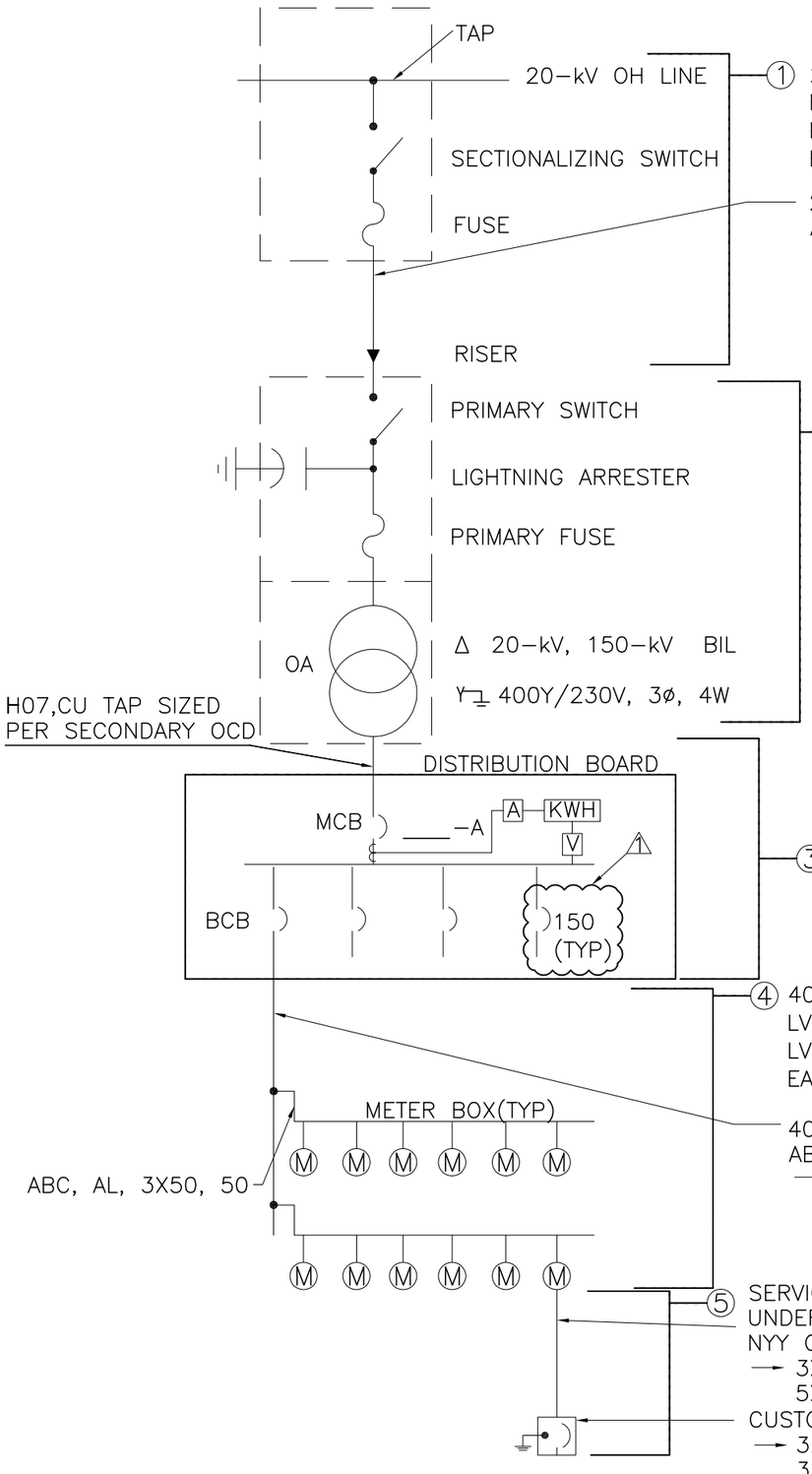

① 20-kV OHL
MV SUSPENSION (TANGENT) POLES, SINGLE 2,000-mm CROSS ARM, DABS AS-01, 2XAS-05, AS-07, MV-301C
MV TENSION (ANGLE) POLES, DOUBLE 2,000-mm CROSS ARMS, DABS AS-03, 1XAS-05, 6XAS-09, MV-308C
EACH MV TENSION (ANGLE) POLE IS GUYED. MV GUY; DABS AN-S1, GU-S1, GU-102C

20-kV OH LINE
ACSR
→ DIN 70/12
DIN 95/15
DIN 120/20
DIN 185/30

② 2

SECONDARY TRANSFORMER SUBSTATION & DISTRIBUTION BOARD			
TRANSFORMER kVA	MCB (A)	TAP C/ø, 3P+N (mm^2)	BCB (A)
25	50	1 X 50	NONE
40	80	1 X 50	NONE
63	120	1 X 50	NONE
100	200	1 X 120	2 X 150
160	300	1 X 240	3 X 150
250	500	2 X 150	5 X 150
400	800	3 X 185	7 X 150
630	1200	5 X 185	12 X 150
1000	2000	8 X 240	10 X 250

③ SECONDARY 400-V DISTRIBUTION
SIZE TRANSFORMER SECONDARY OCD PER TRANSFORMER SIZE

④ 400-V OH TO METER BOXES
LV SUSPENSION (TANGENT) POLES, DABS AS-11, LV-101
LV TENSION (ANGLE) POLES, DABS AS-12, AS-13, LV-102
EACH LV TENSION (ANGLE) POLE IS GUYED. LV GUY, DABS AN-S1, GU-S1, GU-101C

400-V OH LINE
ABC, AL
→ 3X50, 50
3X70, 50
3X95, 70
3X120, 70

⑤ SERVICE LATERALS AND SE DISCONNECTS
UNDERGROUND SERVICE LATERAL
NYY CU
→ 3X10 RE
5X10 RE
CUSTOMER SERVICE DISCONNECT
→ 32A, 1P
32A, 3P

NOTE:
MATERIALS SHALL CONFORM TO DABS DISTRIBUTION STANDARDS, CHAPTER U DABS STANDARD TECHNICAL DATA SHEETS, CHAPTER Y, DABS TECHNICAL SPECIFICATIONS, CHAPTERS A THROUGH S, AND DABS CHAPTER Z-3 INFORMATION ON SPECIFIC ITEMS OF SUPPLY, CHAPTERS D,H,I,N,O,S.

NOT FOR CONSTRUCTION

UNLESS OTHERWISE NOTED, LINEAR DIMENSIONS SHOWN ARE IN MILLIMETERS.

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CONCEPT DESIGN

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SYMB	DESCRIPTION	DATE	APR
2	ADDED SECONDARY TABLE	12/20/2010	
1	CHANGED SIZE OF OCD	12/18/2010	

DESIGNED BY: MAL
DATE: 12/31/2010
DWN BY: AS
SUBMITTED BY: TETRA TECH
CHK BY: MAL
FILE NO.: LT0025-E-100

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AESP

USAID - OIEE
42 VILLAGES ELECTRIFICATION
ELECTRICAL
ONE-LINE DIAGRAM

SHEET REFERENCE NUMBER:
LT0025
E-100

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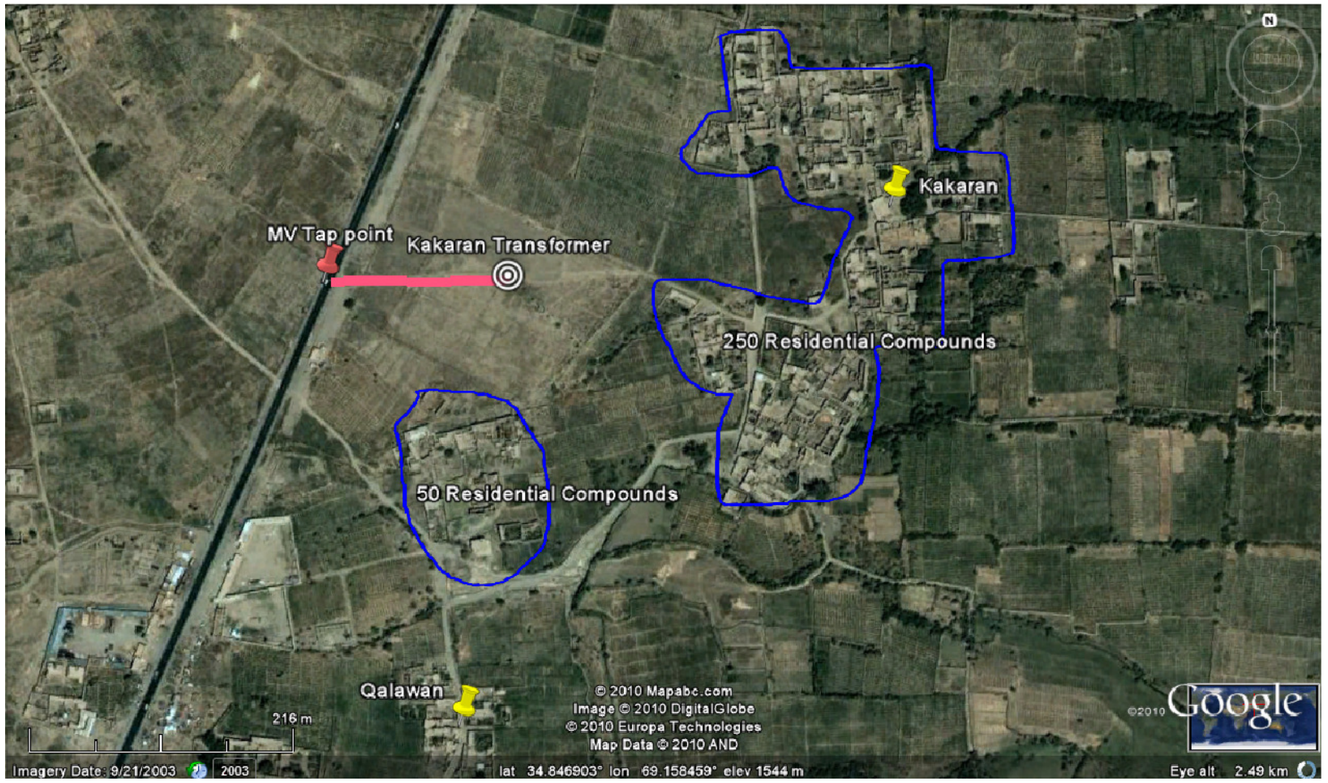

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50 0 50 100 150 200
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N

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SYMB	DESCRIPTION	DATE	APR

DESIGNED BY: AS
DATE: 01/04/2011
DWN BY: AS
SUBMITTED BY: TETRA TECH
CHK BY: MAL
FILE NO.: LT0025-E-141

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42 VILLAGES ELECTRIFICATION
KAKARAN
AERIAL IMAGE

SHEET REFERENCE NUMBER:
LT0025
E-141

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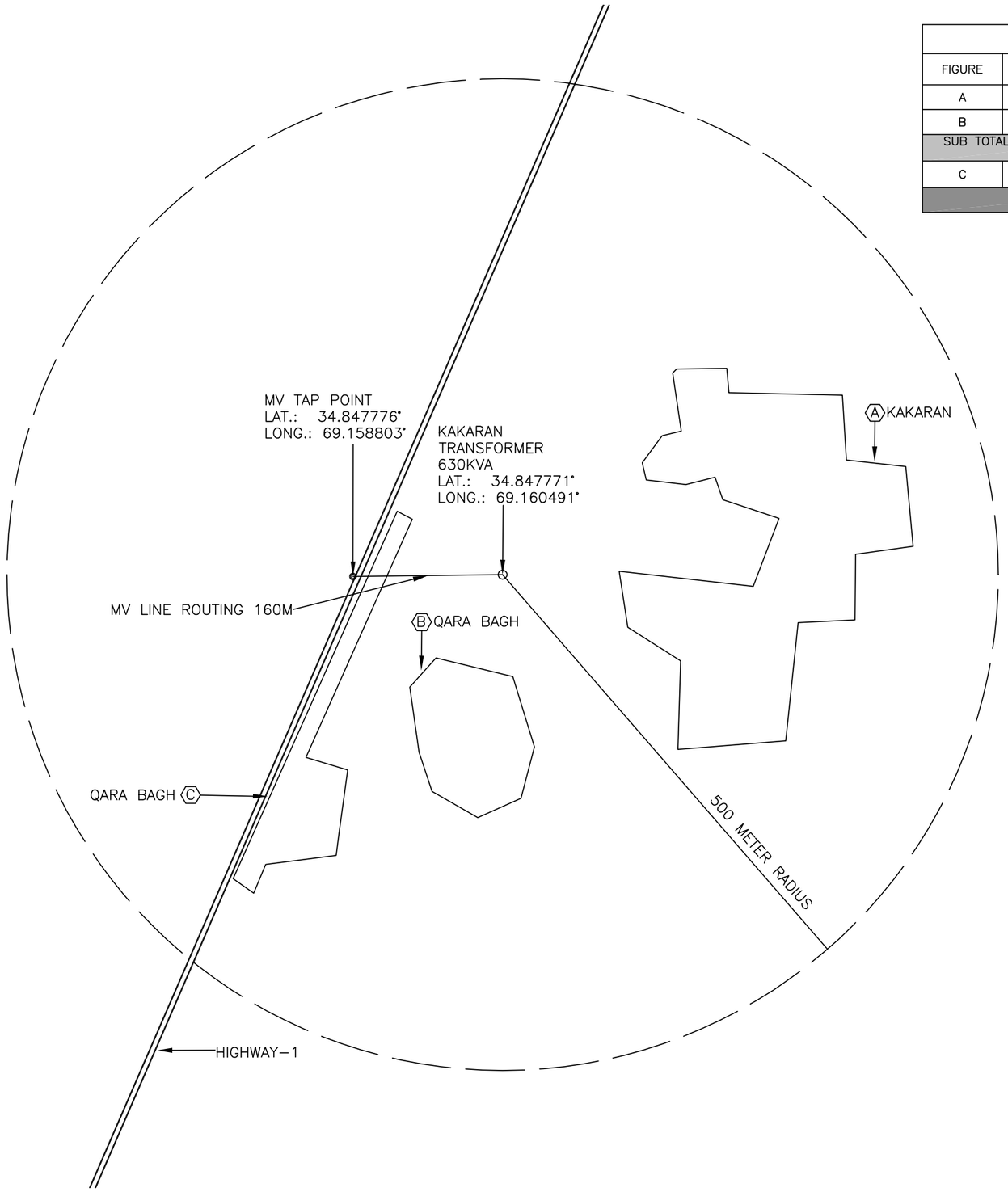

SUMMARY TABLE					
FIGURE	TYPE OF CUSTOMER	NUMBER OF CUSTOMER	AREA M²	DENSITY M²/CUSTOMER	ESTIMATED PEAK COINCIDENTAL KW
A	RESIDENTIAL COMPOUNDS	250	57,786	231	175
B	RESIDENTIAL COMPOUNDS	50	14,765	295	35
SUB TOTAL LOAD OF RESIDENTIAL COMPOUNDS		300	72,551	242	210
C	BAZAAR	70	350		70
TOTAL LOAD		370	72,901	197	280

N

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SYMB	DESCRIPTION	DATE
		APR

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DATE: 01/04/2011
DWN BY: AS
SUBMITTED BY: TETRA TECH
CHK BY: MAL
FILE NO.: LT0025-E-142

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42 VILLAGES ELECTRIFICATION
KAKARAN
CONCEPT DESIGN

SHEET REFERENCE NUMBER:
LT0025
E-142

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1:5000

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