .487W$$

$\therefore T_3 = 1.6T_2 + .487W$ also

$$T_4 = 1.6T_3 + \frac{(.62)W}{1.09}(1.87) = 1.6T_3 + 1.06W$$

$$T_2 = 1.6T_1 + 1.06\ W$$

$T_1 = WL_1(\sin a + K\cos a) +$ prior tension $= WL_1$

$T_2 = 1.6T_1 + 1.06W$

$T_3 = 1.6T_2 + .487W = 1.6(1.6T_1 + 1.06W) + .487W = 2.56T_1 + 2.18W$

$T_4 = 1.6T_3 + 1.06\ W = 1.6(2.56T_1 + 2.18W) + 1.06W = 4.1T_1 + 4.55W$

$T_5 = 1.6T_4 + .487W = 1.6(4.1T_1 + 4.55W) + .487W = 6.56T_1 + 7.77W$

$T_5 = 6.56WL_1 + 7.77W$; $T_5 = 186^{\#}$ @ $300^{\#}/ft$ SWP

$T_5 = 62^{\#}$ @ $100^{\#}/ft$ SWP

$$L_1 = \frac{186 - 7.77W}{6.56W} = \frac{28.35}{W} - 1.18 \quad \text{for } 300^{\#}/ft \text{ SWP}$$

$$L_1 = \frac{62 - 7.77W}{6.56W} = \frac{9.45}{W} - 1.18 \quad \text{for } 100^{\#}/ft \text{ SWP}$$

2" conduit; 1 cable

COMPUTED DRJ DATE 10/5/85
CHECKED JRB DATE 10-7-85

$$T_5 = 1.6T_4 - \frac{W(.71)}{1.09}(-.856) = 1.6T_4 + .558W$$

$\therefore T_3 = 1.6T_2 + .558\,W$ also

$$T_4 = 1.6T_3 + \frac{(.71)W}{1.09}(1.87) = 1.6T_3 + 1.22W$$

$$T_2 = 1.6T_1 + 1.22\,W$$

$T_1 = WL_1(\sin a + K\cos a) + \text{prior tension} = WL_1$

$T_2 = 1.6T_1 + 1.22W$

$T_3 = 1.6T_2 + .558W = 1.6(1.6T_1 + 1.22W) + .558W = 2.56T_1 + 2.51W$

$T_4 = 1.6T_3 + 1.22W = 1.6(2.56T_1 + 2.51W) + 1.22W = 4.1T_1 + 5.24W$

$T_5 = 1.6T_4 + .558W = 1.6(4.1T_1 + 5.24W) + .558W = 6.56T_1 + 8.94W$

$T_5 = 6.56WL_1 + 8.94W$; $T_5 = 213^{\#}$ @ $300^{\#}/ft$ SWP

$T_5 = 71^{\#}$ @ $100^{\#}/ft$ SWP

$$L_1 = \frac{213 - 8.94W}{6.56W} = \frac{32.47}{W} - 1.36 \text{ for } 300^{\#}/ft \text{ SWP}$$

$$L_1 = \frac{71 - 8.94W}{6.56W} = \frac{10.82}{W} - 1.36 \text{ for } 100^{\#}/ft \text{ SWP}$$

3" conduit; 1 cable

COMPUTED OJT DATE 10/5/85
CHECKED JRB DATE 10-7-85

$$T_5 = 1.6T_4 - \frac{W(.96)}{1.09}(-.856) = 1.6T_4 + .754W$$

$\therefore T_3 = 1.6T_2 + .754\ W$ also

$$T_4 = 1.6T_3 + \frac{(.96)W}{1.09}(1.87) = 1.6T_3 + 1.65W$$

$$T_2 = 1.6T_1 + 1.65\ W$$

$T_1 = WL_1(\sin a + K\cos a) + \text{prior tension} = WL_1$

$T_2 = 1.6T_1 + 1.65W$

$T_3 = 1.6T_2 + .754W = 1.6(1.6T_1 + 1.65W) + .754W = 2.56T_1 + 3.39W$

$T_4 = 1.6T_3 + 1.65\ W = 1.6(2.56T_1 + 3.39W) + 1.65W = 4.1T_1 + 7.07W$

$T_5 = 1.6T_4 + .754\ W = 1.6(4.1T_1 + 7.07W) + .754W = 6.56T_1 + 12.07W$

$T_5 = 6.56WL_1 + 12.07W$; $T_5 = 288^{\#}$ @ $300^{\#}/ft$ SWP

$T_5 = 96^{\#}$ @ $100^{\#}/ft$ SWP

$$L_1 = \frac{288 - 12.07W}{6.56W} = \frac{43.90}{W} - 1.84 \text{ for } 300^{\#}/ft \text{ SWP}$$

$$L_1 = \frac{96 - 12.07W}{6.56W} = \frac{14.63}{W} - 1.84 \text{ for } 100^{\#}/ft \text{ SWP}$$

4" conduit; 1 cable

COMPUTED OZZ DATE 10/5/85
CHECKED JRB DATE 10-7-85

$$T_5 = 1.6T_4 - \frac{W(1.17)}{1.09}(-.856) = 1.6T_4 + .919W$$

$\therefore T_3 = 1.6T_2 + .919\,W$ also

$$T_4 = 1.6T_3 + \frac{(1.17)W}{1.09}(1.87) = 1.6T_3 + 2.01W$$

$$T_2 = 1.6T_1 + 2.01\,W$$

$T_1 = WL_1(\sin\alpha + K\cos\alpha) + \text{prior tension} = WL_1$

$T_2 = 1.6T_1 + 2.01W$

$T_3 = 1.6T_2 + .919\,W = 1.6(1.6T_1 + 2.01\,W) + .919W = 2.56T_1 + 4.14W$

$T_4 = 1.6T_3 + 2.01\,W = 1.6(2.56T_1 + 4.14W) + 2.01W = 4.1T_1 + 8.63W$

$T_5 = 1.6T_4 + .919W = 1.6(4.1T_1 + 8.63W) + .919W = 6.56T_1 + 14.73W$

$T_5 = 6.56WL_1 + 14.73W$; $T_5 = 351^{\#}$ @ $300^{\#}/ft$ SWP

$T_5 = 117^{\#}$ @ $100^{\#}/ft$ SWP

$$L_1 = \frac{351 - 14.73W}{6.56W} = \frac{53.51}{W} - 2.25 \text{ for } 300^{\#}/ft \text{ SWP}$$

$$L_1 = \frac{117 - 14.73W}{6.56W} = \frac{17.84}{W} - 2.25 \text{ for } 100^{\#}/ft \text{ SWP}$$

5" conduit; 1 cable

COMPUTED O.D.T. DATE 10/5/85
CHECKED JRB DATE 10-7-85

$$T_5 = 1.6T_4 - \frac{W(1.79)}{1.09}(-.856) = 1.6T_4 + 1.41W$$

$$\therefore T_3 = 1.6T_2 + 1.41\,W \text{ also}$$

$$T_4 = 1.6T_3 + \frac{(1.79)W}{1.09}(1.87) = 1.6T_3 + 3.07W$$

$$T_2 = 1.6T_1 + 3.07\,W$$

$$T_1 = WL_1(\sin a + K\cos a) + \text{prior tension} = WL_1$$

$$T_2 = 1.6T_1 + 3.07\,W$$

$$T_3 = 1.6T_2 + 1.41\,W = 1.6(1.6T_1 + 3.07\,W) + 1.41\,W = 2.56T_1 + 6.32W$$

$$T_4 = 1.6T_3 + 3.07\,W = 1.6(2.56T_1 + 6.32W) + 3.07W = 4.1T_1 + 13.18W$$

$$T_5 = 1.6T_4 + 1.41\,W = 1.6(4.1T_1 + 13.18\,W) + 1.41W = 6.56T_1 + 22.50W$$

$$T_5 = 6.56WL_1 + 22.50W \quad ; \quad T_5 = 537^{\#} @ 300^{\#}/ft \text{ SWP}$$

$$T_5 = 179^{\#} @ 100^{\#}/ft \text{ SWP}$$

$$L_1 = \frac{537 - 22.50W}{6.56W} = \frac{81.86}{W} - 3.43 \text{ for } 300^{\#}/ft \text{ SWP}$$

$$L_1 = \frac{179 - 22.50W}{6.56W} = \frac{27.29}{W} - 3.43 \text{ for } 100^{\#}/ft \text{ SWP}$$

3/4" conduits; 2 cables

COMPUTED ODZ DATE 10/5/85
CHECKED RHG DATE 10-7-85

$T_1 = W_t L_1 +$ prior tension

$T_2 = 1.93 T_1 + .66 W_t$

$T_3 = 1.93 T_2 + .13 W_t = 1.93(1.93 T_1 + .66 W_t) + .13 W_t = 3.72 T_1 + 1.40 W_t$

$T_4 = 1.93 T_3 + .66 W_t = 1.93(3.72 T_1 + 1.40 W_t) + .66 W_t = 7.18 + 3.37 W_t$

$T_5 = 1.93 T_4 + .13 W_t = 1.93(7.18 T_1 + 3.37 W_t) + .13 W_t = 13.86 T_1 + 6.64 W_t$

$T_5 = 13.86 W_t L_1 + 6.64 W_t$; $T_5 = 146$ or 49

$$L_1 = \frac{146 - 6.64 W_t}{13.86 W_t} = \frac{10.53}{W_t} - .48 \quad \text{or} \quad \frac{3.54}{W_t} - .48$$

1" conduit; 2 cables

COMPUTED DBT DATE 10/5/85
CHECKED RHB DATE 10-7-85

$$T_5 = 1.93T_4 - \frac{.44W_t}{1.176}\left[-.43\right] = 1.93T_4 + .16\ W_t$$

$$\therefore T_3 = 1.93T_2 + .16\ W_t$$

$$T_4 = 1.93T_3 + \frac{.44W_t}{1.176}\left[2.28\right] = 1.93T_3 + .85\ W_t$$

$$\therefore T_2 = 1.93T_1 + .85\ W_t$$

$T_1 = W_t L_1$ + prior Tension

$$T_2 = 1.93T_1 + .85\ W_t$$

$$T_3 = 1.93T_2 + .16\ W_t = 1.93(1.93T_1 + .85W_t) + .16W_t = 3.72T_1 + 1.81W_t$$

$$T_4 = 1.93T_3 + .85\ W_t = 1.93(3.72T_1 + 1.81W_t) + .85W_t = 7.18T_1 + 4.34W_t$$

$$T_5 = 1.93T_4 + .16\ W_t = 1.93(7.18T_1 + 4.34W_t) + .16W_t = 13.86T_1 + 8.53W_t$$

$$T_5 = 13.86W_tL_1 + 8.53W_t\ ; \quad T_5 = 186 \text{ or } 62$$

$$L_1 = \frac{186 - 8.53W_t}{13.86W_t} = \frac{13.42}{W_t} - .62 \text{ or } \frac{4.47}{W_t} - .62$$

$1\frac{1}{2}$" conduit; 2 cables

COMPUTED OJT DATE 10/5/85
CHECKED RHB DATE 10-7-85

$$T_5 = 1.93T_4 - \frac{.62W_t}{1.176}\left[-.43\right] = 1.93T_4 + .23\ W_t$$

$$\therefore T_3 = 1.93T_2 + .23\ W_t$$

$$T_4 = 1.93T_3 + \frac{.62W_t}{1.176}\left[2.28\right] = 1.93T_3 + 1.20\ W_t$$

$$\therefore T_2 = 1.93T_1 + 1.20\ W_t$$

$T_1 = W_t L_1$ + prior Tension

$T_2 = 1.93T_1 + 1.20\ W_t$

$T_3 = 1.93T_2 + .23\ W_t = 1.93(1.93T_1 + 1.20\ W_t) + .23\ W_t = 3.72\ T_1 + 2.55\ W_t$

$T_4 = 1.93T_3 + 1.20\ W_t = 1.93(3.72T_1 + 2.55W_t) + 1.20\ W_t = 7.18\ T_1 + 6.12\ W_t$

$T_5 = 1.93T_4 + .23\ W_t = 1.93(7.18T_1 + 6.12W_t) + .23\ W_t = 13.86\ T_1 + 12.04\ W_t$

$T_5 = 13.86\ W_t L_1 + 12.04\ W_t$; $T_5 = 266$ or 89

$$L_1 = \frac{266 - 12.04W_t}{13.86W_t} = \frac{19.19}{W_t} - .87 \quad \text{or} \quad \frac{6.42}{W_t} - .87$$

2" conduit; 2 cables

COMPUTED OBZ DATE 10/5/85
CHECKED RHZ DATE 10-7-85

$$T_5 = 1.93T_4 - \frac{.71\,W_t}{1.176}\left[-.43\right] = 1.93T_4 + .26\,W_t$$

$$\therefore T_3 = 1.93T_2 + .26\,W_t$$

$$T_4 = 1.93T_3 + \frac{.71\,W_t}{1.176}\left[2.28\right] = 1.93T_3 + 1.38\,W_t$$

$$\therefore T_2 = 1.93T_1 + 1.38\,W_t$$

$T_1 = W_t L_1$ + prior Tension

$T_2 = 1.93T_1 + 1.38\,W_t$

$T_3 = 1.93T_2 + .26\,W_t = 1.93(1.93T_1 + 1.38\,W_t) + .26\,W_t = 3.72\,T_1 + 2.92\,W_t$

$T_4 = 1.93T_3 + 1.38\,W_t = 1.93(3.72T_1 + 2.92\,W_t) + 1.38\,W_t = 7.18\,T_1 + 7.01\,W_t$

$T_5 = 1.93T_4 + .26\,W_t = 1.93(7.18T_1 + 7.01\,W_t) + .26\,W_t = 13.86\,T_1 + 13.79\,W_t$

$T_5 = 13.86\,W_t L_1 + 13.79\,W_t$; $T_5 = 302$ or 101

$$L_1 = \frac{302 - 13.79W_t}{13.86W_t} = \frac{21.79}{W_t} - .99 \quad \text{or} \quad \frac{7.29}{W_t} - .99$$

3" conduit; 2 cables

COMPUTED OJT DATE 10/5/85
CHECKED RHB DATE 10-7-85

$$T_5 = 1.93T_4 - \frac{.96W_t}{1.176}\left[-.43\right] = 1.93T_4 + .35\ W_t$$

$$\therefore T_3 = 1.93T_2 + .35\ W_t$$

$$T_4 = 1.93T_3 + \frac{.96W_t}{1.176}\left[2.28\right] = 1.93T_3 + 1.86\ W_t$$

$$\therefore T_2 = 1.93T_1 + 1.86\ W_t$$

$T_1 = W_t L_1$ + prior Tension

$T_2 = 1.93T_1 + 1.86\ W_t$

$T_3 = 1.93T_2 + .35\ W_t = 1.93(1.93T_1 + 1.86\ W_t) + .35\ W_t = 3.72\ T_1 + 3.94 W_t$

$T_4 = 1.93T_3 + 1.86\ W_t = 1.93(3.72T_1 + 3.94 W_t) + 1.86\ W_t = 7.18\ T_1 + 9.47\ W_t$

$T_5 = 1.93T_4 + .35\ W_t = 1.93(7.18T_1 + 9.47W_t) + .35\ W_t = 13.86\ T_1 + 18.62\ W_t$

$T_5 = 13.86\ W_t L_1 + 18.62\ W_t$; $T_5 = 409$ or 136

$$L_1 = \frac{409 - 18.62W_t}{13.86W_t} = \frac{29.5}{W_t} - 1.34 \quad \text{or} \quad \frac{9.81}{W_t} - 1.34$$

4" conduit; 2 cables

COMPUTED OZZ DATE 10/5/85
CHECKED RHB DATE 10-7-85

$$T_5 = 1.93T_4 - \frac{1.17W_t}{1.176}\left[-.43\right] = 1.93T_4 + .42W_t$$

$$\therefore T_3 = 1.93T_2 + .42W_t$$

$$T_4 = 1.93T_3 + \frac{1.17W_t}{1.176}\left[2.28\right] = 1.93T_3 + 2.27W_t$$

$$\therefore T_2 = 1.93T_1 + 2.27W_t$$

$T_1 = W_t L_1$ + prior Tension

$$T_2 = 1.93T_1 + 2.27W_t$$

$$T_3 = 1.93T_2 + .42W_t = 1.93(1.93T_1 + 2.27W_t) + .42W_t = 3.72T_1 + 4.80W_t$$

$$T_4 = 1.93T_3 + 2.27W_t = 1.93(3.72T_1 + 4.80W_t) + 2.27W_t = 7.18T_1 + 11.53W_t$$

$$T_5 = 1.93T_4 + .42W_t = 1.93(7.18T_1 + 11.53W_t) + .42W_t = 13.86T_1 + 22.67W_t$$

$$T_5 = 13.86W_tL_1 + 22.67W_t \; ; \quad T_5 = 499 \text{ or } 166$$

$$L_1 = \frac{499 - 22.67W_t}{13.86W_t} = \frac{36.00}{W_t} - 1.64 \text{ or } \frac{11.98}{W_t} - 1.64$$

5" conduit; 2 cables

COMPUTED [illegible] DATE 10/5/85
CHECKED [illegible] DATE 10-7-85

$$T_5 = 1.93T_4 - \frac{1.79W_t}{1.176}\left[-.43\right] = 1.93T_4 + .65\,W_t$$

$$\therefore T_3 = 1.93T_2 + .65\,W_t$$

$$T_4 = 1.93T_3 + \frac{1.79W_t}{1.176}\left[2.28\right] = 1.93T_3 + 3.47\,W_t$$

$$\therefore T_2 = 1.93T_1 + 3.47\,W_t$$

$T_1 = W_t L_1$ + prior Tension

$T_2 = 1.93T_1 + 3.47W_t$

$T_3 = 1.93T_2 + .65W_t = 1.93(1.93T_1 + 3.47W_t) + .65W_t = 3.72T_1 + 7.35W_t$

$T_4 = 1.93T_3 + 3.47W_t = 1.93(3.72T_1 + 7.35W_t) + 3.47W_t = 7.18T_1 + 17.65W_t$

$T_5 = 1.93T_4 + .65W_t = 1.93(7.18T_1 + 17.65W_t) + .65W_t = 13.86T_1 + 34.72W_t$

$T_5 = 13.86W_tL_1 + 34.72W_t$; $T_5 = 767$ or 256

$L_1 = \frac{767 - 34.72W_t}{13.86W_t} = \frac{55.34}{W_t} - 2.51$ or $\frac{18.47}{W_t} - 2.51$

1" conduit; 3 cables

COMPUTED DBT DATE 10/5/85
CHECKED RHB DATE 10-7-85

$$T_5 = 1.93T_4 - \frac{.44W_t}{1.176}\left[-.43\right] = 1.93T_4 + .16\ W_t$$

$$\therefore T_3 = 1.93T_2 + .16\ W_t$$

$$T_4 = 1.93T_3 + \frac{.44W_t}{1.176}\left[2.28\right] = 1.93T_3 + .85\ W_t$$

$$\therefore T_2 = 1.93T_1 + .85\ W_t$$

$T_1 = W_t L_1$ + prior Tension

$T_2 = 1.93T_1 + .85\ W_t$

$T_3 = 1.93T_2 + .16\ W_t = 1.93(1.93T_1 + .85W_t) + .16W_t = 3.72T_1 + 1.81W_t$

$T_4 = 1.93T_3 + .85\ W_t = 1.93(3.72T_1 + 1.81W_t) + .85W_t = 7.18\ T_1 + 4.34W_t$

$T_5 = 1.93T_4 + .16\ W_t = 1.93(7.18T_1 + 4.34W_t) + .16\ W_t = 13.86T_1 + 8.53W_t$

$T_5 = 13.86W_t L_1 + 8.53\ W_t$; $T_5 = 178$ or 59

$$L_1 = \frac{178 - 8.53W_t}{13.86W_t} = \frac{12.84}{W_t} - .62 \quad \text{or} \quad \frac{4.26}{W_t} - .62$$

$1\frac{1}{2}$" conduit; 3 cables

COMPUTED ODT DATE 10/5/85
CHECKED RHB DATE 10-7-85

$$T_5 = 1.93T_4 - \frac{.62W_t}{1.176}\left[-.43\right] = 1.93T_4 + .23\ W_t$$

$$\therefore T_3 = 1.93T_2 + .23\ W_t$$

$$T_4 = 1.93T_3 + \frac{.62W_t}{1.176}\left[2.28\right] = 1.93T_3 + 1.20\ W_t$$

$$\therefore T_2 = 1.93T_1 + 1.20\ W_t$$

$T_1 = W_t L_1 +$ prior Tension

$T_2 = 1.93T_1 + 1.20\ W_t$

$T_3 = 1.93T_2 + .23\ W_t = 1.93(1.93T_1 + 1.20\ W_t) + .23\ W_t = 3.72\ T_1 + 2.55\ W_t$

$T_4 = 1.93T_3 + 1.20\ W_t = 1.93(3.72T_1 + 2.55W_t) + 1.20\ W_t = 7.18\ T_1 + 6.12\ W_t$

$T_5 = 1.93T_4 + .23\ W_t = 1.93(7.18T_1 + 6.12W_t) + .23\ W_t = 13.86\ T_1 + 12.04\ W_t$

$T_5 = 13.86\ W_t L_1 + 12.04\ W_t$; $T_5 = 254$ or 85

$$L_1 = \frac{254 - 12.04W_t}{13.86W_t} = \frac{18.33}{W_t} - .87 \quad \text{or} \quad \frac{6.13}{W_t} - .87$$

2" conduit; 3 cables

COMPUTED QDZ DATE 10/5/85
CHECKED RHB DATE 10-7-85

$$T_5 = 1.93T_4 - \frac{.71\,W_t}{1.176}\left[-.43\right] = 1.93T_4 + .26\,W_t$$

$$\therefore T_3 = 1.93T_2 + .26\,W_t$$

$$T_4 = 1.93T_3 + \frac{.71\,W_t}{1.176}\left[2.28\right] = 1.93T_3 + 1.38\,W_t$$

$$\therefore T_2 = 1.93T_1 + 1.38\,W_t$$

$T_1 = W_t L_1$ + prior Tension

$T_2 = 1.93T_1 + 1.38\,W_t$

$T_3 = 1.93T_2 + .26\,W_t = 1.93(1.93T_1 + 1.38\,W_t) + .26\,W_t = 3.72\,T_1 + 2.92\,W_t$

$T_4 = 1.93T_3 + 1.38\,W_t = 1.93(3.72T_1 + 2.92\,W_t) + 1.38\,W_t = 7.18\,T_1 + 7.01\,W_t$

$T_5 = 1.93T_4 + .26\,W_t = 1.93(7.18T_1 + 7.01\,W_t) + .26\,W_t = 13.86\,T_1 + 13.79\,W_t$

$T_5 = 13.86\,W_t L_1 + 13.79\,W_t$; $T_5 = 288$ or 96

$$L_1 = \frac{288 - 13.79\,W_t}{13.86\,W_t} = \frac{20.78}{W_t} - .99 \quad \text{or} \quad \frac{6.93}{W_t} - .99$$

3" conduit; 3 cables

COMPUTED [illegible] DATE 10/5/85
CHECKED RLA DATE 10-7-85

$$T_5 = 1.93T_4 - \frac{.96W_t}{1.176}\left[-.43\right] = 1.93T_4 + .35\ W_t$$

$$\therefore T_3 = 1.93T_2 + .35\ W_t$$

$$T_4 = 1.93T_3 + \frac{.96W_t}{1.176}\left[2.28\right] = 1.93T_3 + 1.86\ W_t$$

$$\therefore T_2 = 1.93T_1 + 1.86\ W_t$$

$T_1 = W_t L_1$ + prior Tension

$T_2 = 1.93T_1 + 1.86\ W_t$

$T_3 = 1.93T_2 + .35\ W_t = 1.93(1.93T_1 + 1.86\ W_t) + .35\ W_t = 3.72\ T_1 + 3.94\ W_t$

$T_4 = 1.93T_3 + 1.86\ W_t = 1.93(3.72T_1 + 3.94\ W_t) + 1.86\ W_t = 7.18\ T_1 + 9.47\ W_t$

$T_5 = 1.93T_4 + .35\ W_t = 1.93(7.18T_1 + 9.47W_t) + .35\ W_t = 13.86\ T_1 + 18.62\ W_t$

$T_5 = 13.86\ W_t L_1 + 18.62\ W_t$; $T_5 = 391$ or 130

$$L_1 = \frac{391 - 18.62W_t}{13.86W_t} = \frac{28.21}{W_t} - 1.34 \quad \text{or} \quad \frac{9.38}{W_t} - 1.34$$

4" conduit; 3 cables

COMPUTED OBJB DATE 10/5/85
CHECKED RHB DATE 10-7-85

$$T_5 = 1.93T_4 - \frac{1.17W_t}{1.176}\left[-.43\right] = 1.93T_4 + .42\,W_t$$

$$\therefore T_3 = 1.93T_2 + .42\,W_t$$

$$T_4 = 1.93T_3 + \frac{1.17W_t}{1.176}\left[2.28\right] = 1.93T_3 + 2.27\,W_t$$

$$\therefore T_2 = 1.93T_1 + 2.27\,W_t$$

$T_1 = W_t L_1$ + prior Tension

$T_2 = 1.93T_1 + 2.27W_t$

$T_3 = 1.93T_2 + .42W_t = 1.93(1.93T_1 + 2.27W_t) + .42W_t = 3.72T_1 + 4.80W_t$

$T_4 = 1.93T_3 + 2.27W_t = 1.93(3.72T_1 + 4.80W_t) + 2.27W_t = 7.18T_1 + 11.53W_t$

$T_5 = 1.93T_4 + .42W_t = 1.93(7.18T_1 + 11.53W_t) + .42W_t = 13.86T_1 + 22.67W_t$

$T_5 = 13.86W_tL_1 + 22.67W_t$; $T_5 = 477$ or 159

$$L_1 = \frac{477 - 22.67W_t}{13.86W_t} = \frac{34.42}{W_t} - 1.64 \quad \text{or} \quad \frac{11.47}{W_t} - 1.64$$

5" conduit; 3 cables

COMPUTED OJZ DATE 10/5/85
CHECKED RHB DATE 10-7-85

$$T_5 = 1.93T_4 - \frac{1.79W_t}{1.176}\left[-.43\right] = 1.93T_4 + .65\,W_t$$

$$\therefore T_3 = 1.93T_2 + .65\,W_t$$

$$T_4 = 1.93T_3 + \frac{1.79W_t}{1.176}\left[2.28\right] = 1.93T_3 + 3.47\,W_t$$

$$\therefore T_2 = 1.93T_1 + 3.47\,W_t$$

$T_1 = W_t L_1 +$ prior Tension

$T_2 = 1.93T_1 + 3.47W_t$

$T_3 = 1.93T_2 + .65W_t = 1.93(1.93T_1 + 3.47W_t) + .65W_t = 3.72T_1 + 7.35W_t$

$T_4 = 1.93T_3 + 3.47W_t = 1.93(3.72T_1 + 7.35W_t) + 3.47W_t = 7.18T_1 + 17.65W_t$

$T_5 = 1.93T_4 + .65W_t = 1.93(7.18T_1 + 17.65W_t) + .65W_t = 13.86T_1 + 34.72W_t$

$T_5 = 13.86W_tL_1 + 34.72W_t$; $T_5 = 732$ or 244

$L_1 = \frac{732 - 34.72W_t}{13.86W_t} = \frac{52.81}{W_t} - 2.51$ or $\frac{17.6}{W_t} - 2.51$

1" conduit; 4 cables

COMPUTED [illegible] DATE 10/5/85
CHECKED RHB DATE 10-7-85

$$T_5 = 1.93T_4 - \frac{.44W_t}{1.176}\left[-.43\right] = 1.93T_4 + .16\ W_t$$

$$\therefore T_3 = 1.93T_2 + .16\ W_t$$

$$T_4 = 1.93T_3 + \frac{.44W_t}{1.176}\left[2.28\right] = 1.93T_3 + .85\ W_t$$

$$\therefore T_2 = 1.93T_1 + .85\ W_t$$

$T_1 = W_t L_1$ + prior Tension

$T_2 = 1.93T_1 + .85\ W_t$

$T_3 = 1.93T_2 + .16\ W_t = 1.93(1.93T_1 + .85W_t) + .16W_t = 3.72T_1 + 1.81W_t$

$T_4 = 1.93T_3 + .85\ W_t = 1.93(3.72T_1 + 1.81W_t) + .85W_t = 7.18\ T_1 + 4.34W_t$

$T_5 = 1.93T_4 + .16\ W_t = 1.93(7.18T_1 + 4.34W_t) + .16\ W_t = 13.86T_1 + 8.53W_t$

$T_5 = 13.86W_t L_1 + 8.53\ W_t$; $T_5 = 326$ or 109

$$L_1 = \frac{326 - 8.53W_t}{13.86W_t} = \frac{23.52}{W_t} - .62 \quad \text{or} \quad \frac{7.86}{W_t} - .62$$

$1\frac{1}{2}$" conduit; 4 cables

COMPUTED [illegible] DATE 10/5/85
CHECKED RHA DATE 10-7-85

$$T_5 = 1.93T_4 - \frac{.62W_t}{1.176}\left[-.43\right] = 1.93T_4 + .23\ W_t$$

$$\therefore T_3 = 1.93T_2 + .23\ W_t$$

$$T_4 = 1.93T_3 + \frac{.62W_t}{1.176}\left[2.28\right] = 1.93T_3 + 1.20\ W_t$$

$$\therefore T_2 = 1.93T_1 + 1.20\ W_t$$

$T_1 = W_t L_1$ + prior Tension

$T_2 = 1.93T_1 + 1.20\ W_t$

$T_3 = 1.93T_2 + .23\ W_t = 1.93(1.93T_1 + 1.20\ W_t) + .23\ W_t = 3.72\ T_1 + 2.55\ W_t$

$T_4 = 1.93T_3 + 1.20\ W_t = 1.93(3.72T_1 + 2.55\ W_t) + 1.20\ W_t = 7.18\ T_1 + 6.12\ W_t$

$T_5 = 1.93T_4 + .23\ W_t = 1.93(7.18T_1 + 6.12W_t) + .23\ W_t = 13.86\ T_1 + 12.04\ W_t$

$T_5 = 13.86\ W_t L_1 + 12.04\ W_t$; $T_5 = 465$ or 155

$$L_1 = \frac{465 - 12.04W_t}{13.86W_t} = \frac{33.55}{W_t} - .87 \quad \text{or} \quad \frac{11.18}{W_t} - .87$$

2" conduit; 4 cables

COMPUTED OBZ DATE 10/5/85
CHECKED RHB DATE 10-7-85

$$T_5 = 1.93T_4 - \frac{.71\,W_t}{1.176}\left[-.43\right] = 1.93T_4 + .26\,W_t$$

$$\therefore T_3 = 1.93T_2 + .26\,W_t$$

$$T_4 = 1.93T_3 + \frac{.71\,W_t}{1.176}\left[2.28\right] = 1.93T_3 + 1.38\,W_t$$

$$\therefore T_2 = 1.93T_1 + 1.38\,W_t$$

$T_1 = W_t L_1$ + prior Tension

$T_2 = 1.93T_1 + 1.38\,W_t$

$T_3 = 1.93T_2 + .26\,W_t = 1.93(1.93T_1 + 1.38\,W_t) + .26\,W_t = 3.72\,T_1 + 2.92\,W_t$

$T_4 = 1.93T_3 + 1.38\,W_t = 1.93(3.72T_1 + 2.92\,W_t) + 1.38\,W_t = 7.18\,T_1 + 7.01\,W_t$

$T_5 = 1.93T_4 + .26\,W_t = 1.93(7.18T_1 + 7.01\,W_t) + .26\,W_t = 13.86\,T_1 + 13.79\,W_t$

$T_5 = 13.86\,W_t L_1 + 13.79\,W_t$; $T_5 = 529$ or 176

$$L_1 = \frac{529 - 13.79\,W_t}{13.86\,W_t} = \frac{38.17}{W_t} - .99 \quad \text{or} \quad \frac{12.70}{W_t} - .99$$

3" conduit; 4 cables

COMPUTED OBZ DATE 10/5/85
CHECKED RHB DATE 10-7-85

$$T_5 = 1.93T_4 - \frac{.96W_t}{1.176}\left[-.43\right] = 1.93T_4 + .35\ W_t$$

$$\therefore T_3 = 1.93T_2 + .35\ W_t$$

$$T_4 = 1.93T_3 + \frac{.96W_t}{1.176}\left[2.28\right] = 1.93T_3 + 1.86\ W_t$$

$$\therefore T_2 = 1.93T_1 + 1.86\ W_t$$

$T_1 = W_t L_1$ + prior Tension

$T_2 = 1.93T_1 + 1.86\ W_t$

$T_3 = 1.93T_2 + .35\ W_t = 1.93(1.93T_1 + 1.86\ W_t) + .35\ W_t = 3.72\ T_1 + 3.94\ W_t$

$T_4 = 1.93T_3 + 1.86\ W_t = 1.93(3.72T_1 + 3.94\ W_t) + 1.86\ W_t = 7.18\ T_1 + 9.47\ W_t$

$T_5 = 1.93T_4 + .35\ W_t = 1.93(7.18T_1 + 9.47\ W_t) + .35\ W_t = 13.86\ T_1 + 18.62\ W_t$

$T_5 = 13.86\ W_t L_1 + 18.62\ W_t$; $T_5 = 716$ or 239

$$L_1 = \frac{716 - 18.62\ W_t}{13.86\ W_t} = \frac{51.66}{W_t} - 1.34 \quad \text{or} \quad \frac{17.24}{W_t} - 1.34$$

4" conduit; 4 cables

COMPUTED [illegible] DATE 10/5/85
CHECKED RHA DATE 10-7-85

$$T_5 = 1.93T_4 - \frac{1.17W_t}{1.176}\left[-.43\right] = 1.93T_4 + .42W_t$$

$$\therefore T_3 = 1.93T_2 + .42\ W_t$$

$$T_4 = 1.93T_3 + \frac{1.17W_t}{1.176}\left[2.28\right] = 1.93T_3 + 2.27\ W_t$$

$$\therefore T_2 = 1.93T_1 + 2.27\ W_t$$

$T_1 = W_t L_1$ + prior Tension

$T_2 = 1.93T_1 + 2.27W_t$

$T_3 = 1.93T_2 + .42W_t = 1.93(1.93T_1 + 2.27W_t) + .42W_t = 3.72T_1 + 4.80W_t$

$T_4 = 1.93T_3 + 2.27\ W_t = 1.93(3.72T_1 + 4.80W_t) + 2.27\ W_t = 7.18\ T_1 + 11.53W_t$

$T_5 = 1.93T_4 + .42\ W_t = 1.93(7.18T_1 + 11.53W_t) + .42W_t = 13.86T_1 + 22.67W_t$

$T_5 = 13.86W_tL_1 + 22.67\ W_t$; $T_5 = 874$ or 291

$$L_1 = \frac{874 - 22.67W_t}{13.86W_t} = \frac{63.06}{W_t} - 1.64 \text{ or } \frac{21.00}{W_t} - 1.64$$

5" conduit; 4 cables

COMPUTED OJT DATE 10/5/85
CHECKED RHB DATE 10-7-85

$$T_5 = 1.93T_4 - \frac{1.79W_t}{1.176}\left[-.43\right] = 1.93T_4 + .65\,W_t$$

$$\therefore T_3 = 1.93T_2 + .65\,W_t$$

$$T_4 = 1.93T_3 + \frac{1.79W_t}{1.176}\left[2.28\right] = 1.93T_3 + 3.47\,W_t$$

$$\therefore T_2 = 1.93T_1 + 3.47\,W_t$$

$T_1 = W_t L_1 +$ prior Tension

$T_2 = 1.93T_1 + 3.47W_t$

$T_3 = 1.93T_2 + .65W_t = 1.93(1.93T_1 + 3.47W_t) + .65W_t = 3.72T_1 + 7.35W_t$

$T_4 = 1.93T_3 + 3.47W_t = 1.93(3.72T_1 + 7.35W_t) + 3.47W_t = 7.18T_1 + 17.65W_t$

$T_5 = 1.93T_4 + .65W_t = 1.93(7.18T_1 + 17.65W_t) + .65W_t = 13.86T_1 + 34.72W_t$

$T_5 = 13.86W_t L_1 + 34.72W_t$; $T_5 = 1343$ or 448

$$L_1 = \frac{1343 - 34.72W_t}{13.86W_t} = \frac{96.90}{W_t} - 2.51 \quad \text{or} \quad \frac{32.32}{W_t} - 2.51$$

TVA 488 (EN DES 3-77)

Screening Values to Determine Length of Conduit (L_1)

For 380 lb/ft and 100 lb/ft SWP Limits

COMPUTED DZF DATE 10/5/85

CHECKED WEC DATE 10/7/85

Conduit size	Number of Cables 1	2	3	4	5
3/4"	15.55/W - .65	10.53/W - .48			
	5.18/W - .65	3.54/W - .48			
1"	20.12/W - .835	13.42/W - .62	12.84/W - .62	23.52/W - .62	13.42/W - .62
	6.63/W - .835	4.47/W - .62	4.26/W - .62	7.86/W - .62	4.47/W - .62
1½"	28.35/W - 1.18	19.19/W - .87	18.33/W - .87	33.55/W - .87	19.19/W - .87
	9.45/W - 1.18	6.42/W - .87	6.13 - .87	11.18/W - .87	6.42/W - .87
2"	32.47/W - 1.36	21.79/W - .99	20.78/W - .99	38.17/W - .99	21.79/W - .99
	10.82/W - 1.36	7.29/W - .99	6.93/W - .99	12.70/W - .99	7.29/W - .99
3"	43.90/W - 1.84	29.5/W - 1.34	28.21/W - 1.34	51.66/W - 1.34	29.5/W - 1.34
	14.63/W - 1.84	9.81/W - 1.34	9.38/W - 1.34	17.24/W - 1.34	9.81/W - 1.34
4"	53.51/W - 2.25	36.00/W - 1.64	34.42/W - 1.64	63.06/W - 1.64	36.00/W - 1.64
	17.84/W - 2.25	11.98/W - 1.64	11.47/W - 1.64	21.00/W - 1.64	11.98/W - 1.64
5"	81.86/W - 3.43	55.34/W - 2.51	52.81/W - 2.51	96.90/W - 2.51	55.34/W - 2.51
	27.29/W - 3.43	18.47/W - 2.51	17.6/W - 2.51	32.32/W - 2.51	18.47/W - 2.51

Computed [illegible] Date 9/4/85
Checked [illegible] Date 9/4/85

ATTACHMENT ~~7.2 (R1)~~ 7.1 ODB

CONDUITS WHICH NEED FURTHER EVALUATION
TO DETERMINE IF CABLE SIDEWALL PRESSURES
HAVE BEEN EXCEEDED

2B1044D	2NM3076E	2NM3133D	2PLC285B
2B1054G	2NM3077G	2NM3134D	2PLC294A
2B1059E	2NM3078G	2NM3136D	2PLC296A
2G1524B	2NM3081G	2NM3253D	2PLC303A
2G1525A	2NM3091F	2NM3254F	2PLC305B
2M2987B	2NM3092D	2NM3256E	2PLC562A
2M3360A	2NM3102G	2NM3259G	2PLC563A
2M4325B	2NM3103E	2PLC4A	2PLC564B
2M4337A	2NM3116F	2PLC5B	2PLC565B
2M4338B	2NM3119F	2PLC8A	2PLC582A
2M4389B	2NM3122D	2PLC13B	2PLC583A
2M4390A	2NM3123D	2PLC15B	2PLC584B
2M4391A	2NM3124D	2PLC35A	2PLC585B
2M4414B	2NM3125D	2PLC36B	2PLC588B
2NM3068E	2NM3126D	2PLC215B	2PLC589B
2NM3069E	2NM3127D	2PLC217A	2PLC595B
2NM3072E	2NM3128D	2PLC218A	2PLC596B
2NM3073E	2NM3130E	2PLC277A	2PLC641B
2NM3074E	2NM3131E	2PLC278A	2PLC682A
2NM3075E	2NM3132E	2PLC284A	2PLC683B

R1 Added sheets 10 through 23.

045215.03

Computed WEC Date 9/4/85
Checked DDF Date 9/4/85

ATTACHMENT ~~7.2 (R1)~~ 7.1 ODF

2PLC714A	2PLC873A	2PLC901B	2PLC1276A
2PLC749B	2PLC874A	2PLC902B	2PLC1277B
2PLC852A	2PLC875A	2PLC1072A	2PLC1279B
2PLC853B	2PLC876B	2PLC1073B	2PLC1280B
2PLC854A	2PLC877B	2PLC1077B	2PLC1284A
2PLC855B	2PLC878B	2PLC1078A	2PLC1286B
2PLC856A	2PLC879B	2PLC1082A	2PLC1289A
2PLC857A	2PLC880B	2PLC1083B	2PLC1320A
2PLC858A	2PLC881B	2PLC1087B	2PLC1321A
2PLC859A	2PLC882B	2PLC1122A	2PLC1322A
2PLC860A	2PLC883B	2PLC1123A	2PLC1323A
2PLC861A	2PLC884B	2PLC1124B	2PLC1341B
2PLC862A	2PLC885B	2PLC1125B	2PLC1342B
2PLC863A	2PLC886B	2PLC1136A	2PLC1545B
2PLC864A	2PLC887B	2PLC1184A	2PLC1546B
2PLC865A	2PLC888B	2PLC1185B	2PLC1556A
2PLC866A	2PLC889B	2PLC1214A	2PLC1557B
2PLC867A	2PLC890B	2PLC1215A	2PLC1558A
2PLC868A	2PLC891B	2PLC1218B	2PLC1559B
2PLC869A	2PLC892B	2PLC1219B	2PLC1928B
2PLC870A	2PLC893B	2PLC1256B	2PLC1975A
2PLC871A	2PLC894B	2PLC1268B	2PLC1976A
2PLC872A	2PLC895B	2PLC1275A	2PLC1977A

045215.03

Computed WEC Date 9/9/85
Checked DDZ Date 9/4/85

ATTACHMENT ~~7.2 (D1)~~ 7.1 ~~6.1~~ DDZ

2PLC2300A	2PLC2547B	2PLC2795B	2PLC2968B
2PLC2301A	2PLC2550B	2PLC2817B	2PLC3184A
2PLC2303A	2PLC2621A	2PLC2825A	2PLC3188B
2PLC2310B	2PLC2623A	2PLC2826A	2PLC3202B
2PLC2311B	2PLC2630B	2PLC2837B	2PLC3221A
2PLC2313B	2PLC2632B	2PLC2840B	2PLC3223B
2PLC2324B	2PLC2661A	2PLC2841B	2PLC3224B
2PLC2478B	2PLC2662A	2PLC2843B	2PLC3225B
2PLC2479B	2PLC2663B	2PLC2844B	2PLC3226A
2PLC2484A	2PLC2664B	2PLC2850A	2PLC3240A
2PLC2490A	2PLC2730A	2PLC2851A	2PLC3242A
2PLC2491A	2PLC2734B	2PLC2852A	2PLC3245B
2PLC2493A	2PLC2737B	2PLC2853A	2PLC3255A
2PLC2495A	2PLC2740B	2PLC2854A	2PLC3324B
2PLC2498A	2PLC2741B	2PLC2855A	2PLC3325B
2PLC2501A	2PLC2756B	2PLC2856A	2PLC3326B
2PLC2511A	2PLC2762A	2PLC2857A	2PLC3327B
2PLC2515A	2PLC2763A	2PLC2858A	2PLC3328B
2PLC2519A	2PLC2764A	2PLC2859A	2PLC3329B
2PLC2526B	2PLC2765A	2PLC2881A	2PLC3340A
2PLC2536B	2PLC2766A	2PLC2882A	2PLC3341A
2PLC2538B	2PLC2767A	2PLC2921B	2PLC3342A
2PLC2542B	2PLC2790B	2PLC2922B	2PLC3345A

045215.03

Computed [illegible] Date 9/4/85
Checked [illegible] Date 9/4/85

ATTACHMENT ~~7.2 (R1)~~ ~~6.1~~ 7.1 [illegible]

2PLC3346A	2PM5667E	2PM6360F	2PM6443E
2PLC3350B	2PM5673E	2PM6361F	2PM6444E
2PLC3351B	2PM5675E	2PM6362F	2PM6445E
2PLC3352B	2PM5677D	2PM6363F	2PM6446E
2PLC3355B	2PM5680D	2PM6364D	2PM6447E
2PLC3356B	2PM6063F	2PM6365D	2PM6448E
2PLC3504B	2PM6131A	2PM6368F	2PM6461D
2PLC3505A	2PM6140B	2PM6376E	2PM6470D
2PLC3511A	2PM6216E	2PM6377E	2PM6471D
2PLC3513B	2PM6217E	2PM6378E	2PM6472D
2PLC3525B	2PM6218G	2PM6382E	2PM6473D
2PLC3529B	2PM6219G	2PM6383E	2PM6474D
2PLC3532B	2PM6220F	2PM6384E	2PM6475D
2PLC3533B	2PM6221F	2PM6389F	2PM6476D
2PLC3534B	2PM6222D	2PM6390F	2PM6477D
2PLC3555B	2PM6223D	2PM6396G	2PM6478D
2PLC3660B	2PM6225B	2PM6397G	2PM6492B
2PLC3661A	2PM6226G	2PM6399D	2PM6523D
2PM5660D	2PM6255J	2PM6420D	2PM6524F
2PM5661E	2PM6321E	2PM6425D	2PM6525E
2PM5664E	2PM6349G	2PM6426D	2PM6530E
2PM5665E	2PM6350G	2PM6440E	2PM6559F
2PM5666E	2PM6351G	2PM6442E	2PM6560E

045215.03

Computed WEC Date 9/4/85
Checked OZZ Date 9/4/85

ATTACHMENT ~~7.2 (R1)~~ ~~6.1~~ 7.1 OZZ

2PM6562E	2PM6930B	2PM7270E	2PM7407B
2PM6563E	2PM6937A	2PM7275B	2PM7411A
2PM6565D	2PM6952F	2PM7276A	2PM7413A
2PM6566E	2PM6953G	2PM7277B	2PM7415A
2PM6576D	2PM7184B	2PM7279F	2PM7417A
2PM6583G	2PM7185A	2PM7351B	2PM7418B
2PM6584E	2PM7186A	2PM7352A	2PM7435B
2PM6586E	2PM7195B	2PM7353A	2PM7436A
2PM6587F	2PM7242K	2PM7354B	2PM7444E
2PM6598G	2PM7245J	2PM7356A	2PM7468D
2PM6599E	2PM7247J	2PM7358B	2PM7488G
2PM6619A	2PM7252K	2PM7360K	2PM7489G
2PM6668A	2PM7253J	2PM7361K	2PM7492E
2PM6669B	2PM7254J	2PM7380A	2PM7498D
2PM6686G	2PM7257J	2PM7383B	2PM7480F
2PM6689F	2PM7260D	2PM7384B	2PM7621D
2PM6702B	2PM7261E	2PM7387A	2PM7622J
2PM6713F	2PM7262F	2PM7392A	2PM7623K
2PM6714D	2PM7263G	2PM7400B	2PM7840A
2PM6715A	2PM7265D	2PM7401A	2PM7845B
2PM6718G	2PM7266D	2PM7404A	2PM7861E
2PM6920A	2PM7267G	2PM7405B	2PM7863E
2PM6929A	2PM7269G	2PM7406B	2PM7868F

045215.03

Computed WEC Date 9/4/85
Checked ODF Date 9/4/85

ATTACHMENT ~~7.2 (R1)~~ 7.1 ODF

2PM7869D	2PP2314A	2PP2758P	2PS706F
2PM7870F	2PP2337A	2PP2759R	2PS707F
2PM7872F	2PP2340A	2PP2760P	2PS709G
2PM7873D	2PP2355A	2PP2761R	2PS710G
2PM7875D	2PP2541A	2PP2762P	2PS720D
2PM7883B	2PP2542B	2PP2763R	2PS721E
2PM7884F	2PP2550A	2PS609D	2PS722F
2PP2002B	2PP2661A	2PS610F	2PS723G
2PP2006A	2PP2663B	2PS611E	2PV780D
2PP2180B	2PP2664A	2PS620A	2PV782E
2PP2181A	2PP2667B	2PS621B	2PV784F
2PP2182B	2PP2668A	2PS660A	2PV786G
2PP2183A	2PP2670B	2PS680D	2PV819D
2PP2188A	2PP2704B	2PS681E	2PV823E
2PP2189B	2PP2740R	2PS682F	2PV825E
2PP2190B	2PP2741R	2PS683G	2PV827D
2PP2191A	2PP2743P	2PS688E	2PV830F
2PP2280A	2PP2746R	2PS700D	2PV833G
2PP2291A	2PP2747R	2PS701D	2PV847A
2PP2292A	2PP2749P	2PS702D	2PV848B
2PP2295B	2PP2752R	2PS703E	2PV946A
2PP2296B	2PP2753R	2PS704E	2PV950B
2PP2297B	2PP2755P	2PS705E	2PV956A

045215.03

Computed WEC Date 9/4/85
Checked 0273 Date 9/4/85

ATTACHMENT ~~7.2 (R1)~~ 7.1 0273

2PV961D	2RM525A	2VC785A	2VC1161G
2PV965E	2RM527A	2VC791A	2VC1202A
2PV973G	2RM528B	2VC860A	2VC1258A
2PV980G	2RM568B	2VC874A	2VC1259B
2PV983F	2SG674S	2VC881B	2VC1289B
2PV986E	2SG678S	2VC890B	2VC1325B
2PV989D	2SG704A	2VC891B	2VC1392A
2RM290A	2SG716S	2VC892B	2VC1393A
2RM291B	2VC8A	2VC903A	2VC1398A
2RM293A	2VC15B	2VC1069A	2VC1400B
2RM295B	2VC491B	2VC1071A	2VC1498B
2RM297A	2VC504B	2VC1072A	2VC1502B
2RM298B	2VC513A	2VC1078A	2VC1503B
2RM330B	2VC527A	2VC1083B	2VC1504B
2RM435B	2VC608A	2VC1085B	2VC1506B
2RM438A	2VC611A	2VC1088B	2VC1507B
2RM476A	2VC623A	2VC1089B	2VC1508B
2RM477B	2VC768B	2VC1090A	2VC1509B
2RM508A	2VC769B	2VC1091B	2VC1528B
2RM509B	2VC770B	2VC1092A	2VC1555B
2RM522B	2VC774B	2VC1093A	2VC1562B
2RM523B	2VC780A	2VC1094B	2VC1573A
2RM524A	2VC781A	2VC1154F	2VC1574A

045215.03

Computed WEC Date 9/4/85
Checked OZF Date 9/4/85

ATTACHMENT ~~7.2 (R1)~~ 7.1 OZF

2VC1622A	2VC2260A	2VC2559B	2VC2929B
2VC1640A	2VC2295A	2VC2565B	2VC2936A
2VC1818A	2VC2298A	2VC2566B	2VC2940A
2VC1934A	2VC2299A	2VC2577A	2VC2954A
2VC2007B	2VC2300A	2VC2597A	2VC3021E
2VC2011A	2VC2304A	2VC2650B	2VC3022F
2VC2016B	2VC2307B	2VC2651A	2VC3023G
2VC2035B	2VC2308B	2VC2653A	2VC3028B
2VC2036A	2VC2312B	2VC2760B	2VC3029A
2VC2069B	2VC2313B	2VC2761B	2VC3040B
2VC2085B	2VC2314B	2VC2762A	2VC3061B
2VC2092A	2VC2323A	2VC2764A	2VC3064B
2VC2103A	2VC2342A	2VC2765B	2VC3067B
2VC2137B	2VC2347A	2VC2780B	2VC3339B
2VC2138B	2VC2353B	2VC2791A	2VC3447B
2VC2145B	2VC2372B	2VC2794A	2VC3448B
2VC2148B	2VC2377B	2VC2797B	2VC3489A
2VC2188A	2VC2380A	2VC2810A	2VC3557B
2VC2220B	2VC2391A	2VC2815A	2VC3673A
2VC2222A	2VC2395B	2VC2873A	2VC3674A
2VC2238B	2VC2460A	2VC2876A	2VC3678A
2VC2239B	2VC2530B	2VC2911B	2VC4220A
2VC2240D	2VC2558A	2VC2920B	2VC4400B

045215.03

Computed WEC Date 9/4/85
Checked [illegible] Date 9/4/85

ATTACHMENT ~~7.1 (R1)~~ 7.1 0.03

2VC4402B	2VC4450A
2VC4403B	2VC4455A
2VC4405B	2VC4464B
2VC4407A	2VC4465B
2VC4409A	2VC4474B
2VC4410A	2VC4595A
2VC4412A	2VC4596B
2VC4420A	2VC4876A
2VC4431B	2VC4879B
2VC4439B	2VC4951A
2VC4442A	2VC4952A
2VC4449A	2VC4953A

Computed WEC Date 9/4/85
Checked [illegible] Date 9/4/85

ATTACHMENT ~~7.1 (R1)~~ 7.1 023

1B1044D	1M4315A	1NM3149D	1NM3206G
1B1049F	1M4337A	1NM3150D	1NM3207G
1B1054G	1M4338B	1NM3151D	1NM3208G
1B1059E	1M4389B	1NM3152D	1NM3209G
1B1065E	1M4390A	1NM3153D	1NM3226D
1B1071F	1M4413A	1NM3162F	1NM3228E
1CR4551A	1M4414B	1NM3164F	1NM3229D
1CR4624A	1M4440A	1NM3167F	1NM3252G
1CR4625B	1M4442B	1NM3169F	1NM3253E
1CR4626A	1M4445B	1NM3171F	1NM3256F
1G1524A	1NM3086G	1NM3182E	1NM3258D
1G1525B	1NM3103F	1NM3183E	1NM3280D
1M2988B	1NM3106E	1NM3184E	1NM3300D
1M3380A	1NM3122E	1NM3185E	1NM3302D
1M3385B	1NM3124E	1NM3186E	1NM3303D
1M4020A	1NM3123E	1NM3194E	1NM3304D
1M4022B	1NM3126E	1NM3195E	1NM3305D
1M4026A	1NM3142D	1NM3196E	1NM3306D
1M4028A	1NM3143D	1NM3197E	1NM3310D
1M4031B	1NM3144D	1NM3200G	1NM3311D
1M4032B	1NM3146D	1NM3203G	1NM3329E
1M4033B	1NM3147D	1NM3204G	1NM3330E
1M4262A	1NM3148D	1NM3205G	1NM3331E

045215.03

Computed WEC Date 9/4/85
Checked [illegible] Date 9/4/85

ATTACHMENT 7.1 ~~7.1 (R1)~~

1NM3368D	1PLC34A	1PLC315A	1PLC762B
1NM3369D	1PLC35B	1PLC317B	1PLC766B
1NM3370D	1PLC60F	1PLC562A	1PLC784A
1NM3371D	1PLC61D	1PLC563A	1PLC787A
1NM3373E	1PLC62E	1PLC564B	1PLC805A
1NM3376D	1PLC63G	1PLC565B	1PLC817B
1NM3377D	1PLC82B	1PLC584A	1PLC852A
1NM3378E	1PLC232B	1PLC585A	1PLC853B
1NM3379E	1PLC234A	1PLC588B	1PLC854A
1NM3381F	1PLC235A	1PLC589B	1PLC855B
1NM3383F	1PLC244B	1PLC592S	1PLC856A
1PLC1A	1PLC277B	1PLC593S	1PLC857A
1PLC2A	1PLC278S	1PLC603B	1PLC858A
1PLC4A	1PLC279B	1PLC640A	1PLC859A
1PLC5B	1PLC280B	1PLC644B	1PLC860A
1PLC8A	1PLC281A	1PLC652B	1PLC861A
1PLC13B	1PLC282B	1PLC682A	1PLC863A
1PLC14B	1PLC283A	1PLC683A	1PLC864A
1PLC15B	1PLC284A	1PLC714A	1PLC865A
1PLC17B	1PLC286A	1PLC725A	1PLC866A
1PLC18A	1PLC287B	1PLC727A	1PLC867A
1PLC19A	1PLC288A	1PLC713A	1PLC868A
1PLC23B	1PLC313A	1PLC749B	1PLC869A
		1PLC760B	1PLC870A

Computed WEC Date 9/4/85
Checked OZJ Date 9/4/85

ATTACHMENT ~~7.2 (R1)~~ 7.1 OZJ

1PLC871A	1PLC895B	1PLC1337A	1PLC2385B
1PLC872A	1PLC901B	1PLC1338A	1PLC2483A
1PLC873A	1PLC902B	1PLC1341B	1PLC2485A
1PLC874A	1PLC1068A	1PLC1342B	1PLC2490A
1PLC875A	1PLC1072A	1PLC1545B	1PLC2491A
1PLC876B	1PLC1073B	1PLC1546B	1PLC2493A
1PLC877B	1PLC1077B	1PLC1556A	1PLC2495A
1PLC878B	1PLC1078A	1PLC1557B	1PLC2498A
1PLC879B	1PLC1082A	1PLC1558A	1PLC2504A
1PLC880B	1PLC1083B	1PLC1559B	1PLC2507A
1PLC881B	1PLC1087B	1PLC1917B	1PLC2508A
1PLC882B	1PLC1122A	1PLC1939A	1PLC2513A
1PLC883B	1PLC1123A	1PLC1976B	1PLC2514A
1PLC884B	1PLC1124B	1PLC1977B	1PLC2515A
1PLC886B	1PLC1125B	1PLC2305A	1PLC2517A
1PLC887B	1PLC1136A	1PLC2306B	1PLC2518A
1PLC888B	1PLC1218A	1PLC2307A	1PLC2519A
1PLC889B	1PLC1256A	1PLC2308B	1PLC2532B
1PLC890B	1PLC1280A	1PLC2332B	1PLC2534B
1PLC891B	1PLC1284B	1PLC2360B	1PLC2536B
1PLC892B	1PLC1322A	1PLC2362B	1PLC2537B
1PLC893B	1PLC1324A	1PLC2366A	1PLC2538B
1PLC894B	1PLC1333B	1PLC2384A	1PLC2554B

045215.03

Computed WEC Date 9/4/85
Checked 027 Date 9/4/85

ATTACHMENT ~~7.2 (R1)~~ 7.1 ~~6.1~~ 027

1PLC2557B	1PLC2732B	1PLC2816A	1PLC3331A
1PLC2559B	1PLC2732B	1PLC2817A	1PLC3332A
1PLC2578S	1PLC2735B	1PLC2818A	1PLC3345B
1PLC2579S	1PLC2740B	1PLC2822A	1PLC3353B
1PLC2580S	1PLC2741B	1PLC2837B	1PLC3354B
1PLC2581S	1PLC2749B	1PLC2850A	1PLC3360B
1PLC2582S	1PLC2754B	1PLC2852A	1PLC3361B
1PLC2585A	1PLC2771B	1PLC2855B	1PLC3362B
1PLC2607A	1PLC2800A	1PLC2880B	1PLC3363B
1PLC2608A	1PLC2801A	1PLC2881B	1PLC3364B
1PLC2609A	1PLC2803A	1PLC2940A	1PLC3365B
1PLC2620A	1PLC2804A	1PLC2941A	1PLC3366B
1PLC2621A	1PLC2805B	1PLC3188B	1PLC3367B
1PLC2622A	1PLC2806B	1PLC3201B	1PLC3368B
1PLC2623A	1PLC2807B	1PLC3245A	1PLC3369B
1PLC2629B	1PLC2808B	1PLC3249A	1PLC3370B
1PLC2630B	1PLC2809B	1PLC3264A	1PLC3380B
1PLC2631B	1PLC2810B	1PLC3266A	1PLC3381B
1PLC2632B	1PLC2811B	1PLC3273B	1PLC3382B
1PLC2665B	1PLC2812B	1PLC3281A	1PLC3383B
1PLC2680A	1PLC2813B	1PLC3283B	1PLC3384B
1PLC2681A	1PLC2814B	1PLC3323A	1PLC3385B
1PLC2729A	1PLC2815B	1PLC3329B	1PLC3386B

045215.03

Computed WEC Date 9/4/85
Checked DBT Date 9/4/85

ATTACHMENT ~~7.2 (R1)~~ 7.1 ~~6.1~~ 087

1PLC3387B	1PM5677D	1PM6330B	1PM6382E
1PLC3388B	1PM5678D	1PM6331B	1PM6383E
1PLC3389B	1PM5683D	1PM6332B	1PM6384E
1PLC3481B	1PM5685D	1PM6333B	1PM6388F
1PLC3482B	1PM6126B	1PM6344A	1PM6389F
1PLC3484B	1PM6132A	1PM6345B	1PM6390F
1PLC3488B	1PM6207E	1PM6346B	1PM6395G
1PLC3490A	1PM6209E	1PM6350G	1PM6396G
1PLC3511A	1PM6211E	1PM6351G	1PM6397G
1PLC3513B	1PM6213E	1PM6352G	1PM6399D
1PLC3554A	1PM6215E	1PM6355E	1PM6420D
1PLC3555A	1PM6216E	1PM6359B	1PM6425D
1PLC3561B	1PM6217E	1PM6360F	1PM6426D
1PLC3563A	1PM6218G	1PM6361F	1PM6427D
1PLC3589A	1PM6219G	1PM6362F	1PM6434E
1PLC3590A	1PM6220F	1PM6363F	1PM6438E
1PLC3591A	1PM6222D	1PM6364D	1PM6440E
1PLC3659A	1PM6223D	1PM6365D	1PM6442E
1PM5660D	1PM6226G	1PM6367F	1PM6443E
1PM5661E	1PM6229A	1PM6368F	1PM6444E
1PM5664E	1PM6249B	1PM6376E	1PM6445E
1PM5673E	1PM6256J	1PM6378B	1PM6446E
1PM5675E	1PM6258K	1PM6379B	1PM6447E

045215.03

Computed WES Date 9/4/85
Checked DRB Date 9/4/85

ATTACHMENT ~~7.1 (R1)~~ 7.1 (R3)

1PM6448E	1PM6560E	1PM6657B	1PM7195B
1PM6461A	1PM6562E	1PM6666A	1PM7214D
1PM6467A	1PM6565D	1PM6686G	1PM7215E
1PM6468A	1PM6566E	1PM6687G	1PM7241K
1PM6470D	1PM6576D	1PM6689F	1PM7243K
1PM6471A	1PM6577G	1PM6702B	1PM7248J
1PM6472B	1PM6583G	1PM6713F	1PM7252K
1PM6473D	1PM6584E	1PM6714D	1PM7253K
1PM6474D	1PM6586E	1PM6715A	1PM7254J
1PM6475D	1PM6587F	1PM6718G	1PM7255J
1PM6476D	1PM6591F	1PM6926B	1PM7256J
1PM6477D	1PM6597E	1PM6935A	1PM7258J
1PM6478D	1PM6598E	1PM6936B	1PM7260D
1PM6491D	1PM6599E	1PM7096A	1PM7261E
1PM6493E	1PM6603F	1PM7097B	1PM7262F
1PM6498A	1PM6620G	1PM7136B	1PM7263G
1PM6499A	1PM6645B	1PM7137A	1PM7266D
1PM6504B	1PM6646B	1PM7146A	1PM7267D
1PM6523D	1PM6650A	1PM7153G	1PM7268G
1PM6524F	1PM6651A	1PM7179G	1PM7269E
1PM6525E	1PM6653A	1PM7184B	1PM7274A
1PM6530E	1PM6654B	1PM7185A	1PM7275B
1PM6559F	1PM6656A	1PM7186A	1PM7276A

Computed WEC Date 9/4/85
Checked [illegible] Date 9/4/85

ATTACHMENT ~~7.2 (R1)~~ ~~6.1~~ 7.1 OB3

1PM7277B	1PM7392A	1PP2006B	1PP2795A
1PM7279F	1PM7488G	1PP2180B	1PS607D
1PM7281E	1PM7489G	1PP2181A	1PS608E
1PM7353A	1PM7492E	1PP2182B	1PS617D
1PM7354B	1PM7498D	1PP2183A	1PS618E
1PM7355A	1PM7566J	1PP2188A	1PS619F
1PM7356A	1PM7580F	1PP2189B	1PS620A
1PM7358B	1PM7620E	1PP2190B	1PS621B
1PM7361K	1PM7621D	1PP2191A	1PS660A
1PM7362K	1PM7622J	1PP2280A	1PS680D
1PM7363K	1PM7623K	1PP2291B	1PS681E
1PM7364K	1PM7624D	1PP2322A	1PS682F
1PM7368J	1PM7625E	1PP2540A	1PS683G
1PM7370K	1PM7634E	1PP2543B	1PS701D
1PM7375A	1PM7780J	1PP2615B	1PS703E
1PM7376B	1PM7781K	1PP2660A	1PS704E
1PM7380A	1PM7840A	1PP2663B	1PS705E
1PM7381B	1PM7845B	1PP2665A	1PS706F
1PM7383B	1PM7853D	1PP2667B	1PS707F
1PM7384B	1PM7854D	1PP2668A	1PS708F
1PM7386B	1PP2000A	1PP2670B	1PS709G
1PM7387A	1PP2002A	1PP2701B	1PS710G
1PM7388A	1PP2004B	1PP2724B	1PS711G

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Computed WEC Date 9/4/85
Checked DDF Date 9/4/85

ATTACHMENT ~~7.2 (R1)~~ 7.1 (R3)

1PS720D	1PV986E	1RM524B	1VC521A
1PS721E	1PV989D	1RM525A	1VC523A
1PS722F	1PV1005B	1RM526A	1VC565B
1PS723G	1PV1007B	1RM528B	1VC577B
1PV780D	1RM290A	1RM529A	1VC580A
1PV782E	1RM291B	1RM531A	1VC582A
1PV784F	1RM293A	1RM562B	1VC599B
1PV786G	1RM298A	1RM568B	1VC620A
1PV827F	1RM299A	1RM569B	1VC632A
1PV829E	1RM380B	1RM570A	1VC633B
1PV830D	1RM473B	1RM573A	1VC760B
1PV831C	1RM474B	1RM579A	1VC768B
1PV847A	1RM475A	1SG600B	1VC769B
1PV927A	1RM476A	1SG666S	1VC770B
1PV928A	1RM477B	1SG669S	1VC774B
1PV930B	1RM501A	1SG716S	1VC780A
1PV931B	1RM502A	1SG717S	1VC781A
1PV961D	1RM503B	1SG881S	1VC785A
1PV964E	1RM504B	1VC5B	1VC860A
1PV969F	1RM508A	1VC8A	1VC881B
1PV973G	1RM509B	1VC11A	1VC885B
1PV980G	1RM522B	1VC15B	1VC890B
1PV983F	1RM523B	1VC17B	1VC891B

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Checked DBF Date 9/4/85

ATTACHMENT ~~7.2 (21)~~ 7.1 ~~7.1~~ DBF

1VC892B	1VC1147E	1VC1509B	1VC2085B
1VC903A	1VC1154F	1VC1510B	1VC2138B
1VC978A	1VC1161G	1VC1528B	1VC2145B
1VC1063A	1VC1198A	1VC1562B	1VC2148B
1VC1076A	1VC1199B	1VC1573A	1VC2188A
1VC1077A	1VC1202A	1VC1574A	1VC2240D
1VC1079A	1VC1213A	1VC1594B	1VC2243E
1VC1082B	1VC1247B	1VC1595B	1VC2246F
1VC1085B	1VC1258A	1VC1640A	1VC2249G
1VC1087B	1VC1259B	1VC1646A	1VC2254B
1VC1089B	1VC1261B	1VC1680B	1VC2276D
1VC1094A	1VC1283B	1VC1682A	1VC2277E
1VC1095A	1VC1289B	1VC1686B	1VC2278F
1VC1098A	1VC1392A	1VC1689A	1VC2279G
1VC1100A	1VC1393A	1VC1763B	1VC2295A
1VC1103B	1VC1398A	1VC1818A	1VC2303A
1VC1105B	1VC1400B	1VC1934A	1VC2307B
1VC1106B	1VC1498B	1VC1975B	1VC2311B
1VC1107B	1VC1502B	1VC2007B	1VC2336A
1VC1109B	1VC1503B	1VC2011A	1VC2361A
1VC1119B	1VC1504B	1VC2016B	1VC2530B
1VC1120B	1VC1506B	1VC2035B	1VC2558A
1VC1140D	1VC1507B	1VC2069A	1VC2565B

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