SOLICITATION, OFFER AND AWARD

1 THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)	RATING	PAGE 1 OF PAGES 113

2 CONTRACT NO	3 SOLICITATION NO	4 TYPE OF SOLICITATION	5 DATE ISSUED	6 REQUISITION/PURCHASE NO
M67854-08-C-8017	M67854-07-R-8017	[ ] SEALED BID (IFB) [X] NEGOTIATED (RFP)	13 Aug 2007	

7 ISSUED BY CODE M67854
PM TRASYS
PROGRAM MANAGER, TRA NING SYSTEMS
12350 RESEARCH PARKWAY
ORLANDO FL 32826-3275
TEL:
FAX:

8 ADDRESS OFFER TO (If other than Item 7) CODE
See Item 7
TEL:
FAX:

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder"

SOLICITATION

9. Sealed offers in original and _____ copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if handcarried, in the depository located in _____ until 12:00 PM (Hour) local time 14 Sep 2007 (Date)

CAUTION - LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation.

10 FOR INFORMATION CALL:	A NAME	B TELEPHONE (Include area code) (NO COLLECT CALLS)	C. E-MAIL ADDRESS
	SANDI BRUBAKER	407-380-8184	sandi brubaker@usmc mil

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OFFER (Must be fully completed by offeror)

NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.

12. In compliance with the above, the undersigned agrees, if this offer is accepted within _____ calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52.232-8): Net 30 Days

14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated):

AMENDMENT NO.	DATE	AMENDMENT NO.	DATE

15A. NAME AND ADDRESS OF OFFEROR — CODE 8X637 FACILITY
AHNTECH
KATHY JACKSON
3333 CAM NO DEL RIO SOUTH
SUITE 120
SAN D EGO CA 92108-3836

16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)
KATHY JACKSON / CORP PROGRAM DIRECTOR

15B. TELEPHONE NO (Include area code)
850-939-7945

15C CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE [ ]

17. SIGNATURE

18. OFFER DATE

AWARD (To be completed by Government)

19 ACCEPTED AS TO ITEMS NUMBERED	20 AMOUNT	21 ACCOUNTING AND APPROPRIATION
	$2,865,390.57	See Schedule

22 AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION:
[ ] 10 U S C 2304(c)( ) [ ] 41 U S C 253(c)( )

23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified) — ITEM

24 ADMINISTERED BY (If other than Item 7) CODE
See Item 7

25 PAYMENT WILL BE MADE BY CODE M67443
DFAS-COLUMBUS CENTER
P.O. BOX 369022
ATTN: KANSAS - M67443
COLUMBUS OH 43236-9022

26. NAME OF CONTRACTING OFFICER (Type or print)
JOHN E. LYNCH
TEL: 407-380-4197 EMAIL: john.e.lynch2@usmc.mil

27 UNITED STATES OF AMERICA
(Signature of Contracting Officer)

28 AWARD DATE
22-Jan-2008

IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001		1	Lot	$1,112,684.17	$1,112,684.17
	Mobilization FFP (02 July 2007 - 31August 2007) FOB: Destination MILSTRIP: M6785408RCAC403				
				NET AMT	$1,112,684.17
	ACRN AA CIN: 000000000000000000000000000000				$1,112,684.17

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002		1	Each		
	Data Items for Mobilization FFP Specified in Exhibit A, DD From 1423 NOT SEPARATELY PRICED FOB: Destination				
				NET AMT	$0.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0100					NSP
	MAGTF Twentynine Palms, CA FFP FOB: Destination				
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0101		10	Each	$2,636.22	$26,362.20
	Range 103 AFFR - COMS FFP FOB: Destination				
				NET AMT	$26,362.20

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
010101					
	ACRN AA FFP FOB: Destination MILSTRIP: M6785408RCAC403				
				NET AMT	$0.00
	ACRN AA CIN: 0000000000000000000000000000000				$15,817.32

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0102		10	Each	$901.87	$9,018.70
	Range 103 AFFR - Berm Maintenance FFP FOB: Destination				
				NET AMT	$9,018.70

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
010201					
	ACRN AA FFP FOB: Destination MILSTRIP: M6785408RCAC403				
				NET AMT	$0.00
	ACRN AA CIN: 000000000000000000000000000000				$5,411.22

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0103		10	Each	$2,722.94	$27,229.40
	Range 107 AFFR - COMS FFP FOB: Destination				
				NET AMT	$27,229.40

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
010301					
	ACRN AA FFP FOB: Destination MILSTRIP: M6785408RCAC403				
				NET AMT	$0.00
	ACRN AA CIN: 00000000000000000000000000000				$16,337.64

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0104		10	Each	$589.68	$5,896.80
	Range 107 AFFR - Berm Maintenance FFP FOB: Destination				
				NET AMT	$5,896.80

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
010401					
	ACRN AA FFP FOB: Destination MILSTRIP: M6785408RCAC403				
				NET AMT	$0.00
	ACRN AA CIN: 00000000000000000000000000000				$3,538.08

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0105		10	Each	$6,590.55	$65,905.50
	Range 108 ISBC - COMS FFP FOB: Destination				
				NET AMT	$65,905.50

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
010501					
	ACRN AA FFP FOB: Destination MILSTRIP: M6785408RCAC403				
				NET AMT	$0.00
	ACRN AA CIN: 00000000000000000000000000000				$39,543.30

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0106		10	Each	$1,109.99	$11,099.90
	Range 108 ISBC - Berm Maintenance FFP FOB: Destination				
				NET AMT	$11,099.90

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
010601					
	ACRN AA FFP FOB: Destination MILSTRIP: M6785408RCAC403				
				NET AMT	$0.00
	ACRN AA CIN: 00000000000000000000000000000				$6,659.94

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0107		10	Each	$7,700.54	$77,005.40
	Range 109 AALFT - COMS FFP FOB: Destination				
				NET AMT	$77,005.40

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
010701					
	ACRN AA FFP FOB: Destination MILSTRIP: M6785408RCAC403				
				NET AMT	$0.00
	ACRN AA CIN: 000000000000000000000000000000				$46,203.24

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0108		10	Each	$2,480.13	$24,801.30
	Range 109 AALFT - Berm Maintenance FFP FOB: Destination				
				NET AMT	$24,801.30

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
010801					
	ACRN AA FFP FOB: Destination MILSTRIP: M6785408RCAC403				
				NET AMT	$0.00
	ACRN AA CIN: 00000000000000000000000000000				$14,880.78

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0109		10	Each	$5,046.98	$50,469.80
	Range 113 MPMG - COMS FFP FOB: Destination				
				NET AMT	$50,469.80

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
010901					
	ACRN AA FFP FOB: Destination MILSTRIP: M6785408RCAC403				
				NET AMT	$0.00
	ACRN AA CIN: 00000000000000000000000000000				$30,281.88

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0110		10	Each	$277.50	$2,775.00
	Range 113 MPMG - Berm Maintenance FFP FOB: Destination				
				NET AMT	$2,775.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
011001					
	ACRN AA FFP FOB: Destination MILSTRIP: M6785408RCAC403				
				NET AMT	$0.00
	ACRN AA CIN: 00000000000000000000000000000				$1,665.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0111		10	Each	$20,604.15	$206,041.50
	Range 500 MPRC - COMS FFP FOB: Destination				
				NET AMT	$206,041.50

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
011101					
	ACRN AA FFP FOB: Destination MILSTRIP: M6785408RCAC403				
				NET AMT	$0.00
	ACRN AA CIN: 00000000000000000000000000000				$84,568.05

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
011102					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$39,056.85

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0112		10	Each	$2,827.00	$28,270.00
	Range 500 MPRC - Berm Maintenance FFP FOB: Destination				
				NET AMT	$28,270.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
011201					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 000000000000000000000000000000				$16,962.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0113		10	Each	$832.49	$8,324.90
	Range 500 MPRC - PV Power System Maint. FFP FOB: Destination				
				NET AMT	$8,324.90

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
011301					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$4,994.94

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0114		10	Each	$3,676.83	$36,768.30
	Range 1A UDRR - COMS FFP FOB: Destination				
				NET AMT	$36,768.30

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
011401					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$22,060.98

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0115		10	Each	$225.47	$2,254.70
	Range 1A - Berm Maintenance FFP FOB: Destination				
				NET AMT	$2,254.70

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
011501					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$1,352.82

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0116		10	Each	$1,179.36	$11,793.60
	Range 2A CPC - COMS FFP FOB: Destination				
				NET AMT	$11,793.60

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
011601					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$7,076.16

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0117		10	Each	$121.40	$1,214.00
	Range 2A CPC - Berm Maintenance FFP FOB: Destination				
				NET AMT	$1,214.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
011701					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$728.40

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0118		10	Each	$1,734.36	$17,343.60
	Tactical Video Network (TVN) - COMS FFP FOB: Destination				
				NET AMT	$17,343.60

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
011801					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$10,406.16

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0119		10	Each	$15,487.80	$154,878.00
	Live Fire Training - COMS FFP FOB: Destination				
				NET AMT	$154,878.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
011901					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$92,926.80

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0120		10	Each	$728.43	$7,284.30
	Precision Gunnery Training System - COMS FFP FOB: Destination				
				NET AMT	$7,284.30

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
012001					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$4,370.58

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0121		10	Each	$12,140.49	$121,404.90
	Live Fire MOUT - COMS FFP FOB: Destination				
				NET AMT	$121,404.90

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
012101					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$72,842.94

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0122		10	Each	$13,684.07	$136,840.70
	TA East Training Complex - COMS FFP FOB: Destination				
				NET AMT	$136,840.70

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
012201					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$82,104.42

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0123		10	Each	$14,967.49	$149,674.90
	Video Capture System - COMS FFP FOB: Destination				
				NET AMT	$149,674.90

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
012301					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$89,804.94

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0124		10	Each	$1,769.04	$17,690.40
	Minor Training Devices - COMS FFP FOB: Destination				
				NET AMT	$17,690.40

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
012401					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$10,614.24

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0125		10	Each	$13,788.13	$137,881.30
	TA West Training Complex - COMS FFP FOB: Destination				
				NET AMT	$137,881.30

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
012501					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$82,728.78

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0126		10	Each	$4,110.42	$41,104.20
	Range 111 MOUT Assault Course - COMS FFP FOB: Destination				
				NET AMT	$41,104.20

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
012601					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$24,662.52

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0127		10	Each	$3,399.34	$33,993.40
	Range 111 MAC -Real Property Maintenance FFP FOB: Destination				
				NET AMT	$33,993.40

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
012701					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$20,396.04

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0128		10	Each	$4,370.58	$43,705.80
	MOUT Air Indirect Fire Ranges - COMS FFP FOB: Destination				
				NET AMT	$43,705.80

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
012801					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$26,223.48

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0129		10	Each	$13,423.91	$134,239.10
	Combined Arms MOUT - COMS FFP FOB: Destination				
				NET AMT	$134,239.10

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
012901					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$80,543.46

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0130		10	Each	$6,694.61	$66,946.10
	Range 400 - COMS FFP FOB: Destination				
				NET AMT	$66,946.10

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
013001					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$40,167.66

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0131		10	Each	$450.93	$4,509.30
	Range 400 - Berm Maintenance FFP FOB: Destination				
				NET AMT	$4,509.30

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
013101					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$2,705.58

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0132		10	Each	$6,694.61	$66,946.10
	Range 410 - COMS FFP FOB: Destination				
				NET AMT	$66,946.10

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
013201					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$40,167.66

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0133		10	Each	$450.93	$4,509.30
	Range 410 - Berm Maintenance FFP FOB: Destination				
				NET AMT	$4,509.30

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
013301					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$2,705.58

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0200					NSP
	MCAS Yuma, AZ FFP FOB: Destination				
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0201		10	Each	$838.84	$8,388.40
	Minor Training Devices - COMS FFP FOB: Destination				
				NET AMT	$8,388.40

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
020101					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$5,033.04

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0202		10	Each	$481.78	$4,817.80
	Rifle Range - COMS FFP FOB: Destination				
				NET AMT	$4,817.80

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
020201					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$2,890.68

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0203		10	Each	$481.78	$4,817.80
	Pistol Range - COMS FFP FOB: Destination				
				NET AMT	$4,817.80

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
020301					
	ACRN AB FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 00000000000000000000000000000				$2,890.68

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0204					$ TBN
	Time and Materials FFP FOB: Destination				
				NET AMT	$0.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0205		25	Hours	$20.00	$500.00
	Premium Time FFP FOB: Destination				
				NET AMT	$500.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
020501					
	FFP FOB: Destination MILSTRIP: M9543008RCTR002				
				NET AMT	$0.00
	ACRN AB CIN: 000000000000000000000000000000				$240.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0300 OPTION	MAGTF Twentynine Palms, CA FFP FOB: Destination				NSP
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0301 OPTION	Range 103 AFFR - COMS FFP FOB: Destination	12	Each	$2,636.22	$31,634.64
				NET AMT	$31,634.64

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0302 OPTION	Range 103 AFFR - Berm Maintenance FFP FOB: Destination	12	Each	$901.87	$10,822.44
				NET AMT	$10,822.44

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0303 OPTION	Range 107 AFFR - COMS FFP FOB: Destination	12	Each	$2,722.94	$32,675.28
				NET AMT	$32,675.28

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0304 OPTION	Range 107 AFFR - Berm Maintenance FFP FOB: Destination	12	Each	$589.68	$7,076.16
				NET AMT	$7,076.16

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0305 OPTION	Range 108 ISBC - COMS FFP FOB: Destination	12	Each	$6,590.55	$79,086.60
				NET AMT	$79,086.60

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0306 OPTION	Range 108 ISBC - Berm Maintenance FFP FOB: Destination	12	Each	$1,109.99	$13,319.88
				NET AMT	$13,319.88

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0307 OPTION	Range 109 AALFT - COMS FFP FOB: Destination	12	Each	$7,700.54	$92,406.48
				NET AMT	$92,406.48

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0308 OPTION	Range 109 AALFT - Berm Maintenance FFP FOB: Destination	12	Each	$2,480.13	$29,761.56
				NET AMT	$29,761.56

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0309 OPTION	Range 113 MPMG - COMS FFP FOB: Destination	12	Each	$5,046.98	$60,563.76
				NET AMT	$60,563.76

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0310 OPTION	Range 113 MPMG - Berm Maintenance FFP FOB: Destination	12	Each	$277.50	$3,330.00
				NET AMT	$3,330.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0311 OPTION	Range 500 MPRC - COMS FFP FOB: Destination	12	Each	$20,604.15	$247,249.80
				NET AMT	$247,249.80

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0312 OPTION	Range 500 MPRC - Berm Maintenance FFP FOB: Destination	12	Each	$2,827.00	$33,924.00
				NET AMT	$33,924.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0313 OPTION	Range 500 MPRC - PV Power System Maint. FFP FOB: Destination	12	Each	$832.49	$9,989.88
				NET AMT	$9,989.88

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0314 OPTION	Range 1A UDRR - COMS FFP FOB: Destination	12	Each	$3,676.83	$44,121.96
				NET AMT	$44,121.96

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0315 OPTION	Range 1A - Berm Maintenance FFP FOB: Destination	12	Each	$255.47	$3,065.64
				NET AMT	$3,065.64

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0316 OPTION	Range 2A CPC - COMS FFP FOB: Destination	12	Each	$1,179.36	$14,152.32
				NET AMT	$14,152.32

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0317 OPTION	Range 2A CPC - Berm Maintenance FFP FOB: Destination	12	Each	$121.40	$1,456.80
				NET AMT	$1,456.80

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0318 OPTION	Tactical Video Network (TVN) - COMS FFP FOB: Destination	12	Each	$1,734.36	$20,812.32
				NET AMT	$20,812.32

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0319 OPTION	Live Fire Training - COMS FFP FOB: Destination	12	Each	$15,487.80	$185,853.60
				NET AMT	$185,853.60

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0320 OPTION	Precision Gunnery Training System - COMS FFP FOB: Destination	12	Each	$728.43	$8,741.16
				NET AMT	$8,741.16

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0321 OPTION	Live Fire MOUT - COMS FFP FOB: Destination	12	Each	$12,140.49	$145,685.88
				NET AMT	$145,685.88

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0322 OPTION	TA East Training Complex - COMS FFP FOB: Destination	12	Each	$13,684.07	$164,208.84
				NET AMT	$164,208.84

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0323 OPTION	Video Capture System - COMS FFP FOB: Destination	12	Each	$14,967.49	$179,609.88
				NET AMT	$179,609.88

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0324 OPTION	Minor Training Devices - COMS FFP FOB: Destination	12	Each	$1,769.04	$21,228.48
				NET AMT	$21,228.48

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0325 OPTION	TA West Training Complex - COMS FFP FOB: Destination	12	Each	$13,788.13	$165,457.56
				NET AMT	$165,457.56

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0326 OPTION	Range 111 MOUT Assault Course - COMS FFP FOB: Destination	12	Each	$4,110.42	$49,325.04
				NET AMT	$49,325.04

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0327 OPTION	Range 111 MAC -Real Property Maintenance FFP FOB: Destination	12	Each	$3,399.34	$40,792.08
				NET AMT	$40,792.08

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0328 OPTION	MOUT Air Indirect Fire Ranges - COMS FFP FOB: Destination	12	Each	$4,370.58	$52,446.96
				NET AMT	$52,446.96

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0329 OPTION	Combined Arms MOUT - COMS FFP FOB: Destination	12	Each	$13,423.91	$161,086.92
				NET AMT	$161,086.92

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0330 OPTION	Range 400 - COMS FFP FOB: Destination	12	Each	$6,694.61	$80,335.32
				NET AMT	$80,335.32

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0331 OPTION	Range 400 - Berm Maintenance FFP FOB: Destination	12	Each	$450.93	$5,411.16
				NET AMT	$5,411.16

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0332 OPTION	Range 410 - COMS FFP FOB: Destination	12	Each	$6,694.61	$80,335.32
				NET AMT	$80,335.32

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0333 OPTION	Range 410 - Berm Maintenance FFP FOB: Destination	12	Each	$450.93	$5,411.16
				NET AMT	$5,411.16

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0400 OPTION	MCAS Yuma, AZ FFP FOB: Destination				NSP
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0401 OPTION	Minor Training Devices - COMS FFP FOB: Destination	12	Each	$838.84	$10,066.08
				NET AMT	$10,066.08

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0402 OPTION	Rifle Range - COMS FFP FOB: Destination	12	Each	$481.78	$5,781.36
				NET AMT	$5,781.36

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0403 OPTION	Pistol Range - COMS FFP FOB: Destination	12	Each	$481.78	$5,781.36
				NET AMT	$5,781.36

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0404 OPTION	Time and Materials FFP FOB: Destination				$ TBN
				NET AMT	$0.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0405 OPTION	Premium Time FFP FOB: Destination	25	Hours	$20.00	$500.00
				NET AMT	$500.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0500 OPTION	MAGTF Twentynine Palms, CA FFP FOB: Destination				NSP
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0501 OPTION	Range 103 AFFR - COMS FFP FOB: Destination	12	Each	$2,636.22	$31,634.64
				NET AMT	$31,634.64

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0502 OPTION	Range 103 AFFR - Berm Maintenance FFP FOB: Destination	12	Each	$901.87	$10,822.44
				NET AMT	$10,822.44

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0503 OPTION	Range 107 AFFR - COMS FFP FOB: Destination	12	Each	$2,722.94	$32,675.28
				NET AMT	$32,675.28

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0504 OPTION	Range 107 AFFR - Berm Maintenance FFP FOB: Destination	12	Each	$589.68	$7,076.16
				NET AMT	$7,076.16

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0505 OPTION	Range 108 ISBC - COMS FFP FOB: Destination	12	Each	$6,590.55	$79,086.60
				NET AMT	$79,086.60

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0506 OPTION	Range 108 ISBC - Berm Maintenance FFP FOB: Destination	12	Each	$1,109.99	$13,319.88
				NET AMT	$13,319.88

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0507 OPTION	Range 109 AALFT - COMS FFP FOB: Destination	12	Each	$7,700.54	$92,406.48
				NET AMT	$92,406.48

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0508 OPTION	Range 109 AALFT - Berm Maintenance FFP FOB: Destination	12	Each	$2,480.13	$29,761.56
				NET AMT	$29,761.56

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0509 OPTION	Range 113 MPMG - COMS FFP FOB: Destination	12	Each	$5,046.98	$60,563.76
				NET AMT	$60,563.76

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0510 OPTION	Range 113 MPMG - Berm Maintenance FFP FOB: Destination	12	Each	$277.50	$3,330.00
				NET AMT	$3,330.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0511 OPTION	Range 500 MPRC - COMS FFP FOB: Destination	12	Each	$20,604.15	$247,249.80
				NET AMT	$247,249.80

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0512 OPTION	Range 500 MPRC - Berm Maintenance FFP FOB: Destination	12	Each	$2,827.00	$33,924.00
				NET AMT	$33,924.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0513 OPTION	Range 500 MPRC - PV Power System Maint. FFP FOB: Destination	12	Each	$832.49	$9,989.88
				NET AMT	$9,989.88

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0514 OPTION	Range 1A UDRR - COMS FFP FOB: Destination	12	Each	$3,676.83	$44,121.96
				NET AMT	$44,121.96

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0515 OPTION	Range 1A - Berm Maintenance FFP FOB: Destination	12	Each	$225.47	$2,705.64
				NET AMT	$2,705.64

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0516 OPTION	Range 2A CPC - COMS FFP FOB: Destination	12	Each	$1,179.36	$14,152.32
				NET AMT	$14,152.32

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0517 OPTION	Range 2A CPC - Berm Maintenance FFP FOB: Destination	12	Each	$121.40	$1,456.80
				NET AMT	$1,456.80

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0518 OPTION	Tactical Video Network (TVN) - COMS FFP FOB: Destination	12	Each	$1,734.36	$20,812.32
				NET AMT	$20,812.32

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0519 OPTION	Live Fire Training - COMS FFP FOB: Destination	12	Each	$15,487.80	$185,853.60
				NET AMT	$185,853.60

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0520 OPTION	Precision Gunnery Training System - COMS FFP FOB: Destination	12	Each	$728.43	$8,741.16
				NET AMT	$8,741.16

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0521 OPTION	Live Fire MOUT - COMS FFP FOB: Destination	12	Each	$12,140.49	$145,685.88
				NET AMT	$145,685.88

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0522 OPTION	TA East Training Complex - COMS FFP FOB: Destination	12	Each	$13,684.07	$164,208.84
				NET AMT	$164,208.84

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0523 OPTION	Video Capture System - COMS FFP FOB: Destination	12	Each	$14,967.49	$179,609.88
				NET AMT	$179,609.88

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0524 OPTION	Minor Training Devices - COMS FFP FOB: Destination	12	Each	$1,769.04	$21,228.48
				NET AMT	$21,228.48

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0525 OPTION	TA West Training Complex - COMS FFP FOB: Destination	12	Each	$13,788.13	$165,457.56
				NET AMT	$165,457.56

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0526 OPTION	Range 111 MOUT Assault Course - COMS FFP FOB: Destination	12	Each	$4,110.42	$49,325.04
				NET AMT	$49,325.04

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0527 OPTION	Range 111 MAC -Real Property Maintenance FFP FOB: Destination	12	Each	$3,399.34	$40,792.08
				NET AMT	$40,792.08

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0528 OPTION	MOUT Air Indirect Fire Ranges - COMS FFP FOB: Destination	12	Each	$4,370.58	$52,446.96
				NET AMT	$52,446.96

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0529 OPTION	Combined Arms MOUT - COMS FFP FOB: Destination	12	Each	$13,423.91	$161,086.92
				NET AMT	$161,086.92

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0530 OPTION	Range 400 - COMS FFP FOB: Destination	12	Each	$6,694.61	$80,335.32
				NET AMT	$80,335.32

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0531 OPTION	Range 400 - Berm Maintenance FFP FOB: Destination	12	Each	$450.93	$5,411.16
				NET AMT	$5,411.16

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0532 OPTION	Range 410 - COMS FFP FOB: Destination	12	Each	$6,694.61	$80,335.32
				NET AMT	$80,335.32

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0533 OPTION	Range 410 - Berm Maintenance FFP FOB: Destination	12	Each	$450.93	$5,411.16
				NET AMT	$5,411.16

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0600 OPTION	MCAS Yuma, AZ FFP FOB: Destination				NSP
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0601 OPTION	Minor Training Devices - COMS FFP FOB: Destination	12	Each	$838.84	$10,066.08
				NET AMT	$10,066.08

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0602 OPTION	Rifle Range - COMS FFP FOB: Destination	12	Each	$481.78	$5,781.36
				NET AMT	$5,781.36

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0603 OPTION	Pistol Range - COMS FFP FOB: Destination	12	Each	$481.78	$5,781.36
				NET AMT	$5,781.36

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0604 OPTION	Time and Materials FFP FOB: Destination				$ TBN
				NET AMT	$0.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0605 OPTION	Premium Time FFP FOB: Destination	25	Hours	$20.00	$500.00
				NET AMT	$500.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0700 OPTION	MAGTF Twentynine Palms, CA FFP FOB: Destination				NSP
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0701 OPTION	Range 103 AFFR - COMS FFP FOB: Destination	12	Each	$2,636.22	$31,634.64
				NET AMT	$31,634.64

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0702 OPTION	Range 103 AFFR - Berm Maintenance FFP FOB: Destination	12	Each	$901.87	$10,822.44
				NET AMT	$10,822.44

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0703 OPTION	Range 107 AFFR - COMS FFP FOB: Destination	12	Each	$2,722.94	$32,675.28
				NET AMT	$32,675.28

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0704 OPTION	Range 107 AFFR - Berm Maintenance FFP FOB: Destination	12	Each	$589.68	$7,076.16
				NET AMT	$7,076.16

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0705 OPTION	Range 108 ISBC - COMS FFP FOB: Destination	12	Each	$6,590.55	$79,086.60
				NET AMT	$79,086.60

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0706 OPTION	Range 108 ISBC - Berm Maintenance FFP FOB: Destination	12	Each	$1,109.99	$13,319.88
				NET AMT	$13,319.88

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0707 OPTION	Range 109 AALFT - COMS FFP FOB: Destination	12	Each	$7,700.54	$92,406.48
				NET AMT	$92,406.48

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0708 OPTION	Range 109 AALFT - Berm Maintenance FFP FOB: Destination	12	Each	$2,480.13	$29,761.56
				NET AMT	$29,761.56

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0709 OPTION	Range 113 MPMG - COMS FFP FOB: Destination	12	Each	$5,046.98	$60,563.76
				NET AMT	$60,563.76

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0710 OPTION	Range 113 MPMG - Berm Maintenance FFP FOB: Destination	12	Each	$277.50	$3,330.00
				NET AMT	$3,330.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0711 OPTION	Range 500 MPRC - COMS FFP FOB: Destination	12	Each	$20,604.15	$247,249.80
				NET AMT	$247,249.80

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0712 OPTION	Range 500 MPRC - Berm Maintenance FFP FOB: Destination	12	Each	$2,827.00	$33,924.00
				NET AMT	$33,924.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0713 OPTION	Range 500 MPRC - PV Power System Maint. FFP FOB: Destination	12	Each	$832.49	$9,989.88
				NET AMT	$9,989.88

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0714 OPTION	Range 1A UDRR - COMS FFP FOB: Destination	12	Each	$3,676.83	$44,121.96
				NET AMT	$44,121.96

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0715 OPTION	Range 1A - Berm Maintenance FFP FOB: Destination	12	Each	$225.47	$2,705.64
				NET AMT	$2,705.64

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0716 OPTION	Range 2A CPC - COMS FFP FOB: Destination	12	Each	$1,179.36	$14,152.32
				NET AMT	$14,152.32

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0717 OPTION	Range 2A CPC - Berm Maintenance FFP FOB: Destination	12	Each	$121.40	$1,456.80
				NET AMT	$1,456.80

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0718 OPTION	Tactical Video Network (TVN) - COMS FFP FOB: Destination	12	Each	$1,734.36	$20,812.32
				NET AMT	$20,812.32

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0719 OPTION	Live Fire Training - COMS FFP FOB: Destination	12	Each	$15,487.80	$185,853.60
				NET AMT	$185,853.60

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0720 OPTION	Precision Gunnery Training System - COMS FFP FOB: Destination	12	Each	$728.43	$8,741.16
				NET AMT	$8,741.16

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0721 OPTION	Live Fire MOUT - COMS FFP FOB: Destination	12	Each	$12,140.49	$145,685.88
				NET AMT	$145,685.88

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0722 OPTION	TA East Training Complex - COMS FFP FOB: Destination	12	Each	$13,684.07	$164,208.84
				NET AMT	$164,208.84

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0723 OPTION	Video Capture System - COMS FFP FOB: Destination	12	Each	$14,967.49	$179,609.88
				NET AMT	$179,609.88

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0724 OPTION	Minor Training Devices - COMS FFP FOB: Destination	12	Each	$1,769.04	$21,228.48
				NET AMT	$21,228.48

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0725 OPTION	TA West Training Complex - COMS FFP FOB: Destination	12	Each	$13,788.13	$165,457.56
				NET AMT	$165,457.56

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0726 OPTION	Range 111 MOUT Assault Course - COMS FFP FOB: Destination	12	Each	$4,110.42	$49,325.04
				NET AMT	$49,325.04

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0727 OPTION	Range 111 MAC -Real Property Maintenance FFP FOB: Destination	12	Each	$3,399.34	$40,792.08
				NET AMT	$40,792.08

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0728 OPTION	MOUT Air Indirect Fire Ranges - COMS FFP FOB: Destination	12	Each	$4,370.58	$52,446.96
				NET AMT	$52,446.96

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0729 OPTION	Combined Arms MOUT - COMS FFP FOB: Destination	12	Each	$13,423.91	$161,086.92
				NET AMT	$161,086.92

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0730 OPTION	Range 400 - COMS FFP FOB: Destination	12	Each	$6,694.61	$80,335.32
				NET AMT	$80,335.32

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0731 OPTION	Range 400 - Berm Maintenance FFP FOB: Destination	12	Each	$450.93	$5,411.16
				NET AMT	$5,411.16

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0732 OPTION	Range 410 - COMS FFP FOB: Destination	12	Each	$6,694.61	$80,335.32
				NET AMT	$80,335.32

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0733 OPTION	Range 410 - Berm Maintenance FFP FOB: Destination	12	Each	$450.93	$5,411.16
				NET AMT	$5,411.16

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0800 OPTION	MCAS Yuma, AZ FFP FOB: Destination				NSP
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0801 OPTION	Minor Training Devices - COMS FFP FOB: Destination	12	Each	$838.84	$10,066.08
				NET AMT	$10,066.08

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0802 OPTION	Rifle Range - COMS FFP FOB: Destination	12	Each	$481.78	$5,781.36
				NET AMT	$5,781.36

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0803 OPTION	Pistol Range - COMS FFP FOB: Destination	12	Each	$481.78	$5,781.36
				NET AMT	$5,781.36

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0804 OPTION	Time and Materials FFP FOB: Destination				$ TBN
				NET AMT	$0.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0805 OPTION	Premium Time FFP FOB: Destination	25	Hours	$20.00	$500.00
				NET AMT	$500.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0900 OPTION	MAGTF Twentynine Palms, CA FFP FOB: Destination				NSP
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0901 OPTION	Range 103 AFFR - COMS FFP FOB: Destination	12	Each	$2,636.22	$31,634.64
				NET AMT	$31,634.64

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0902 OPTION	Range 103 AFFR - Berm Maintenance FFP FOB: Destination	12	Each	$901.87	$10,822.44
				NET AMT	$10,822.44

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0903 OPTION	Range 107 AFFR - COMS FFP FOB: Destination	12	Each	$2,722.94	$32,675.28
				NET AMT	$32,675.28

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0904 OPTION	Range 107 AFFR - Berm Maintenance FFP FOB: Destination	12	Each	$589.68	$7,076.16
				NET AMT	$7,076.16

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0905 OPTION	Range 108 ISBC - COMS FFP FOB: Destination	12	Each	$6,590.55	$79,086.60
				NET AMT	$79,086.60

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0906 OPTION	Range 108 ISBC - Berm Maintenance FFP FOB: Destination	12	Each	$1,109.99	$13,319.88
				NET AMT	$13,319.88

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0907 OPTION	Range 109 AALFT - COMS FFP FOB: Destination	12	Each	$7,700.54	$92,406.48
				NET AMT	$92,406.48

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0908 OPTION	Range 109 AALFT - Berm Maintenance FFP FOB: Destination	12	Each	$2,480.13	$29,761.56
				NET AMT	$29,761.56

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0909 OPTION	Range 113 MPMG - COMS FFP FOB: Destination	12	Each	$5,046.98	$60,563.76
				NET AMT	$60,563.76

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0910 OPTION	Range 113 MPMG - Berm Maintenance FFP FOB: Destination	12	Each	$277.50	$3,330.00
				NET AMT	$3,330.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0911 OPTION	Range 500 MPRC - COMS FFP FOB: Destination	12	Each	$20,604.15	$247,249.80
				NET AMT	$247,249.80

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0912 OPTION	Range 500 MPRC - Berm Maintenance FFP FOB: Destination	12	Each	$2,827.00	$33,924.00
				NET AMT	$33,924.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0913 OPTION	Range 500 MPRC - PV Power System Maint. FFP FOB: Destination	12	Each	$832.49	$9,989.88
				NET AMT	$9,989.88

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0914 OPTION	Range 1A UDRR - COMS FFP FOB: Destination	12	Each	$3,676.83	$44,121.96
				NET AMT	$44,121.96

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0915 OPTION	Range 1A - Berm Maintenance FFP FOB: Destination	12	Each	$225.47	$2,705.64
				NET AMT	$2,705.64

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0916 OPTION	Range 2A CPC - COMS FFP FOB: Destination	12	Each	$1,179.36	$14,152.32
				NET AMT	$14,152.32

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0917 OPTION	Range 2A CPC - Berm Maintenance FFP FOB: Destination	12	Each	$121.40	$1,456.80
				NET AMT	$1,456.80

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0918 OPTION	Tactical Video Network (TVN) - COMS FFP FOB: Destination	12	Each	$1,734.36	$20,812.32
				NET AMT	$20,812.32

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0919 OPTION	Live Fire Training - COMS FFP FOB: Destination	12	Each	$15,487.80	$185,853.60
				NET AMT	$185,853.60

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0920 OPTION	Precision Gunnery Training System - COMS FFP FOB: Destination	12	Each	$728.43	$8,741.16
				NET AMT	$8,741.16

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0921 OPTION	Live Fire MOUT - COMS FFP FOB: Destination	12	Each	$12,140.49	$145,685.88
				NET AMT	$145,685.88

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0922 OPTION	TA East Training Complex - COMS FFP FOB: Destination	12	Each	$13,684.07	$164,208.84
				NET AMT	$164,208.84

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0923 OPTION	Video Capture System - COMS FFP FOB: Destination	12	Each	$14,967.49	$179,609.88
				NET AMT	$179,609.88

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0924 OPTION	Minor Training Devices - COMS FFP FOB: Destination	12	Each	$1,769.04	$21,228.48
				NET AMT	$21,228.48

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0925 OPTION	TA West Training Complex - COMS FFP FOB: Destination	12	Each	$13,788.13	$165,457.56
				NET AMT	$165,457.56

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0926 OPTION	Range 111 MOUT Assault Course - COMS FFP FOB: Destination	12	Each	$4,110.42	$49,325.04
				NET AMT	$49,325.04

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0927 OPTION	Range 111 MAC -Real Property Maintenance FFP FOB: Destination	12	Each	$3,399.34	$40,792.08

NET AMT $40,792.08

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0928 OPTION	MOUT Air Indirect Fire Ranges - COMS FFP FOB: Destination	12	Each	$4,370.58	$52,446.96

NET AMT $52,446.96

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0929 OPTION	Combined Arms MOUT - COMS FFP FOB: Destination	12	Each	$13,423.91	$161,086.92

NET AMT $161,086.92

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0930 OPTION	Range 400 - COMS FFP FOB: Destination	12	Each	$6,694.61	$80,335.32
				NET AMT	$80,335.32

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0931 OPTION	Range 400 - Berm Maintenance FFP FOB: Destination	12	Each	$450.93	$5,411.16
				NET AMT	$5,411.16

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0932 OPTION	Range 410 - COMS FFP FOB: Destination	12	Each	$6,694.61	$80,335.32
				NET AMT	$80,335.32

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0933 OPTION	Range 410 - Berm Maintenance FFP FOB: Destination	12	Each	$450.93	$5,411.16
				NET AMT	$5,411.16

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1000 OPTION	MCAS Yuma, AZ FFP FOB: Destination				NSP
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1001 OPTION	Minor Training Devices - COMS FFP FOB: Destination	12	Each	$838.84	$10,066.08
				NET AMT	$10,066.08

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1002 OPTION	Rifle Range - COMS FFP FOB: Destination	12	Each	$481.78	$5,781.36
				NET AMT	$5,781.36

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1003 OPTION	Pistol Range - COMS FFP FOB: Destination	12	Each	$481.78	$5,781.36
				NET AMT	$5,781.36

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1004 OPTION	Time and Materials FFP FOB: Destination				$ TBN
				NET AMT	$0.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1005 OPTION	Premium Time FFP FOB: Destination	25	Hours	$20.00	$500.00
				NET AMT	$500.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1006	FFP FOB: Destination				
				NET AMT	$0.00

Section C - Descriptions and Specifications

DESCRIPTIONS AND SPECIFICATION

C.1 DESCRIPTION/SPECIFICATION/WORK STATEMENT

The Contractor shall furnish the necessary supplies, services, facilities and materials required to perform the work described here and in the attached Statement of Work 343-USMC-0001 (Attachment (1)) and associated DD Forms 1423 Contract Data Requirements List(s) (Exhibit A).

C.2 INCORPORATION OF THE CONTRACTOR'S TECHNICAL PROPOSAL

(a) The Contractor's Technical Proposal, **To Be Determined** and any amendments/addenda thereof, is incorporated herein by reference, unless otherwise specified, with the same force and effect as if set forth in full text. Nothing in the Contractor's proposal shall constitute a waiver of any of the provisions of the contract, including the Statement(s) of Work and Specifications.

(b) For purposes of FAR Clause 52.215-8, Order of Precedence—Uniform Contract Format, the Contractor's technical proposal shall be considered a "Specification."

C.3 DEVICES UNDER WARRANTY

(a) New devices added to the contract will normally carry a manufacturer's warranty covering defects in materials or workmanship. Repairs under the warranty are the responsibility of the COMS contractor.

(b) For devices under warranty, the COMS contractor shall determine if the immediate problem is covered by the warranty (i.e., is it a defect in material or workmanship). If it is not, the COMS contractor shall make the repair.

(c) If the problem is covered by the warranty, the COMS contractor shall arrange directly with the warrantor for the repair. This may include telephone calls, packing, shipping, receiving, inspection, restocking and coordination.

(d) The COMS contractor may elect to make the repair himself even though it is covered by a warranty as long as doing so does not void the warranty. The decision to void the warranty can only be made by the Government (PCO).

(e) When a device is out for repair under a warranty, it is not eligible for a deduction.

(f) The Government reserves the right to direct the COMS contractor to repair a warranted repair item. In this case, the COMS contractor may be entitled to additional compensation.

(g) Should the COMS contractor and the warrantor have a dispute over what constitutes a warranted repair, the PCO will make a determination. However, the COMS contractor must make a good faith effort to reach agreement with the warrantor prior to elevating the matter to the PCO.

(h) The COMS contractor shall keep records on warranty repair items and make the records available to the COR/PCO on demand. The COMS contractor shall establish repair completion dates with the warrantor and shall suspense repair completions. The COMS contractor shall diligently pursue getting warranty repair items returned in a timely manner.

C.4 PREMIUM TIME

(a) Premium time is that time required by the Government to accomplish a COMS requirement, other than makeup training, outside the work schedule defined in the attached appendices to the Statement of Work. Reimbursement to the Contractor for Premium Time will be made at the hourly Premium Time rate specified in Section B. A Premium Time hour equates to an additional man-hour of effort; however, the Premium Time rate is a composite rate that does not reflect the rate of any one-labor category. Therefore, Premium Time rates will not be subject to DOL wage adjustments provided for under FAR 52.222-41.

(b) All premium time will be approved by the COR before being worked by the contractor.

Section D - Packaging and Marking

D.1 PACKAGING AND MARKING OF SHIPMENTS

The Contractor will preserve, package and mark all shipments in accordance with ASTM (American Society of Testing and Materials) D3951-95, "Standard Practice for Commercial Packaging".

D.2 TECHNICAL DATA PACKING INSTRUCTIONS

Technical Data and Information will be packed and packaged for domestic shipment in accordance with best commercial practices to assure arrival at the destination(s) in an undamaged condition. The package or envelope should be clearly marked with any special markings specified in this contract, e.g. Contract Number, Device No., and document title must be on the outside of the package.

Section E - Inspection and Acceptance

CLAUSES

E.1 52.252-2 CLAUSES INCORPORATED BY REFERENCE. (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(s): http://farsite.hill.af.mil

52.246-2	INSPECTION OF SUPPLIES--FIXED-PRICE.	(AUG 1996)
52.246-4	INSPECTION OF SERVICES -- FIXED-PRICE	(AUG 1996)
52.246-16	RESPONSIBILITY FOR SUPPLIES	(APR 1984)
252.246-7000	MATERIAL INSPECTION AND RECEIVING REPORT	(MAR 2003)

E.2 TECHNICAL DATA AND INFORMATION

Inspection and acceptance of technical data and information will be performed by the Procuring Contracting Officer (PCO) or his duly authorized representative. Inspection of technical data and information will be performed by ensuring successful completion of the requirements set forth in the DD Form 1423, Contract Data Requirements List (CDRL) and incorporation/resolution of Government review comments on the data items. Acceptance will be evidenced by execution of a DD Form 250, Material Inspection and Receiving Report, as appropriate, and/or upon receipt of a second endorsement acceptance by the PCO.

E.3 INSPECTION AND ACCEPTANCE BY CONTRACTING OFFICER'S REPRESENTATIVE (COR)

All supplies provided under this contract will be inspected by the cognizant Contracting Officer's Representative (COR) accepted if the supplies meet the requirements specified in the attached Statement of Work. Acceptance will be accomplished by signature of the COR on the Invoice or DD Form 250, Material Inspection and Receiving Report.

E.4 INSPECTION AND ACCEPTANCE TERMS:

All supplies/services (CLINs 0001-1003) will be inspected/accepted as follows:

Inspect at:	Destination
Inspect by:	Government
Accept at:	Destination
Accept by:	Government

Section F - Deliveries or Performance

CLAUSES

F.1 CONTRACT CLAUSES INCORPORATED BY REFERENCE (FAR 52.252-2) (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

FAR: http://www.arnet.gov/far/
DFARS: http://farsite.hill.af.mil/vfdfar1.htm

Reference	Title	Date
52.242-15	STOP-WORK ORDER	(AUG 1989)
52.242-17	GOVERNMENT DELAY OF WORK	(APR 1984)
52.247-34	FOB DESTINATION	(NOV 1991)

F.2 OVER AND ABOVE WORK REQUIREMENTS

(a) These procedures apply when the Government or Contractor identifies needed services that are over and above the requirements of the contract. This clause shall only be utilized at the discretion of the Government to fulfill specific event/exercise support deemed necessary, which falls outside the total labor hours for one or more sites. The Government shall identify the event/exercise and/or tasks required and start and stop dates. This clause shall not be utilized to increase labor hours identified in Section B of the contract.

(b) The contractor shall prepare and submit the applicable Over and Above Work Request (OAWR) via the COR, for authorization to proceed. The contractor shall use the OAWR to describe the over and above work that needs to be performed, including any parts and materials, in such detail as necessary to permit a thorough evaluation. The contractor shall justify the total cost by specifying direct hours by labor category, as well any additional required cost to accomplish the requirement. The contractor shall also propose a schedule to complete the needed repair or replacement.

(c) The COR will review the OAWR submitted by the contractor, and then forward the form to the with a recommendation of approval or disapproval to the PCO. The COR will annotate the form with the reasons for the recommendation.

(d) The PCO shall take one of the following actions:

(1) Disapprove the OAWR. In this event, the OAWR will be returned to the contractor. A copy will also be provided to the COR.

(2) Authorize the OAWR. In this event, a modification (Standard Form 30) will be issued. Upon issuance of the modification, the contractor shall proceed with the event/exercise support.

To the maximum extent practical, a FFP will be negotiated for this effort prior to the start of the work. In the event that the urgency of the effort does not permit the negotiation of an FFP, then the authorizing modification will establish not-to-exceed (NTE) prices. A sub-line item, under the OAWR line item, will be established to fund the effort. The Government is not responsible for any costs incurred by the contractor, which exceed the NTE price established by the modification.

Modifications to an OAWR will be effected by Standard Form 30.

If the OAWR is issued on an NTE basis, the contractor shall promptly submit a proposal for the OAWR to the PCO. The PCO is responsible for negotiating a FFP for the OAWR and issuing an appropriate modification, which establishes a FFP for that amount. The definitizing modification should include the following information:

(1) Reference to the OAWR and modification number and any later modification, which relates to that OAWR.

The applicable ACRN and fund citation provided in the Accounting and Appropriation Data Block. Any excess funds are to be deobligated.

F.3 TECHNICAL DATA AND INFORMATION

Technical Data and Information will be delivered in accordance with the requirements of the Contract Data Requirements List, DD Forms 1423, attached hereto, and the following:

(a) The contractor will concurrently deliver technical data and information per DD Form 1423, Blocks 12 and 13 (date of first/subsequent submission) to all activities listed in Block 14 of the DD Form 1423 (distribution and addresses) for each item. Complete addresses for the abbreviations in Block 14 are shown in (g) below. The method of submittal for the data item is shown in Block 7 of the DD Form 1423.

(b) Partial delivery of data is not acceptable unless specifically authorized on the DD Form 1423, or unless approved in writing by the PCO.

(c) The Government review period provided on the DD Form 1423 for each item commences upon receipt of all required data by the technical activity designated in Block 6.

(d) A copy of all other correspondence addressed to the Contracting Officer relating to data item requirements (i.e., status of delivery) will also be provided to the codes reflected below and the technical activity responsible for the data item per Block 6, if not one of the activities listed above.

(e) The PCO reserves the right to issue unilateral modifications to change the destination codes and addresses for all technical data and information at no additional cost to the Government.

(f) Unless otherwise specified in writing, rejected data items will be resubmitted within 30 days after receipt of the notice of rejection.

(g) DD Form 1423, Block 14 Mailing Addresses:

PMTRASYS, USMC
John E. Lynch, Contracting Officer
12350 Research Parkway
Orlando, FL 32826-3276

NAWCTSD
Code 6.6.4.10 (Phil Boettjer)
12350 Research Parkway
Orlando, FL 32826-3276

F. 4 CONTRACT PERIOD OF PERFORMANCE

(a) The period(s) of performance for the Lot(s) contained in Section B are as follows:

CLINs	Fiscal Year	Period of Performance	Effort
0001-0002	(FY08)	01 Feb 08 – 29 Feb 08	(Base Year Mobilization)
0101-0205	(FY09)	01 Mar 08 – 31 Dec 08	(Base Year Effort)
0301-0405	(FY10)	01 Jan 09 – 31 Dec 09	(Option I)
0501-0605	(FY11)	01 Jan 10 – 31 Dec 09	(Option II)
0701-0805	(FY12)	01 Jan 11 – 31 Dec 11	(Option III)
0901-1005	(FY13)	01 Jan 12 – 31 Dec 12	(Option IV)

(b) The Transition Option shall have a period of performance of one (1) month. The anticipated period of performance is as stated below unless changed in accordance with Section H, Awarding/Exercising Option Line Items.

(c) The total contract period of performance shall not exceed 60 months.

CLAUSES INCORPORATED BY REFERENCE

252.227-7015	Technical Data--Commercial Items	NOV 1995

ACCOUNTING AND APPROPRIATION DATA

AA: 178110627M0 250 67854 067443 2D M67854
COST CODE: 23AC8RCAC403
AMOUNT: $1,377,590.62
CIN 00000000000000000000000000000: $1,377,590.62

AB: 178110627M0 250 67856 067443 2D M95430
COST CODE: DNTR8RCTR002
AMOUNT: $786,657.39
CIN 00000000000000000000000000000: $786,657.39

ACCOUNTING AND APPROPRIATION DATA

AA: 178110627M0 250 67854 067443 2D M67854
COST CODE: 23AC8RCAC403
AMOUNT: $1,377,590.62
CIN 00000000000000000000000000000: $1,377,590.62

AB: 178110627M0 250 67856 067443 2D M95430
COST CODE: DNTR8RCTR002
AMOUNT: $786,657.39
CIN 00000000000000000000000000000: $786,657.39

CLAUSES INCORPORATED BY FULL TEXT

252.232-7007 LIMITATION OF GOVERNMENT'S OBLIGATION (MAY 2006)

(a) Contract line item(s) 0101 through 0205 are incrementally funded. For these item(s), the sum of $1,051,563.84 of the total price is presently available for payment and allotted to this contract. An allotment schedule is set forth in paragraph (j) of this clause.

(b) For items(s) identified in paragraph (a) of this clause, the Contractor agrees to perform up to the point at which the total amount payable by the Government, including reimbursement in the event of termination of those item(s) for the Government's convenience, approximates the total amount currently allotted to the contract. The Contractor is not authorized to continue work on those item(s) beyond that point. The Government will not be obligated in any event to reimburse the Contractor in excess of the amount allotted to the contract for those item(s) regardless of anything to the contrary in the clause entitled "TERMINATION FOR THE CONVENIENCE OF THE GOVERNMENT." As used in this clause, the total amount payable by the Government in the event of termination of applicable contract line item(s) for convenience includes costs, profit and estimated termination settlement costs for those item(s).

(c) Notwithstanding the dates specified in the allotment schedule in paragraph (j) of this clause, the Contractor will notify the Contracting Officer in writing at least ninety days prior to the date when, in the Contractor's best

judgment, the work will reach the point at which the total amount payable by the Government, including any cost for termination for convenience, will approximate 85 percent of the total amount then allotted to the contract for performance of the applicable item(s). The notification will state (1) the estimated date when that point will be reached and (2) an estimate of additional funding, if any, needed to continue performance of applicable line items up to the next scheduled date for allotment of funds identified in paragraph (j) of this clause, or to a mutually agreed upon substitute date. The notification will also advise the Contracting Officer of the estimated amount of additional funds that will be required for the timely performance of the item(s) funded pursuant to this clause, for subsequent period as may be specified in the allotment schedule in paragraph (j) of this clause, or otherwise agreed to by the parties. If after such notification additional funds are not allotted by the date identified in the Contractor's notification, or by an agreed substitute date, the Contracting Officer will terminate any item(s) for which additional funds have not been allotted, pursuant to the clause of this contract entitled "TERMINATION FOR THE CONVENIENCE OF THE GOVERNMENT".

(d) When additional funds are allotted for continued performance of the contract line item(s) identified in paragraph (a) of this clause, the parties will agree as to the period of contract performance which will be covered by the funds. The provisions of paragraph (b) through (d) of this clause will apply in like manner to the additional allotted funds and agreed substitute date, and the contract will be modified accordingly.

(e) If, solely by reason of failure of the Government to allot additional funds, by the dates indicated below, in amounts sufficient for timely performance of the contract line item(s) identified in paragraph (a) of this clause, the Contractor incurs additional costs or is delayed in the performance of the work under this contract and if additional funds are allotted, an equitable adjustment will be made in the price or prices (including appropriate target, billing, and ceiling prices where applicable) of the item(s), or in the time of delivery, or both. Failure to agree to any such equitable adjustment hereunder will be a dispute concerning a question of fact within the meaning of the clause entitled "disputes."

(f) The Government may at any time prior to termination allot additional funds for the performance of the contract line item(s) identified in paragraph (a) of this clause.

(g) The termination provisions of this clause do not limit the rights of the Government under the clause entitled "DEFAULT." The provisions of this clause are limited to work and allotment of funds for the contract line item(s) set forth in paragraph (a) of this clause. This clause no longer applies once the contract if fully funded except with regard to the rights or obligations of the parties concerning equitable adjustments negotiated under paragraphs (d) or (e) of this clause.

(h) Nothing in this clause affects the right of the Government to this contract pursuant to the clause of this contract entitled "TERMINATION FOR CONVENIENCE OF THE GOVERNMENT."

(i) Nothing in this clause shall be construed as authorization of voluntary services whose acceptance is otherwise prohibited under 31 U.S.C. 1342.

(j) The parties contemplate that the Government will allot funds to this contract in accordance with the following schedule:

On execution of contract $2,164,248.01 (fully funded mobilization and incrementally funded base year)

The remainder of funds for the base year will be obligated on or before 01 June 2008.

(End of clause)

SPECIAL CONTRACT REQUIREMENTS

H.1 LIABILITY INSURANCE (MAR 1999)

The following types of insurance are required in accordance with the clause entitled, "FAR 52.228-5, "Insurance--Work on a Government Installation" and will be maintained in the minimum amounts shown:

(a) Comprehensive General Liability: $500,000 per accident for bodily injury.

(b) Automobile Insurance: $200,000 per person and $500,000 per accident for bodily injury and $20,000 per accident for property damage.

(c) Standard Workman's Compensation and Employer's Liability Insurance (or, where maritime employment is involved, Longshoremen's and Harbor Worker's Compensation Insurance) in the minimum amount of $100,000.

(d) Aircraft public and passenger liability: $ N/A per person and $N/A per occurrence for bodily injury, other than passenger liability; $N/A per occurrence for property damage. Passenger bodily injury liability limits of $N/A per passenger, multiplied by the number of seats or number of passengers, whichever is greater.

H.2 DISCLOSURE, USE AND PROTECTION OF PROPRIETARY INFORMATION (OCT 1994) (5252.227-9511)

(a) During the performance of this contract, the Government may use an independent services contractor (ISC), who is neither an agent nor employee of the Government. The ISC may be used to conduct reviews, evaluations, or independent verification and validations (IVVs) of technical documents submitted to the Government during performance.

(b) The use of an ISC is solely for the convenience of the Government. The ISC has no obligation to the prime contractor. The prime contractor is required to provide full cooperation, working facilities and access to the ISC for the purposes stated in paragraph (a) above.

(c) Since the ISC is neither an employee nor agent of the Government, any findings, recommendations, analyses, or conclusion of such a contractor are not those of the Government.

(d) The prime contractor acknowledges that the Government has the right to use ISCs as stated in paragraph (a) above. It is possible that under such an arrangement the ISC may require access to or the use of information (other than restricted cost or pricing data), which is proprietary to the prime contractor.

(e) To protect any such proprietary information from disclosure or use, and to establish the respective rights and duties of both the ISC and prime contractor, the prime contractor agrees to enter into a direct agreement with any ISC as the Government requires. A properly executed copy (per FAR 9.505-4) of the agreement will be provided to the Procuring Contracting Officer (PCO).

H.3 ACCESS TO GOVERNMENT PROPERTY AND FACILITIES

Work to be performed under this contract shall be performed at facilities operated by the Government. The contractor, therefore, will be granted ingress and egress at the specific site where effort is to be performed. Access to a site shall be coordinated with the ACOR.

While contractor personnel are at a site, they are required to comply with all rules and regulations of the site, particularly in the areas of health and safety. The facilities to which the contractor has access at all times will be in

the custody of the Federal Government and will not be considered “Government Property” furnished to the contractor.

The Government reserves the right to issue DoD identification badges to contractor employees. If DoD badges are required, they will be issued in accordance with DoD procedures.

If it is brought to the attention of the Government that any contractor or subcontractor employee working on this contract does not meet the minimal work requirements as defined in the task (s), the contractor will be advised in writing by the Contracting Officer and access to DoD facilities may be denied or withdrawn for that employee.

The contractor shall be responsible for returning, or ensuring that employees return, all DoD-issued contractor/employee identification, all other DoD property, and any security access cards to Government offices issued by a landlord of commercial space. The Contractor shall meet all local (site) check out and security procedures.

H.4 RELEASE OF NEWS INFORMATION

No news release (including photographs and films, public announcements, denial or confirmation of same) on any part of the subject matter of this contract or any phase of any program hereunder shall be made without the prior written approval of the Contracting Officer and MARCORSYSCOM Public Affairs Office (PAO), and if Congressionally-related, MARCORSYSCOM Congressional Affairs (CA). See also Section I, DFARS clause 252.204-7000 “Disclosure of Information” and Item 12 of the DD Form 254 (if applicable).

H.5 SERVICE CONTRACT ACT - WAGE DETERMINATIONS (OCT 1994)

(a) The Government intends to attach Wage determinations made by the Department of Labor pursuant to the Service Contract Act of 1965 and Section 4.6 of Title 29 of the Code of Federal Regulations (CFR) to this contract. No person employed in the performance of this contract shall be paid less than the minimum monetary wages or be given fewer fringe benefits than those set froth in these determinations.

(b) Each fiscal year, the Government intends to incorporate new wage determinations into this contract as provided for by Part 4.6 of Title 29 of the CFR. If, as a result of the new wage determinations, the Contractor must increase the wages or fringe benefits of employees working on this contract, the contracts' FFP for the instant fiscal year and all options will be adjusted to reflect such increases. The adjustment will be limited to the increases provided for in the new wage determination and the concomitant increases or decreases in social security, unemployment taxes, and workmen's compensation insurance. The adjustment shall not include any amount for general and administrative costs, overhead, or profit.

(c) The wage rates provided as Attachment J.9 are those rates proposed by the Contractor at the time of contract award and shall be used in any future price adjustments.

H.6 OPTION TO EXTEND THE TERM OF THE CONTRACT (52.217-9)

(a) The Government may extend the term of this contract by written notice to the Contractor within 90 Days provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least _90_ days before the contract expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.

H.7 AWARDING/EXERCISING OPTION LINE ITEMS

The Government may unilaterally exercise its option for any line item or subline item designated as an option in Section B. Option quantities may be reduced to reflect revised Government requirements (e.g. 10 vice 12 MO, etc.). Such option may be exercised at any time, and from time to time, by issuing a contract modification not later than the last day of the then current term's performance period. The Government shall comply with FAR 52.217-9 notice requirements. Any option may be exercised subject to the Availability of Funds Clause in Section I.

H.8 5252.211.9500 DELETING TRAINING DEVICES (NAVAIR) (OCT 1994)

(a) The Government may desire to delete support for any training devices under this contract due to changes in Government requirements. Pursuant to the Changes Clause of this contract, the Government may delete the requirement for Contractor Operation and Maintenance of Simulators (COMS) support for training devices using the procedures set forth in this text. Deletion of any device incorporated in the contract on a Firm-Fixed Price (FFP) basis will be effective on the first day of the month following the desired deletion date.

(b) COMS and Supply Support for training devices incorporated at a FFP monthly rate will be deleted from the contract, including all options, at the monthly rate established in the contract.

(c) The Government reserves the right to remove a training device from Contractor responsibility on a temporary basis for trainer changes, modifications and relocations, etc. If the device is removed for a period that is longer than two months, the Contractor's monthly invoice for the period in excess of two months will be reduced in accordance with the provisions set forth in paragraphs (a) and (b) above.

H.9 EXCESS REPAIR/REPLACEMENT COSTS (OCT 1994)

(a) If the cost to repair or replace any item, as defined in the attached Statement(s) of Work, is in excess of $25,000, the Government will equitably adjust this contract on a Firm Fixed-Price (FFP) basis to account for those costs, which exceed $25,000.

(b) Within five working days of diagnosing a failure, for which the cost will exceed that specified above, the Contractor shall prepare and submit a cost estimate. The cost estimate data to be provided, the procedures for processing, approval and pricing of the effort shall be set forth in below.

(c) The contractor shall prepare and submit the cost estimate, via the COR, for authorization to proceed. The contractor shall use the cost estimate to describe the work that needs to be performed, including any parts and materials, in such detail as necessary to permit a thorough evaluation. The contractor shall attach competitive subcontractor quotes or, if such quotes are not available, the contractor shall justify the total cost by specifying direct hours of labor category, as well as the type, quantity, and cost of the material needed to perform the repair or replacement. The contractor shall also propose a schedule to complete the needed repair or replacement.

(d) The COR will review the cost estimate submitted by the contractor and then forward the form to the PCO with a recommendation of approval or disapproval, with the reasons for the recommendation.

(e) The PCO shall take one of the following actions:

(1) Disapprove the additional work. In this event, the cost estimate will be returned to the contractor. A copy will also be provided to the COR.

(2) Authorize the additional work. In this event, a modification (Standard Form 30) will be issued. Upon issuance of the modification, the contractor shall proceed with the repair or replacement effort.

H.10 5252.223-9500 ENVIRONMENTAL CONTROLS (NAVAIR) (JAN 1991)

Notwithstanding that the contract may require the use of paints or coatings which do not meet state or district requirements for reduced volatile organic compounds (VOC's), the contractor must comply with all federal, state, and local regulatory requirements respecting air quality and emission limitations. It remains the contractor's responsibility to meet the requirements for reduced VOC's even where to do so will require the use of engineering controls or other special painting equipment.

H.11 5252.228.9501 LIABILITY, AUTOMOBILE AND WORKMAN'S COMPENSATION INSURANCE

The following types of insurance are required in accordance with the clause entitled, "INSURANCE," FAR 52.228-5, and shall be maintained in the minimum amounts shown:

(a) Comprehensive General Liability: $500,000 per occurrence for bodily injury.

(b) Automobile Insurance: $200,000 per person and $500,000 per accident for bodily injury and $20,000 per accident for property.

(c) Standard Workmen's Compensation and Employer's Liability Insurance (or, where maritime employment is involved, Longshoremen's and Harbor Worker's Compensation Insurance) in the minimum amount of $100,000.

(d) Aircraft public and passenger liability: $ N/A per person and $ N/A per occurrence for bodily injury, other than passenger liability; $ N/A per occurrence for property damage. Passenger bodily injury liability limits of $ N/A per passenger, multiplied by the number of seats or number of passengers, whichever is greater.

H.12 ADDITION OF NEW DEVICES

In addtion to the training devices for which services are acquired in Section B, the Government may require support for other training devices at various sites. Pursuant to this clause, the Government may add any COMS device to the contract. The listings of potential new devices in the statement of work and appendices are provided for informational purposes only and do not guarantee any additional work.

Section I - Contract Clauses

CLAUSES INCORPORATED BY REFERENCE

52.202-1	Definitions	JUL 2004
52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	APR 1984
52.203-6	Restrictions On Subcontractor Sales To The Government	SEP 2006
52.203-7	Anti-Kickback Procedures	JUL 1995
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity	JAN 1997
52.203-10	Price Or Fee Adjustment For Illegal Or Improper Activity	JAN 1997
52.203-12	Limitation On Payments To Influence Certain Federal Transactions	SEP 2005
52.204-2	Security Requirements	AUG 1996
52.204-4	Printed or Copied Double-Sided on Recycled Paper	AUG 2000
52.209-6	Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment	SEP 2006
52.211-5	Material Requirements	AUG 2000
52.211-15	Defense Priority And Allocation Requirements	SEP 1990
52.215-8	Order of Precedence--Uniform Contract Format	OCT 1997
52.215-11	Price Reduction for Defective Cost or Pricing Data--Modifications	OCT 1997
52.215-13	Subcontractor Cost or Pricing Data--Modifications	OCT 1997
52.215-14	Integrity of Unit Prices	OCT 1997
52.215-18	Reversion or Adjustment of Plans for Postretirement Benefits (PRB) Other than Pensions	JUL 2005
52.215-19	Notification of Ownership Changes	OCT 1997
52.215-21	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data--Modifications	OCT 1997
52.216-4	Economic Price Adjustment-Labor and Material	JAN 1997
52.217-8	Option To Extend Services	NOV 1999
52.217-9	Option To Extend The Term Of The Contract	MAR 2000
52.219-6	Notice Of Total Small Business Set-Aside	JUN 2003
52.219-14	Limitations On Subcontracting	DEC 1996
52.222-1	Notice To The Government Of Labor Disputes	FEB 1997
52.222-3	Convict Labor	JUN 2003
52.222-4	Contract Work Hours and Safety Standards Act - Overtime Compensation	JUL 2005
52.222-21	Prohibition Of Segregated Facilities	FEB 1999
52.222-26	Equal Opportunity	MAR 2007
52.222-29	Notification Of Visa Denial	JUN 2003
52.222-35	Equal Opportunity For Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans	SEP 2006
52.222-36	Affirmative Action For Workers With Disabilities	JUN 1998
52.222-37	Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era, and Other Eligible Veterans	SEP 2006
52.222-41	Service Contract Act Of 1965, As Amended	JUL 2005
52.222-42	Statement Of Equivalent Rates For Federal Hires	MAY 1989
52.222-43	Fair Labor Standards Act And Service Contract Act - Price Adjustment (Multiple Year And Option)	NOV 2006
52.223-3	Hazardous Material Identification And Material Safety Data	JAN 1997

52.223-6	Drug-Free Workplace	MAY 2001
52.223-10	Waste Reduction Program	AUG 2000
52.223-11	Ozone-Depleting Substances	MAY 2001
52.223-14	Toxic Chemical Release Reporting	AUG 2003
52.225-1	Buy American Act--Supplies	JUN 2003
52.225-8	Duty-Free Entry	FEB 2000
52.225-13	Restrictions on Certain Foreign Purchases	FEB 2006
52.227-1	Authorization and Consent	JUL 1995
52.227-2	Notice And Assistance Regarding Patent And Copyright Infringement	AUG 1996
52.227-3	Patent Indemnity	APR 1984
52.227-9	Refund Of Royalties	APR 1984
52.227-10	Filing Of Patent Applications--Classified Subject Matter	APR 1984
52.228-3	Worker's Compensation Insurance (Defense Base Act)	APR 1984
52.228-5	Insurance - Work On A Government Installation	JAN 1997
52.229-3	Federal, State And Local Taxes	APR 2003
52.230-2	Cost Accounting Standards	APR 1998
52.230-3	Disclosure And Consistency Of Cost Accounting Practices	APR 1998
52.230-6	Administration of Cost Accounting Standards	APR 2005
52.232-1	Payments	APR 1984
52.232-7	Payments Under Time-And-Materials And Labor Hour Contracts	FEB 2007
52.232-8	Discounts For Prompt Payment	FEB 2002
52.232-9	Limitation On Withholding Of Payments	APR 1984
52.232-11	Extras	APR 1984
52.232-17	Interest	JUN 1996
52.232-18	Availability Of Funds	APR 1984
52.232-23	Assignment Of Claims	JAN 1986
52.232-25	Prompt Payment	OCT 2003
52.232-33	Payment by Electronic Funds Transfer--Central Contractor Registration	OCT 2003
52.233-1	Disputes	JUL 2002
52.233-3	Protest After Award	AUG 1996
52.237-3	Continuity Of Services	JAN 1991
52.237-8	Restriction on Severance Payments to Foreign Nationals	AUG 2003
52.242-1	Notice of Intent to Disallow Costs	APR 1984
52.242-3	Penalties for Unallowable Costs	MAY 2001
52.242-13	Bankruptcy	JUL 1995
52.243-1	Changes--Fixed Price	AUG 1987
52.243-7	Notification Of Changes	APR 1984
52.244-5	Competition In Subcontracting	DEC 1996
52.244-6	Subcontracts for Commercial Items	MAR 2007
52.245-2	Government Property (Fixed Price Contracts)	MAY 2004
52.245-19	Government Property Furnished "As Is"	APR 1984
52.246-25	Limitation Of Liability--Services	FEB 1997
52.248-1	Value Engineering	FEB 2000
52.249-2	Termination For Convenience Of The Government (Fixed-Price)	MAY 2004
52.249-8	Default (Fixed-Price Supply & Service)	APR 1984
52.249-14	Excusable Delays	APR 1984
52.251-1	Government Supply Sources	APR 1984
52.253-1	Computer Generated Forms	JAN 1991
252.201-7000	Contracting Officer's Representative	DEC 1991

252.203-7001	Prohibition On Persons Convicted of Fraud or Other Defense-Contract-Related Felonies	DEC 2004
252.203-7002	Display Of DOD Hotline Poster	DEC 1991
252.204-7000	Disclosure Of Information	DEC 1991
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.204-7005	Oral Attestation of Security Responsibilities	NOV 2001
252.209-7004	Subcontracting With Firms That Are Owned or Controlled By The Government of a Terrorist Country	DEC 2006
252.215-7000	Pricing Adjustments	DEC 1991
252.223-7004	Drug Free Work Force	SEP 1988
252.223-7006	Prohibition On Storage And Disposal Of Toxic And Hazardous Materials	APR 1993
252.225-7001	Buy American Act And Balance Of Payments Program	JUN 2005
252.225-7002	Qualifying Country Sources As Subcontractors	APR 2003
252.227-7013	Rights in Technical Data--Noncommercial Items	NOV 1995
252.227-7016	Rights in Bid or Proposal Information	JUN 1995
252.227-7025	Limitations on the Use or Disclosure of Government-Furnished Information Marked with Restrictive Legends	JUN 1995
252.227-7030	Technical Data--Withholding Of Payment	MAR 2000
252.227-7037	Validation of Restrictive Markings on Technical Data	SEP 1999
252.231-7000	Supplemental Cost Principles	DEC 1991
252.232-7003	Electronic Submission of Payment Requests	MAR 2007
252.232-7008	Assignment of Claims (Overseas)	JUN 1997
252.233-7001	Choice of Law (Overseas)	JUN 1997
252.241-7001	Government Access	DEC 1991
252.243-7001	Pricing Of Contract Modifications	DEC 1991
252.243-7002	Requests for Equitable Adjustment	MAR 1998
252.245-7001	Reports Of Government Property	MAY 1994
252.246-7000	Material Inspection And Receiving Report	MAR 2003

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3	SOW Appendices – Yuma	16
4	CDRL A001	1
5	Annex A – Performance Utilization	3
6	DID – Technical Reports	1
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STATEMENT OF WORK (SOW)

USMC-8017

FOR

CONTRACTOR OPERATION AND MAINTENANCE SERVICES (COMS)

WITH SUPPLY SUPPORT

AT

MAGTF-TC 29 PALMS, CA and MCAS YUMA, AZ

Prepared By:
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Orlando, FL 32826-3275

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SECTION 1: SCOPE

1.1 Scope. This Statement of Work (SOW) is for Contractor Operation and Maintenance Services (COMS) with Supply Support at MAGTFTC 29 Palms, CA and MCAS Yuma, AZ for the training devices and ranges identified in the attached appendices continuing throughout the term of the contract whether the training systems and equipment remain in the same configuration or are modified or upgraded.

Contractor shall provide all labor, materials, consumables, equipment, tools and test equipment, and transportation necessary to maintain the training systems and equipment in a Fully Operational Condition. This includes, but is not limited to, Corrective Maintenance, stand-by corrective maintenance, emergency services and Preventive Maintenance required to maintain training systems or equipment in a ready-for-use condition, including recurring work such as corrosion removal and painting, touch-up painting and lettering, sign replacement, repairs, and physical protection of the training systems and equipment, and supply support functions. In addition, Contractor shall be responsible for maintaining all training systems and equipment electrical grounds.

1.2 General Information.

1.2.1 COMS Contractor Personnel.

1.2.1.1 Training. The COMS Contractor is responsible for providing competent, qualified personnel necessary to perform his/her responsibilities hereunder. The Contractor shall provide adequate employee training to enable performance of tasks delineated in this SOW. Training shall include as a minimum, initial training during Mobilization, refresher training, training resulting from Government/Contractor change/modification, first aid/CPR, and training of replacement personnel. The Contractor shall maintain personnel training records on-site and ensure their availability to the COR upon request. All training costs will be the responsibility of the COMS Contractor.

1.2.1.2 Safety. Contractor shall comply with federal, Occupational Safety and Health Administration (OSHA) and Naval Occupational Safety and Health (NAVOSH) safety standards and programs, and all site specific safety programs, including the Chief of Naval Operations Instruction (OPNAVINST) 5100 series safety program. Contractor shall be responsible for keeping current with the latest revision of applicable safety requirements. In addition to standard safety practices, the COMS Contractor shall conform with the following regulations and all site specific safety practices and regulations: COMS Contractor personnel required to handle, operate, transport or otherwise be in contact with pyrotechnic devices shall be in compliance with all local, state, and federal

regulations in addition to any Marine Corps Base Standard Operation Procedures for Pyrotechnics.

1.2.1.3 Clearances. As required, all on-site Contractor personnel having access to controlled areas or classified material shall hold a security clearance in accordance with Department of Defense (DOD) Contract Security Classification Specification, DD Form 254, provided as an attachment to the contract. Contractor shall comply with OPNAVINST 5510.1 Security Manual and site-specific security procedures. Fifteen (15) days prior to start of mobilization the Contractor shall notify the site security manager and COR in writing of the names and positions of all Contractor personnel requiring access to controlled areas. The Contractor shall ensure that employees are on approved Government access list prior to entering any access-controlled area. Also, during the term of the contract, the site security manager and COR shall be notified, in writing, within 24 hours of the names and positions of all Contractor personnel added to, or removed from, the access control list.

1.2.2 Mobilization and COMS Contractor Support Dates. COMS Contractor Mobilization Start Date (MSD) and COMS Contractor Support Date(s) (CSD) are shown in the respective training device appendices.

1.2.3 Administrative Office Space. The Contractor will be provided spaces as identified in the attached appendices. Contractor is responsible for janitorial services for this space in accordance with base regulations and at the direction of the COR. Furniture assigned to these spaces will be delineated, as applicable, in the attached appendices. Contractor is responsible for providing all consumable items (janitorial supplies, fluorescent lights, air conditioning filters, etc) used in these spaces.

1.2.4 Relocations. The Government may have other future requirements to delete, disassemble, pack and/or prepare for shipment/storage and unpack, assemble and prepare for operation, training devices/equipment and associated supplies listed in the attached appendices. Requirements may also develop to relocate/move training devices/equipment at a training site and/or among training sites. This information is provided for planning purposes only and may be considered future requirements to be negotiated under this Statement of Work. The Government reserves the right to relocate office, storage and maintenance space designated for COMS Contractor use.

1.2.5 Add-On Training Systems and Equipment. Training systems and equipment may be added during the term of the contract. Additions to the contract will be made under the provisions of Section H.

Possible Additional Training Devices:
Live-fire Ranges
MOUT facilities

Firing Towers
Indoor Marksmanship Trainer or like device
Language Lab/trainers
Vehicle maintenance trainers
Range Instrumentation System
Battle Staff trainers
Mission rehearsal trainers
Forward observer trainer
Electronic classrooms
Training devices/systems for M16, M249, M204G, TOW, LAV, M1 Tank, HMMWV, Heavy Tactical Trucks, AAV, AAAV, MK19, M2 .50Cal, 9MM Pistol, Artillery
Automated targetry for live fire training
Improvised Explosive Devices
Minor Training Devices
Convoy Training Courses

1.2.6 Training Systems and Equipment Deletions. Training systems and equipment may be deleted during the term of the contract. Deletions from the contract will be accomplished under the provisions of Section H.

1.2.7 Adverse Weather Conditions. Equipment at the MAGTFTC is susceptible to damage as a result of adverse weather conditions. The COMS Contractor shall be responsible for taking all reasonable precautions to protect training devices/equipment from damage due to adverse weather, including but not limited to: tropical storms, fires, flooding, sandstorms, intense heat, high winds, and landslides. The COMS Contractor shall be aware of and adhere to all MCB instructions and directives concerning storm preparation and recovery.

1.2.8 Trouble Calls. In those spaces where the Contractor is the primary occupant (work spaces, training device spaces, etc.), the Contractor shall be responsible for making trouble calls to base facilities engineering for repair of all facility problems.

SECTION 2: APPLICABLE DOCUMENTS

2.1 Applicable Documents. The Technical Data Support Package (TDSP) includes all technical documentation delivered or subsequently procured in support of training devices/equipment. It may include soft (digital) and hard-copy documents and drawings. The Contractor is responsible for the maintenance of this package.

2.2 Local Directives, Instructions and Procedures. Contractor personnel shall comply with the directives, instructions and procedures of the host nation, host station and, as applicable, the tenant command(s). Compliance with these directives, instructions and procedures is mandatory.

SECTION 3: REQUIREMENTS

3. 1 Mobilization. During the mobilization period the Contractor shall be responsible for performing all tasks necessary to assume full performance responsibilities at CSD for all existing training systems and equipment. All critical Contractor personnel shall be on site and prepared for mobilization requirements at the mobilization start date. When new training systems and equipment are added to the contract, the Contractor shall assume supply support responsibility at the start of mobilization for those training systems and equipment and assume full performance responsibilities at CSD.

3.1.1 Responsibilities. During mobilization, the Contractor shall acquire personnel security clearances, conduct Contractor personnel training, inventory GFP, and perform other essential mobilization tasks, such as participating in an operational analysis of each training system and equipment. The Contractor shall observe the performance (over-the-shoulder) of all operational and maintenance tasks being performed by the incumbent Contractor on a not-to-interfere basis with training and maintenance throughout the entire phase. Inventory completion date and actual turnover of custodial responsibility for GFP will be accomplished as near to the end of the mobilization as possible to minimize operational disruption and align the custodial responsibility with the change in performance responsibility at CSD.

3.1.2 Training System and Equipment Baseline Status. As part of the mobilization/transition effort, the incumbent COMS Contractor shall conduct a detailed analysis of each training system and equipment for which he has responsibilities and ascertain the baseline status of each training system or equipment. Normally this analysis is a tri-party sign off situation where the condition of each training system or equipment is diagnostically and operationally checked. Such analyses shall ascertain the operating condition of each training system or equipment, the condition of all supporting assets for the training system or equipment, the status of all outstanding maintenance actions of the training system or equipment, and any other relevant information that could potentially impact the ability of the successor COMS Contractor to fully perform their COMS responsibilities. Baseline status must be verified by the COR.

3.1.2.1 Repair of Training Systems and Equipment Deficiencies. In the event that training system/device deficiencies are found during the Equipment Baseline Status analysis (as described above), and these repairs will be deficient at CSD, the incumbent and successor COMS Contractors shall negotiate a settlement for the repair/replacemnt of these deficiencies including possible financial consideration if applicable. If the parties cannot reach agreement on a settlement, they must agree to binding arbitration by the Contracting Officer. The intent of these actions is to ensure that the successor COMS Contractor is prepared to assume full performance responsibilities at CSD for all existing training systems and equipment.

3.1.3 Pre-CSD and Post-CSD Meetings.

3.1.3.1 Pre-CSD Meeting. A Government and Contractor Pre-CSD meeting shall be conducted at each site approximately 30 days prior to the Contractor Support Date to discuss the Contractor's readiness to assume full COMS responsibility at CSD and the respective responsibilities of all parties.

3.1.3.2 Post-CSD Meeting. As required, a Government and Contractor Post-CSD meeting shall be conducted at each site within approximately 45 days after CSD to review and discuss the Contractor's progress since CSD (i.e., identify outstanding issues, concerns, repairs to Out-Of-Commission (OOC) equipment, status of baseline inventory of GFP, etc.).

3.2 Maintenance.

3.2.1 General. The Contractor shall assume full maintenance and support responsibility at the Contractor Support Date (CSD) for all training systems and equipment. The training systems and equipment are not available for preventive maintenance during normal Government Scheduled Uses (GSU). The training systems and equipment will normally be available for maintenance outside Government Scheduled Uses. In the event of a malfunction, the Contractor shall be responsible to perform appropriate level of maintenance necessary to return the training system or equipment to a Fully Operational Condition.

3.2.2 Preventive. COMS Contractor shall be responsible for preventive maintenance on all training devices/equipment in accordance with applicable Maintenance Requirements Cards, Preventive Maintenance (PM) Schedule requirements and site specific standard Operating Procedures to include applicable operational readiness tests on training systems and equipment. These tests shall be completed one hour prior to the start of each government scheduled use and COR notified immediately if training systems or equipment is not operationally ready. Preventive maintenance shall include, but not be limited to, corrosion control, spot painting, restencilling, and preparation for adverse weather conditions, maintaining the material condition of the training systems and equipment, including external and internal cleanliness.

Contractor shall strictly adhere to the scheduled PMs for each training system and equipment to facilitate Government verification of work. Contractor may not reschedule PMs without a written approval from the COR. Submission of a Training Equipment Change Request (TECR) or Equipment Change Proposal (ECP) does not constitute the approval of the recommendation or change any maintenance requirements. Specific maintenance requirements may be changed only by written approval of the responsible authority. Unless specifically agreed to by the COR, no PM shall be scheduled within the Normal

Operating Windows defined in the training system and equipment appendices.

3.2.3 Corrective. COMS Contractor shall be responsible for all corrective maintenance required to return the training devices to fully operational condition unless otherwise specified herein. Corrective maintenance shall include, but is not limited to, fault isolation, trouble-shooting, adjusting, testing, aligning, calibrating, repairing, reverse engineering for such things as replacing obsolete parts, fabricating components, and developing and revising maintenance documentation. In the case of a suspected software malfunction, the Contractor shall demonstrate this to the satisfaction of the COR or designated Government representative.

3.2.3.1 Use of Training Systems or Equipment in Degraded Mode. Depending on the severity of the malfunction and the impact it may generate on the quality of the Government Scheduled Use (GSU), the Government may elect to continue to use the training system or equipment in a degraded mode, thus deferring corrective maintenance to a later time. The corrective maintenance shall be performed outside of the normal operating window, unless Contractor receives COR/user approval to perform the corrective maintenance during the normal operating window.

3.2.3.2 Response Time for Corrective Maintenance. Generally, **Contractor personnel shall perform corrective maintenance as malfunctions occur for those devices being operated by Contractor personnel unless maintenance is deferred by using units (see par. 3.2.3.1).** COMS Contractor response times for those devices operated by other-than-Contractor personnel are identified in the applicable training system/device appendix or as determined by the COR.

3.2.3.3 Contractor Phone Numbers. The COMS Contractor shall provide and maintain a current listing of phone numbers (including cell phone/pagers) for the Contractor Site Manager and next senior employee (in the event the Site manager is not available). This list shall be provided to the COR and all applicable device users.

3.3 Operational Readiness. As specified in the individual device appendix, COMS Contractor shall be responsible for initial start-up, software loading, pre-operational readiness checkout, and insertion of test or mission conditions, parameters, or scenarios and other functions necessary to verify training system or equipment is in a fully operational condition. As required in the individual training system/device appendix, the COMS Contractor shall be present at all times when the device is powered up. Exceptions, not to exceed one half hour (30 minutes), to this policy may be granted orally by the COMS COR.

Contractor pre/post operational requirements including issue, retrieval, installation and removal of training devices as required are not included in the annual operational training hours identified in individual training device appendices.

3.4 Modifications. Training systems and equipment may be modified or upgraded during the term of the contract.

3.4.1 COMS Contractor Installed Modifications. As directed by the COMS Contracting Officers Representative COR), the COMS Contractor shall perform Government approved/authorized modifications as a normal maintenance effort that shall be considered within the scope of this contract. Modifications, which are estimated not to exceed 24 installation hours, except safety, shall be accomplished within 30 days from receipt of direction from the COMS COR. Safety modifications shall be accomplished immediately. Those modifications expected to exceed 24 installation hours, excluding safety, shall be accomplished in a time frame to be designated by the COMS COR.

3.4.2 Government or Third Party Installed Modifications. When modifications are to be installed by other than the COMS Contractor, the COMS Contractor shall ensure that all assemblies and subassemblies are fully operational prior to the beginning of the modification. The COMS Contractor shall participate in all Pre- and Post-Modification inspections and bailments. During the modification, the Contractor shall continue to be responsible for the assemblies or subassemblies of the training systems and equipment or equipment not undergoing modification. The Contractor shall participate in the testing and acceptance of the modification and shall identify any interface failures to the training system or equipment not undergoing modification.

3.4.3 Control. No changes or modifications to the device hardware or software shall be made without prior written approval of the Government. All hardware and/or software changes to the training devices will be documented in a Government prepared and approved TRAINING EQUIPMENT CHANGE DIRECTIVE (TECD).

3.4.4 Post Modification Responsibilities. Contractor shall resume full operation/maintenance responsibilities of each modified training device/system at no additional cost to the Government.

3.5 Inspections.

3.5.1 Premodification and Postmodification Inspections. COMS Contractor shall be responsible for participating in all premodification and postmodification inspections, meetings and reviews. When the Government installs changes or modifications to the trainer, pre-modification and post-modification inspections will be conducted with the participation of the COMS Contractor. Pre-modification and post-modification inspections may be accomplished at the discretion of the Government prior to COMS Contractor installed changes or modifications. The COMS Contractor

shall be required to correct conditions, which would degrade or preclude inspection efforts.

3.5.2 Inspections. COMS Contractor shall be responsible for immediate correction of all discrepancies, within his/her responsibilities, resulting from Government audits/inspections. If any discrepancy cannot be corrected within 30 days of the inspection, the COMS Contractor shall submit to the COMS COR a written plan of action for each discrepancy including milestones for completion. Such areas to be inspected shall include, but are not limited to, preventative maintenance, operational readiness, inventory quantity, inventory quality, configuration management, test equipment calibration, record keeping, security, safety and cleanliness inspections.

3.6 Supply Support.

3.6.1 Requirements. Contractor shall be responsible for providing all materials and documentation, including repairables and consumables, required to operate and maintain the training systems and equipment in the attached appendices in a fully operational condition, except those specified Government Furnished Equipment/Government Furnished Material (GFE/GFM) items associated with each training device.

3.6.2 Consumables. Contractor shall be responsible for the procurement and storage of all consumables necessary to complete training system and equipment operation and maintenance. Included is the responsibility to provide all consumables necessary for daily operational tests, calibrations and alignments, and other comparable maintenance activities. Local requirements may limit the amount of materials such as solvents, alcohol, paint, etc. that are allowed to be stored in each work center.

3.6.3 Replenishment of Material Support Package. Except for Items for which the responsibility specifically resides with the Government, Contractor shall be responsible for replenishing all initial issue material items furnished by the Government as identified in each attached device appendix and/or inventory list for which the COMS Contractor has assumed custody for said assets. These assets may not be moved between sites without the prior written approval of the COR and execution of the appropriate documentation.

Any substituted item shall be equivalent in quality, form, fit and function of the item being substituted and pre-approved by the COR in writing. The Government does not warrant that the items furnished are all the supporting materials required to fulfill all contractual requirements. The Government does not warrant the condition of the items supplied under the contract. The Contractor is responsible for providing all other supporting materials necessary to successfully perform under the terms and conditions of this contract.

3.6.3.1 Replenishment Liability Limitation. COMS Contractor's liability for cost of any single item shall not exceed the limitations established in Section H of the contract schedule.

3.6.4 Repair or Replenishment of Government Furnished Property (GFP). The Contractor shall be responsible to perform appropriate level of maintenance necessary to return the training system or equipment to a Fully Operational Condition. The Contractor shall trouble-shoot and identify failures and then requisition or request repair of the failed repairable or repair part through the COR. This includes delivery of failed material in a timely manner, tracking the requisition, and receipt of replacement material from the on-site point designated by the COMS COR.

3.6.5 Substitute Parts Identification. Contractor shall exhaust all means available to identify substitute parts for any obsolete item identified throughout the life of the contract. Such substituted parts shall be appropriately documented in a Training Equipment Change Request (TECR) submitted to the COMS COR and shall be at least equivalent in quality, form, fit and function of the parts being replaced.

3.6.6 Hazardous Materials. Contractor shall be responsible for the proper handling, storage, transport, and turn-in of hazardous material and waste according to applicable federal, state, and local requirements.

3.6.7 Baseline and Physical Inventories. The baseline inventory of the Material Support Packages (MSP) shall be determined during mobilization. Contractor will assume custody of these available spare/repair parts via a signed custody receipt. The baseline inventory is the standard against which the Contractor is measured when the GFP is returned to the Government. The COMS Contractor shall maintain a running inventory of all GFP throughout the term of the contract to document changes (additions, deletions, and shortages) to the baseline inventory. This running inventory shall indicate the status of repairable/spare items (RFI, Non-RFI, out for repair,etc.)and shall be available for review by the COR or designated Government representative. Any additions or deletions to the baseline must be approved in writing by the COR. The Contractor shall be responsible to replenish any shortages within 10 days of identification of shortage, unless an extension is approved by the COR.

3.7 Tools and Test Equipment.

3.7.1 Provisioning. COMS Contractor shall provide all tools and test equipment necessary for the operation and maintenance of training devices listed in this Statement of Work unless otherwise specified in the attached appendices. Any tools or test equipment provided by the Government that are not used by the COMS Contractor shall be returned to the Government for disposition.

3.7.2 Calibration and Repair. COMS Contractor shall be responsible for the calibration and repair of all gauges, special tools and test equipment used on training equipment/devices listed in the attached appendices unless otherwise notified by the Government. COMS Contractor shall be responsible for calibration and repair of all special tools and test equipment regardless of the purpose for which the COMS Contractor uses the tools and test equipment. A certified, up-to-date, calibration tag or sticker shall be attached to all calibrated items. Calibration requirements for all gauges, tools, and test equipment shall be kept current and a valid calibration tag attached whether equipment is in use or not.

3.8 Technical Documentation. COMS Contractor shall be responsible for maintenance of all Technical Documentation, listed in the respective appendix for the training device, which is necessary to support and operate the training devices, including inserting Government approved changes. If any Technical Documentation is found to be incorrect or incomplete, appropriate manuals/drawings shall be red lined and COMS Contractor shall be responsible for recommending corrective action to the COMS COR.

3.8.1 Contractor Developed Documentation. All Contractor developed procedures, techniques, approaches, data, tests, diagnostics, findings, notes or other information ("collective efforts") for performing preventive or corrective maintenance, including isolating malfunctions and operational halts, shall be documented by Contractor. All developed documentation shall become property of the Government.

3.9 Software/Firmware/Hardware

3.9.1 Maintenance. COMS Contractor shall be responsible for maintaining all software media, firmware and hardware in an operable condition in the current and approved configuration; incorporating Government approved changes and maintaining records of said changes; and isolating malfunctions/ operational halts to the lowest software, firmware, or hardware module. Contractor shall not modify software or firmware without government approval.

3.9.2 Library. Contractor shall be responsible for establishing and maintaining a back-up library of all software media. Establishing a library means creating a backup for the last and most current revision of key media, such as operating systems, utilities, diagnostics, and major applications. Included is the requirement to provide the software media for the backup library and the requirement, as directed by the COR, to copy classified media. Contractor shall also provide physical protection for said media in accordance with the local security and classified material handling procedures.

3.10 Administrative.

3.10.1 Cleaning. Contractor shall be responsible for cleaning all assigned spaces, training systems and equipment in their custody as defined in each training system/device appendix. All safety and fire requirements shall be complied with to avoid any unsafe conditions or fire hazards. All other areas the Contractor temporarily occupies will be left in the same physical and orderly condition as before the Contractor occupied or used the area. Contractor shall provide all cleaning materials and supplies required to maintain assigned spaces.

3.10.2 Material, Equipment, Spaces and Furniture. COMS Contractor shall be responsible for providing all material, equipment, spaces and furniture not provided by the Government. All additions or deletions to the COMS Contractor's inventory of these items that involve transporting items on-site/off-site must be coordinated through the COMS COR.

3.10.2.1 Mandatory Heavy Equipment. In addition to any other required tools or equipment, the Contractor shall maintain on site (unless notified otherwise), in a serviceable condition, the following equipment:

Qty 1 - Sky Track Extended Reach Forklift W/Bucket (12,000lbs)
Qty 1 - 5 Cubic Yard Dump Truck 4WD
Qty 1 - Grader W/13' Blade
Qty 1 - 1000 Gal Water Truck 4WD
Qty 1 - 7 Ton Flat Bed Truck 4WD
Qty 1 - Roller/Compactor
Qty 2 - Wheeled Front End Loader W/Drag
Qty 1 - Welding Rig W/Plasma, GMAW, GTAW & Oxy Acetylene (4WD)

The Contractor shall also be required to have timely (1 week or less) access to a 30 Ton Crane which shall be required periodically to perform repairs.

3.10.3 Transportation. COMS Contractor shall be responsible for furnishing all transportation for COMS personnel and material between all points of business requiring COMS Contractor's services under this SOW. COMS Contractor is not responsible for transporting Government personnel at any time.

3.10.4 Safety, Security and Work Condition. All personnel employed by the Contractor entering the Government activity shall conform to all safety, security and work condition regulations and procedures that may be in effect during the contract period and shall be subject to such checks as may be deemed necessary to ensure that no violations occur. Employees violating safety, security and work conditions shall be retrained in the proper safety, security, and work condition procedures that were violated. A memo will be provided to the COR certifying that the employee has received the training. If an employee's presence is determined by the activity to be detrimental to the safety, security or work conditions, the employee can be denied access to the activity. If

an activity investigation determines that employee has committed a serious security violation, the employee's base security clearance can be revoked and access to the activity can be denied. Replacement of the employee shall be at the Contractor's expense.

3.10.4.1 Accidents. All on-site accidents involving COMS Contractor employees shall be reported to the site COR within one hour. The Contractor shall conduct an investigation into all accidents occurring on Government property involving Contractor employees and report the findings of such an investigation, on applicable forms, to the COR within three working days after occurrence.

3.10.5 Records and Reports. COMS Contractor shall be responsible for using and complying with the site-specific Government reporting systems for any local reports that may be required. COMS Contractor shall immediately notify the COMS COR of any training device malfunction or deficiency that degrades usage. Monthly performance utilization and contract funds status reports shall be submitted in accordance with the CDRLs of this contract.

3.10.5.1 Forms and Records.

A. General Use Forms and Records. The following general use forms, described in Chapter 2 of Technical Manual (TM) TM-4700-15-1 shall be utilized for all training devices covered under this Statement of Work (SOW). COMS Contractor may automate any of these records, however, the COMS must approve such automation COR.

(1) Form NAVMC 10245. The Equipment Repair Order (ERO) shall be utilized as set forth in Chapter 2 of TM-4700-15-1. A separate ERO shall be prepared for each item requiring corrective maintenance. A batch ERO may be used for preventative maintenance.

(2) PM Roster NAVMC 10561 (Rev 1086). Used to make a complete roster for all items requiring preventative maintenance and will be used to schedule said cyclic preventative maintenance.

(3) ERO Log. The ERO Log will be maintained as described in Chapter 2 of TM-4700-15-1 for items covered under this SOW.

(4) Calibration Control Record (CCR). A CCR will be maintained on all training devices or components thereof, tools, test equipment provided as Government Furnished Equipment (GFE) that require calibration.

(5) Equipment History File (EHF). An EHF will be prepared and maintained on each end item and will serve as an EHF. At a minimum the EHF will contain identification data for the equipment, information describing required preventive maintenance actions or reference to the publication where the information can

be found, and a copy of all completed ERO's retained as described in Chapter 2 of TM-4700-15-1.

The forms specified in Chapter 2 of TM-4700-15-1 are mandatory and sufficient data should be gathered on ALL repairs to complete the documents. COMS Contractor shall report quality deficiencies to COR for purposes of submitting SF368 (QDR). The COMS may waive use of one or more of these forms COR in writing.

B. Training Equipment Change Request (TECR). NTSC FORM 4720/2 (TECR) is used to request any hardware or software changes to the training devices included in this contract.

3.10.5.2 Electronic Forms and Records.

3.10.5.2.1 RFMSSS. At MAGTFTC the Contractor shall be required to use the Web based Range Facilities Management Support System (RFMSS) to schedule Contractor access time for the base's ranges and training areas. The Contractor's personnel will not be authorized to enter any of the ranges or training areas for any reason unless they have prior approval in the RFMSS system.

3.10.5.2.2 Smart Range At MAGTFTC the Contractor shall use the Web based "Smart Range" range management program to track GFE inventory, track maintenance actions, track the schedule for upcoming issues and turn-ins of training devices, track the schedule for upcoming uses of Contractor supported ranges and equipment. The Smart Range shall be the official training schedule that the Contractor will respond to.

3.10.6 Periodic Performance Reviews.

3.10.6.1 Contractor Performance Reviews. Upon thirty days notice by the Government, Contractor shall participate in an on-site formal performance review that addresses the status of each training system and equipment relative to Contractor's responsibility areas under the SOW. Special attention shall be focused on problem areas and their resolution. These reviews shall not be held more often than every 6 months, unless they are called to address specific, prior identified problems.

3.10.6.2 Government Performance Reviews. All aspects of the Contractor’s performance under this contract will be subject at any time (announced or unannounced) to the monitoring and inspection by the COR or the Government.

3.10.7 Protection of Government Assets. All Government Furnished Property (GFP) shall be maintained and returned to the Government in like condition, normal wear and tear excepted.

3.10.8 Telephones. COMS Contractor shall be responsible for all telephone services and equipment used by COMS Contractor personnel other than the use of base phones for on base calling.

3.10.9 Continuous Improvement. COMS Contractor is specifically charged to work with the Government and/or its agents to continuously review all procedures and processes hereunder in order to verify their necessity and, if necessary, to determine how those procedures and processes can be done more effectively and efficiently. This includes, but is not limited to, review of all PM requirements, determinations of appropriate substitutions of chemical agents, determinations of appropriate inventory stocking levels, etc. COMS Contractor cannot arbitrarily change procedures and processes. All such changes must be approved by the COR or the Contracting Officer.

3.10.10 COR and Alternate COR. The COR is the only on-site technical representatives for the contract, and as such, all Contractor personnel communications with other on-site personnel must go through the COR. Agreements and policies made between Contractor personnel and other Government personnel without COR knowledge or approval are strictly prohibited.

3.10.11 Environmental Protection. Contractor shall comply with all applicable host country, federal, state, and local environmental protection requirements and laws. All such environmental protection matters shall be coordinated through the COR. In the event that a regulatory agency assesses a monetary fine against the Government for violations caused by Contractor negligence, Contractor shall reimburse the Government for the amount of the fine, and all related costs.

3.10.12 Permits. Contractor shall, without additional expense to the Government, obtain all appointments, licenses, and permits required for the performance of its responsibilities hereunder. In doing so, Contractor shall comply with all applicable federal, state and local laws. Evidence of such permits and licenses shall be provided to the COR prior to commencing the work for which such permits and licenses are required.

3.11 Best Practices. In the absence of the documentation of Section 2.0 herein or local procedures, all COMS Contractor responsibilities hereunder shall be performed in accordance with best commercial or industrial practices.

3.12 Transition to Successor.

3.12.1 Responsibilities. COMS Contractor shall, in addition to COMS Contractor's ongoing responsibilities hereunder, provide reasonable and customary support in effecting a smooth transition to the successor COMS Contractor during the mobilization phase of the successor contract. This includes, but is not limited to, participation in all Government initiated inspections and inventories.

3.12.2 Physical Inventory. Within 120 days prior to the expiration of this contract, or any extensions thereto, COMS Contractor shall complete a physical inventory of all GFE under custody of COMS Contractor, even if the COMS Contractor is the successor COMS Contractor. This inventory will ascertain both the existence and condition of these assets against the initial baseline inventory established at the beginning of the contract and any authorized changes made during the term of the contract. The COMS Contractor shall be liable for all missing assets as well as assets not returned in a serviceable condition beyond normal wear and tear, as applicable. The Government, for purposes of this measurement, shall determine normal wear and tear. When 100% inspection is impractical to determine serviceability, statistical audit procedures shall be employed. At transition, an inventory will be conducted to determine exact inventory at CSD.

3.12.3 Training System and Equipment Baseline Status. As a part of its transition efforts, the incumbent COMS Contractor shall conduct a detailed analysis of each training system and equipment for which it has responsibilities and ascertain the baseline status of each training system or equipment. Normally this analysis is a tri-party sign off situation where the condition of each training system or equipment is diagnostically and operationally checked. Such analyses shall ascertain the operating condition of each training system or equipment, the condition of all supporting assets for the training system or equipment, the status of all outstanding maintenance actions of the training system or equipment, and any other relevant information that could potentially impact the ability of the Successor COMS Contractor to fully perform their COMS responsibilities. Baseline status must be verified by the COR.

3.12.4 Plan of Action and Milestones (POA&M). Once the baseline status of each training system and equipment is determined, Contractor shall develop, for review by the COR, a POA&M for each training system or equipment. These POA&Ms must address the actions and milestones the Contractor intends to accomplish to ensure each training system and equipment will be in a fully operational condition at the termination date of the contract. This shall include all steps necessary to complete outstanding maintenance actions, close supply support requisitions, complete final inventories for turnover to the Government, and such other steps that are reasonably necessary to return all GFP to the Government in an acceptable condition. The POA&Ms must be presented to the COR at least 45 days prior to the termination date of the contract. Note: This baseline does not alleviate the maintenance and supply replenishment responsibilities of the current Contractor during the last 45 days.

Contractor shall negotiate the POA&Ms with the COR to obtain mutually agreed upon actions and milestones. Those areas of performance that cannot be reasonably accomplished prior to the termination of the contract shall be documented by the Contractor and

submitted to the Contracting Officer with specific commitments for correcting the deficiencies.

3.12.5 Repair of Training Systems and Equipment Deficiencies. In the event that training system/device deficiencies are found during the Equipment Baseline Status check(as described above), and these repairs will be deficient at CSD, the incumbent and successor COMS Contractors shall negotiate a settlement for the repair/replacement of these deficiencies including possible financial consideration if applicable. If the parties can not reach agreement on a settlement, they must agree to binding arbitration by the Contracting Officer. The intent of these actions is to ensure that the successor COMS Contractor is prepared to assume full performance responsibilities at CSD for all existing training systems and equipment.

3.13 Manpower and Personnel. The COMS Contractor shall provide a competent, highly qualified workforce in support of contract requirements. The Contractor's on-site operator and maintenance personnel shall, as a minimum, meet the position qualification requirements as listed in the current DOL Service Contract Act Directory of Occupations (www.dol.gov/esa/regs/compliance/whd/wage/main.htm) for positions proposed in support of contract requirements (including proposed manning charts). Specific requirements may require other occupations and qualifications in addition to, or in place of, those listed in the Directory.

The Contractor shall designate (in writing) a Site Manager/Alternate Site Manager who shall have full authority to act for the Contractor on all contract matters relating to daily operation at each site. As required by workload, each site shall also have designated Shift Supervisors. Contractor on-site management personnel shall, in addition to meeting DOL Directory of Occupations descriptions for their technical background, meet the following supervisory qualification requirements:

a. Site Manager. A Site Manager must have demonstrated five (5) years' experience in the field of management of which two (2) years shall be maintenance management in the field of electronics. If the Site Manager is to perform as a Shift Supervisor, the requirements for a Shift Supervisor must also be met.

b. Shift Supervisor. A Shift Supervisor must have demonstrated twelve (12) months of maintenance supervisory management experience in the field of electronics and meet the qualifications required for the Electronics Technician, Maintenance III.

Resumes for these positions shall be submitted to the Government for evaluation for initial and any follow-on personnel filling these positions.

SECTION 4: DEFINITIONS

Available Performance Factor (APF). This factor is a measurement of the COMS Contractor success in meeting Government performance capability requirements of a training system or equipment hereunder for each and every Government Scheduled Use, and is derived from the applicable Degraded Operational Matrix as identified in each training system or equipment appendix. COMS Contractor performance shall be measured pursuant to the provisions of Section F of the contract schedule and as explained in Section 5 of the SOW (Reduced Payment Procedures).

COG 2'O'. Cognizance Symbol 2'O', or COG 2'O', designator is an inventory management term that denotes which material support activity is responsible for procurement and overall inventory management of the equipment. COG 2'O' equipment is defined as those training end items that have been specifically developed, procured, catalogued, and distributed by NAWCTSD to meet a training requirement. NAWCTSD is the inventory manager for all COG 2'O' end items.

Consumables. Consumables are those materials requisite to the performance of any training system and equipment that, by their nature, are expended, in whole or in part, as a function of the normal operation or maintenance of said training systems and equipment. Examples include light bulbs, paper, printer ribbons, POL, filters, fuses, computer disks, etc.

Contracting Officer's Representative (COR) or Alternate COR (ACOR). A technical government person or agent, appointed by the PCO, who is responsible for the technical surveillance and measurement of Contractor performance. The COR is the sole Government point of contact for the site manager. The COR is also the only on-site representative for this contract, and all Contractor personnel communications with other command personnel must go through the COR.

Contractor Support Date (CSD). The date of commencement of Contractor performance responsibilities as specified herein. CSD shall coincide with the end of the mobilization phase for a given training system or equipment.

Corrective Maintenance. All tasks required to return a training system or equipment to a fully operational condition. Corrective maintenance shall include, but is not limited to, as necessary, fault isolation, trouble-shooting, adjusting, testing, aligning, calibrating, repairing, reverse engineering for such things as replacing obsolete parts, fabricating components, and developing and revising maintenance documentation. Corrective maintenance may include Organizational, Intermediate, and Depot-Level maintenance.

Exception Items. Those items uncovered by Government inspections but have not been corrected. These items will be determined monthly by audits, applicable documents, records and reports.

Fully Operational Condition (FOC). A training system or equipment performing within defined parameters, available to be used for its intended purpose and accepted by the Government.

Government Furnished Equipment (GFE). Any assets, including the Material Support package, furnished to the Contractor by the Government.

Government Scheduled Use (GSU). A block of time designated by the Government for the purpose of using the training system or equipment herein identified. The Government may schedule a GSU for any purpose, to include, but not limited to instructor preparation, curriculum or scenario development, training, demonstrations, inspections, modifications and upgrades, etc.

On those occasions when the COMS Contractor schedules time in accordance with SOW paragraph 5.2.3.3 (Contractor scheduling/ operation of devices), this time will be considered a Government Scheduled Use for reporting purposes.

Inspected Items. All items selected for review during Government inspections.

Material Support Package. The inventory of supporting assets provided by the Government for an individual training device or a group of training systems and equipment. The content of the Material Support Package may contain training device unique tools and test equipment, training device unique spare and repair parts, publication and technical data, and software media.

Mobilization Phase. The period of time immediately preceding CSD during which the incoming COMS Contractor shall acquire personnel, conduct training operations, and perform all other mobilization tasks necessary to prepare the incoming COMS Contractor for assumption of full performance responsibilities.

Non-Chargeable Downtime. When training device malfunction or degradation precludes completion of a scheduled use period, the entire period shall be considered downtime. Chargeable downtime is included in the APF measurement unless such downtime is due to one or more of the following conditions:

a. Facility power outage, fire or other facility problems, when not caused by COMS Contractor negligence.

b. Acts of God

c. Negligence on the part of Government personnel.

d. Criminal acts by persons not employed by the COMS Contractor.

e. Action that requires a Government response in furnishing equipment, materials or service. Downtime designated non-chargeable under this condition will commence upon receipt by the Government of a properly executed request for such equipment/materials or service and will terminate upon notification to the COMS Contractor by the Government that the item is available for pick up at the local base supply point designated by the COMS COR or that the Government has provided the required service. If insertion of the requisitioned part fails to correct the problem then the downtime shall be included in the APF for the period(s).

f. Failure of equipment that is solely the responsibility of the Government, as determined by the COMS COR, shall be repaired by The COMS Contractor. The Government shall be responsible for the acquisition of necessary repair parts. The Government shall repair failure of software that is solely the responsibility of the Government.

g. Changes and/or modifications directed by Government are not considered malfunctions or degradations and are handled according to Section 3 of this SOW.

Normal Operating Window. The period of time, as specifically identified in each training systems and equipment appendix, within which the Government expects to schedule any uses of the training system or equipment. (See "Government Scheduled Use").

Preventive Maintenance (PM). The care and servicing needed to maintain training systems, equipment and all sub-systems in satisfactory operating condition by providing systematic inspection, detection, and correction of incipient failures either before they occur or before they develop into major defects.

Program Manager for Training Systems (PMTRASYS). PMTRASYS is the Marine Corps System Command’s independent Program manager assigned the responsibility to provide products and services to support the development and life cycle sustainment of USMC training and training systems.

Repair. Repair is the restoration of the training system, equipment, subsystem, system, or a facility to such condition that it may be effectively utilized for its designated purposes and conforms to configuration management requirements. Repair may be overhaul or replacement of parts or materials that have deteriorated by action of the elements or usage and have not been corrected through maintenance.

Training Information Electronic Resource System (T.I.E.R.S). A web based logistics management system for the dissemination and distribution of data. The system may be used as a tool for configuration management, publication distribution, device disposition, etc.

Training Equipment Change Request (TECR). A document that initially addresses a requirement for a change to a training device. The TECR is a proposal recommending that a change to the training device be considered, and the design or engineering change be incorporated into the article to modify, add to, delete or supersede original parts. (Ref: NAWCTSD P-530 and NTSC Form 4720/2, TECR). TECR's may be submitted via T.I.E.R.S.

Transition Phase. The period just prior to the end of the performance period by the incumbent Contractor during which time the successor COMS Contractor is mobilizing to assume performance responsibilities.

5.0 INSPECTION, EVALUATION, AND REDUCED PAYMENT PROCEDURES

5.0.1 Policy. This section provides a standard method for reducing the contract price to reflect the reduced value of non-conforming services. In general, the services provided are assumed to be non-conforming any time training is degraded. The inspection, evaluation and reduced payment provisions of this Section in no way reduce the Government's rights as specified elsewhere in this contract. In particular, the following clauses are significant:

FAR 52.246-4	Inspection of Services - Fixed Price
FAR 52.249-13	Failure to Perform

The contractor shall provide an inspection system covering the services under this contract and shall not rely on the Government's inspection system.

5.1 General. The Contracting Officer's Representative (COR) will monitor the quality of Contractor Operation and Maintenance Services (COMS) support being provided by the Contractor in fulfilling the requirements of the Statement of Work (SOW). The inspection, evaluation and reduced payment procedures for COMS are defined in this Section.

5.1.1 Monitoring and Acceptance. COMS Contractor work performed under this contract will be monitored by the COR at the site(s) indicated in Section 1 of the SOW. The COR will use Government audits and inspections, applicable documents, records, information reports, user complaints and personal observations to monitor the COMS work performed under this contract. The COR accepts such work in accordance with Section E of the Schedule.

5.1.2 Monthly Deductions. Within 3 working days after the end of the month, the contractor will present to the COR an availability average summary table (see sample table at the end of this section). This table will be computed using the availability factor percentage of the first 50% of each scheduled use. The COR will inform the contractor if any adjustments are to be made to this table at this time. Adjustments may increase or decrease the availability, but will be based upon performance. For example, the CAST has no malfunctions for the first 4 hours of a 10-hour exercise, then the Fire Marking System (FMS) fails and cannot be restored within an hour. The remainder of the exercise is cancelled. While the availability for the first 4 hours was 100%, there was certainly an impact upon training with the loss of the FMS (training system is 100% down by the Degraded Operation Matrix). Some chargeable downtime to the Contractor will be expected in this case. On the other extreme, 10 infantry targets fail in the first two hours of a sixteen-hour exercise. At the end of the first platoon exercise, the company holds a debrief and the contractor restores 6 of the down targets without delay to training. Only 2 more infantry targets fail during the remainder of the exercise. In this case, the COR may elect to mitigate the actual number of targets considered degraded for APF calculation purposes.

5.1.3 Contractor Inspection Responsibility. See Section E of the contract schedule.

5.1.4 Inspection and Evaluation of Services. The Government may use a variety of surveillance methods to evaluate the Contractor's performance. Methods to be used to evaluate the listed service during an inspection period for payment computation purposes are specified in this Section. The COR will monitor the quality of services being provided by the Contractor in fulfilling the requirements of the SOW. Various audit procedures will be utilized in accomplishing this function. Inspections will be conducted both periodically and randomly, as the COR deems to be in the best interest of the Government. When practical, 100% inspections of an audited item will be utilized; otherwise, sampling techniques will be employed. In performing these inspections, the COR will utilize local practices, information reports, user complaints, personal observations, quality assurance plans and any other relevant criteria for determining the scope and frequency of the Government audits.

5.2. Evaluation of Services.

5.2.1 Availability Performance Factor (APF). An APF is determined for each Government Scheduled Use (GSU) associated with the COMS CLIN for the training system or equipment being used by the Government. The APF for each GSU is 100% less deductions for a training system or equipment having to operate in a degraded mode or the training system or equipment is not available for the intended purpose of the GSU. The factor is a reflection of the performance capability of the training system or equipment in accordance with the Degraded

Operational Matrix (DOM), when applicable, and may also include degradations for Contractor response time. The DOM for each training system or equipment is contained in the applicable device appendix contained in the Statement of Work. Use and application of the DOM and other factors involved in the APF determination is discussed below. All APFs are expressed as a percentage from 0% to 100%, rounded to the nearest whole percentage, with 100% indicating full performance. When a training system or equipment is not available for a GSU or fails during a GSU, the DOM deduction for that GSU will be 100% if the training system or equipment cannot be operated in a degraded mode. If the training system or equipment can be operated in a degraded mode, the failed item will be identified and the DOM deduction will be the percentage identified for that item.

NOTE: The monthly APF is an average of all individual APF determinations associated with a COMS CLIN and is calculated by dividing the sum of all GSU APFs by the total number of GSUs for that month.

5.2.1.1 Determination. If the COMS Contractor's performance is otherwise acceptable, the Contractor's payment for the month for a given Contract Line Item Number (CLIN) will be the APF factor for the month multiplied by the applicable COMS CLIN dollar amount expressed in Section B of the contract schedule, with the total payment for the month being the sum of each computation. See paragraph 5.2.2 for sample calculations.

5.2.1.2 Degraded Operational Matrix (DOM). Each DOM lists systems, sub-systems and assemblies that experience has shown are necessary to utilize the training system or equipment. Each listed item has a corresponding degradation percentage that is subtracted from the APF when operation of the training system or equipment has degraded due to failure of one or more of the items. If the training system or equipment (1) is not operationally ready at the beginning of a GSU, or, (2) malfunctions or is degraded during the GSU in progress, and (3) a corrective maintenance request is made, the DOM(s) shall be used to calculate that APF and the APF for any subsequent GSU until corrective maintenance has been performed. Exceptions to this policy are defined individually in later subsections. For each GSU, the Government will ascertain the training system or equipment's capability as measured against the DOM by deducting the prescribed degradation(s) from 100%. This becomes the APF for that GSU. Reasonable judgment must be used in determination of applicable degradations. Similarly, if an item has minor degradations but is otherwise functioning correctly and not impacting the GSU, then a deduction would not be warranted. The impact to the GSU should be the guiding factor in these decisions.

Example of Deduction Not Warranted: A bulb is burned out on a dial, but the dial is otherwise functioning correctly and is not impacting the GSU, than a deduction would not be warranted. Note: The burned out bulb shall be repaired before the next GSU or deduction would be warranted for the next GSU.

Example of Deduction Warranted: A component had a burned out indicator light and that indicator light was critical to the performance of the component (such as a navigation or threat warning indicator) then an effective GSU using that component is not possible and a deduction is warranted.

5.2.1.3 Changes to DOMs. As training system or equipment configurations, course curriculum, or training requirements change, the associated DOM may change. In such event, the Contracting Officer will provide the amended DOMs.

5.2.1.4 Contractor Response Time. When the training system or equipment malfunctions or degradation occurs during a GSU, Contractor response time shall be calculated starting from the moment proper notification has been given to the Contractor by the Government until the moment the Contractor commences the required corrective maintenance. Allowable Contractor response times are only applicable to corrective maintenance requests and do not excuse the Contractor from providing the necessary operational readiness support required prior to each GSU period. All DOM degradations to the APF shall remain in effect for all subsequent GSU periods until the required corrective maintenance has been successfully completed. Generally, Contractor response time is immediate for those devices operated by Contractor personnel. COMS Contractor response times for those devices operated by other-than-Contractor personnel are identified in the applicable training system/device appendix or as determined by the COR.

5.2.1.5 Degradation Involving Continued Use. During any GSU, the Government may elect to use the training system or equipment, or any portion thereof, in a degraded mode.

5.2.1.6 Degradation Involving Spares. Non-availability of a training system/device due to failure of the Contractor to maintain the integrity of the Contractor-maintained Material Support Package (spares) shall result in a deduction being taken at the applicable DOM degradation percentage. If a required spare was a Government responsibility to provide or replenish and was not provided in the Material Support Package, then all DOM degradations associated with the required spare will be discontinued once the spare is requisitioned through the COR in accordance with the SOW. In the event the identified spare does not fix the problem, applicable APF calculations and deductions will be retroactive from the GSU during which the wrong spare was identified until the GSU subsequent to the time that the proper spare is identified and ordered. This will apply regardless of whether the spare was supplied by the Contractor or the Government. In the event a Government supplied spare is found to be defective upon receipt but is otherwise correctly identified and required spare, no additional or retroactive APF deductions will be taken from the time the spare was initially ordered.

5.2.1.7 Degradation Involving Erroneous Diagnostics: In the event the Contractor erroneously identified the problem, as soon as it is determined that the problem was misdiagnosed, applicable DOM deductions shall be made retroactively to the GSU period during which the erroneous diagnostic was made. Retroactive calculations with applicable deductions will be reflected in the current month's report with appropriate footnotes to serve as an audit trail.

5.2.1.8 Non-Chargeable Downtime. Whenever the training system or equipment is rendered completely inoperable or unusable for the GSU due to one or more of the following conditions, the APF for that GSU shall be calculated as 100%. The GSU will also be factored into the quantity of GSUs utilized in the Monthly APF calculation.

a. Facility power outage or facility problems not caused by Contractor negligence.
b. Acts of God.
c. Negligence on the part of Government personnel.
d. Criminal acts by persons not employed by the Contractor.
e. Action that requires a Government response in furnishing a service or equipment/materials other than spare parts.
f. Failure of equipment or software which is solely the responsibility of the Government as Determined by the COR.

5.2.1.9 Disputes. In the event of any dispute as to whether or not a specific deduction is merited, the Contracting Officer will make the final determination in accordance with contract Schedule G.

5.2.1.10 Unacceptable Performance. If the Contractor's Monthly APF for any training system or equipment is less than 75%, the Contractor's performance is unacceptable and may be grounds for default.

5.2.2 Calculations. To determine what portion of the unit price is to be paid, the Availability Performance Factor percentage will be multiplied by the COMS SLINS price for each device. At the end of each month, the Availability Performance Factor percentage is determined by averaging the training system/device availability percentages for each scheduled use divided by the number of scheduled uses for that device. This average will be rounded to the nearest whole integer and applied to the COMS SLINS. Scheduled use is not weighted by duration; for example, a 12-hour scheduled use on Range 18 carries the same weight as the 4-hour scheduled use on the same range.

For example: Range 18 is scheduled for use seven (7) times during the course of a month. On 5 occasions, all Degraded Operation Matrix (DOM) valued items function correctly for the duration of the scheduled training. On two other instances of scheduled use, failures cause the range to be degraded--once to 50% and once to 90%. These are averaged to a .91 availability factor. See example below:

GSU:	1	2	3	4	5	6	7	
APF:	100%	100 %	100%	50%	100%	100%	90%	= 640% / 7 uses = .91

This availability factor is applied to the following CLIN:

SLIN	PRICE	AVAILABILITY	PAYMENT DUE
AA COMS	$1000	.91	$910

5.2.2.1 Service Failures. At the end of each scheduled training period in which DOM valued items were considered down, the contractor will notify the COR with the number and type of failures. These will be divided into those failures that occurred within the first 50% of the scheduled training hours and those that occurred in the remaining 50% of scheduled training hours. Those occurring in the first 50% of are considered down for the duration of training. Those which fail in the remaining 50% of training may be considered down for the duration of training, but will normally be mitigated to some extent by the COR. Components that are repaired during the course of scheduled training without impact on the using unit should be annotated on the contractor's report with the nature of the repair and the time affected. Reports may be consolidated and delivered within 24 hours. This is not intended to be an administrative burden, but a daily accounting to preclude disputes.

5.2.2.2 Non-Scheduled Training Systems/Devices. Training Systems/Devices (including Ranges) not scheduled by the Government during the course of a month will be scheduled and operated for one (1) hour by the COMS Contractor during the last 5 days of the month. The status of the device or range at the end of that hour will be used to compute the monthly availability. The COMS Contractor will schedule these one-hour uses with the COR. This hour is chargeable against the annual operation total and will be considered a Government Scheduled Use for reporting purposes. A device scheduled by neither the Government nor the COMS Contractor will have a monthly availability performance factor of zero (0).

5.2.2.3 Other Training System/Devices. Training Systems and/or devices for which an operator is not required and hours are not tracked by the Contractor will be considered to have been scheduled for use 15 times during the course of a month. Downtime for these devices begins 48 hours after return of the malfunctioning item to the Contractor for repair or reporting of the malfunction to the contractor (SOW dependent). For these computations, the device is considered to be down one (1) Government scheduled use for every 48-hour period the device is not available for use to the using unit.

SAMPLE AVAILABILITY AVERAGE SUMMARY TABLE

SCHED USE	R 108	R-111	PGTS	TVN	TA EAST	MNR DVS	R 410A	TA WEST
1	100	100	100	100	100	100	100	100
2	100	100			100	70	100	100
3	100	100			100	80	80	100
4	75	50			0	80	90	100
5	100	100			100	70	100	
6	100	100			100	100		
7	100	90			0			
8	100				0			
9	0				90			
10	100				100			
11	95				100			
12	99				100			
13	100				100			
14	50				100			
15	100				100			
AVG	88	91	100	100	79	83	94	100

Other CLINs would be determined in like manner, with the total payment to the Contractor being the sum of all such computations.

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A.1 Description

LOCATION: MAGTF TRAINING COMMAND, TWENTYNINE PALMS, CA
RANGE NO: 103
TYPE RANGE: AUTOMATED FIELD FIRE (INFANTRY SQUAD DEFENSE)

COMS Contractor Mobilization Date - 1 December 2007
COMS Contractor Support Date - 1 January 2008

EQUIPMENT LISTING	QUANTITY
RANGE CONTROL STATION (RETS)	1
INFANTRY TARGET MECHANISM (ITM)	144
INFANTRY MOVING TARGET CARRIER (IMTC)	12
SMALL ARMS SOUND SIMULATOR (SASS)	12

Range 103 is a permanent installation used for familiarization and live fire training of troops with their organic weapons. The range allows troops firing from fixed defensive positions (concrete fighting holes) to engage stationary and moving infantry targets at unknown distances, including multiple target scenarios. The range provides for realistic combat training for Marine infantry squads under conditions simulating an actual battlefield.

The range has facilities for coordinating the remote control of 12 moving and 144 stationary infantry targets that are permanently emplaced on suitable terrain. Operators, located in a range control tower, utilize a Range Control System (RCS) to monitor and observe the entire range operation. Located in concrete emplacements at varying distances are the 156 remote controlled targets that provide a realistic environment for the training scenario. The targets are located at distances between 75 and 300 meters from the fixed defensive positions.

Remoted Target System (RETS). The RETS is composed of individual target equipments and simulators designed to provide the USMC with standard hardware to satisfy infantry live-fire training needs. The RETS system includes infantry stationary and moving target hardware and miscellaneous live-fire simulation equipment as well as associated interface equipment. The RETS equipment has been selected and installed to provide range configurations for infantry training. From the Range Control Station (RCS), the operator has the option of developing scenarios for RETS automatic target operation or using established target scenarios that have been loaded by Data CD or other suitable media. The following paragraphs describe the principle components of the Remote Targeted System:

Range Control Station (RCS). The RCS consists of the hardware required to provide manual and automatic remote control of the target equipment and which provides hard

copy printout of trainee performance. The RCS is normally operated by a single operator in the presence of the Range Safety Officer (RSO). The RCS is capable of:

a. Controlling armor and infantry target mechanisms, moving target carriers, hostile fire simulators, muzzle flash simulators and armor smoke and flash simulators

b. Displaying malfunctions of all target mechanisms and target carriers

c. Accumulating and displaying scores for each target or selected groups of targets

d. Recording (on the scoring printer) the score for each target or selected groups of targets by operator or preprogrammed command

The RCS has been designed so that the computer is user friendly, enabling a trained operator to quickly write and edit a standard 10 to 15-minute range scenario.

Infantry Target Mechanism (ITM). The ITM may be installed either as a stationary target lifter or as a moving target lifter when mounted on the Infantry Moving Carrier. The ITM holds a three dimensional, self-healing, plastic target that is configured to look like a soldier. The ITM can use either a single or double target arm. The former lifts one target, the other two. The mechanism is capable of lifting its target(s) in winds up to 35 mph preventing all but the most minor movement. It can also be used in conjunction with the Night Muzzle Flash Simulator or Infantry Hostile Fire Simulator.

Infantry Moving Target Carrier (IMTC). The IMTC is an electronically controlled mechanism that simulates a running man moving from one concealed position to another. The carriage mounts an ITM and a Muzzle Flash Simulator. The IMTC is capable of moving a target forward or backward in either the up or down position. It has three speeds, which must be selected at the mechanism and cannot be selected remotely.

Muzzle Flash Simulator (Infantry Night Muzzle Flash Simulator) (MFS). The MFS simulates the muzzle flash of small arms weapons. It utilizes light-emitting diodes reflecting off the target surface to provide the visual effect. The MFS operates either single shot or automatic fire at a rate of 600 rounds per minute. It receives its commands through the ITM. To be effective it must be located 11 to 18 inches in front of the ITM and angled toward the face of the target.

Small Arms Sound Simulator (Infantry Hostile Fire Simulator) (SASS). The SASS provides realistic sound simulation of a single shot and automatic rifle fire. The automatic mode has a rate of

fire of 600 rounds per minute. The SASS consists of a tubular, gun-like barrel with a combustion chamber. A mixture of oxygen and propane gas is ignited in the combustion chamber by a spark plug producing the sound. It receives its commands through the ITM and is usually located in the same emplacement; however it may be located as far as 30 feet away (the length of its cable).

Note: The MFS and SASS operate independently, but can be operated simultaneously.

Interconnecting Box, High/Low Power (Low/High Power Junction Box) (LPJB) (HPJB). The Interconnecting Box (ICB) provides interface between the underground data and power cables and the targetry equipment. It provides power and data cable transient protection, 24VDC power for use by the target equipment and circuit breaker electrical protection. The high power junction box is used exclusively with the Infantry Moving Target Carrier. The low power junction box is used with all other RETS targetry equipment.

Three-Dimensional Infantry Targets. The three-dimensional plastic self-healing targets are shaped like a person, head to mid-thigh, painted to simulate a soldier holding a rifle at port arms.

NAMES, PSEUDONYMS AND ACRONYMS FOR RANGE EQUIPMENT

NAMES	PSEUDONYMS	ACRONYM
Range Control Station	The Tower, The Computer	RCS
Infantry Target Mechanism	Infantry Lifter, Lifter	ITM
Stationary Infantry Target	Infantry Lifter, Lifter	SIT
Moving Infantry Target	Infantry Mover, Mover, Cart, Buggy	MIT
Infantry Moving Target Carrier	Infantry Mover, Mover, Cart, Buggy	IMTC
Interconnecting Box, Low Power	Low Power Junction Box, J-Box, JB	LPJB
Interconnecting Box, High Power	High Power Junction Box, J-Box, JB	HPJB
Small Arms Sound Simulator	Infantry Hostile Fire Simulator, Rifle Fire Simulator, Machinegun Simulator, RFS	SASS
Infantry Night Muzzle Flash Simulator	Muzzle Flash Simulator	MFS
Target Holding Mechanism, Tank Gunnery	Armor Lifter, Armor Target, Lifter	THMTG
Tank Target Mechanism	Armor Lifter, Armor Target, Lifter	TTM
Stationary Armor Target	Armor Lifter, Armor Target, Lifter	SAT
Moving Armor Target	Armor Mover, Mover, Cart, Buggy	MAT
Armor Moving Target Carrier	Armor Mover, Mover, Cart, Buggy	AMTC
Visual Flash Simulator	Strobe Light, Strobe	VFS
Battle Effects Simulator	Omega, Omega-36, Omega-60	BES
Hostile Fire Simulator	Joanell, Hoffman	HFS
Armor Target Kill Simulator	Joanell, Hoffman	ATKS
Interconnecting Box, Target	Target Interface Unit	TIU
Three Dimensional Target	Ivan, Plastic Silhouette	
Armor Target	Target, Armor Silhouette, Flank Target,	

A.1.1 Range Communication System. A base telephone and a built-in PA system are provided at the range as GFE. The remainder of the range communication system used on Range 103 will be provided and by the COMS Contractor at Contractor expense. This system at a minimum shall consist of one (1) 2-way radio in each Contractor vehicle and one (1) radio in the Range Control Tower. These radios will be used to keep in constant communication with the USMC Range Control Facility at BEARMAT (as required by base regulations) and for Contractor communications between vehicles, the Range Control Station (RCS), and other facilities. These radios shall conform to the specifications provided by the Government. These radios shall be considered GFE and will be programmed and maintained by the Government and shall remain as Government property at the end of the contract. The Contractor is responsible for the maintenance of the built in Range PA system.

A.2 Operation and Maintenance Requirements

A.2.1 Operation. The Contractor shall provide RETS operators during normal operating hours, make-up, and additional training periods to facilitate the conduct of training. The Contractor shall provide for the initial start-up of the RETS training system, software load, system readiness check-out, and insertion of initial training conditions and parameters in response to published schedules (including any revisions thereto). The Contractor shall insure that the RETS equipment is operationally ready at the commencement of each scheduled training session. The Contractor shall respond to specific direction from the COR, for desired initial conditions of controls and targets including type and quantity for the range. The Contractor shall be responsible for the operation and control of the RETS throughout the accomplishment of the scheduled training mission. The Contractor shall have the ability to create training scenarios for the RETS, and when the system is not being used for scheduled training requirements, shall assist RETS users in the creation of new scenarios which will be stored on Data CD or other suitable media for future use on the range. The Contractor shall be available to provide operational demonstrations of the training device when it is not being used for scheduled training requirements. Operational demonstrations of the training device will be considered part of the Scheduled Training Requirements as delineated in paragraph A. 12. The Contractor shall work closely with and assist the RETS users in employing the training system to its maximum capabilities. (Note: all scenarios created by the Contractor shall be considered Government property.)

A.2.2 Maintenance. The Contractor is responsible for all levels of maintenance, (organizational, intermediate, and depot; preventative and corrective) for all target systems and equipment

listed in this appendix, which includes low/high power junction boxes, target carriers, RCS computer system, target mechanisms, flash simulators, small arms sound simulators, drainage of the target pits, all connecting cables and all down range wiring within R103, any down range wiring access pits, and removal of all (non-ordnance) foreign material (including water) from the target pits. In addition, the Contractor is responsible for all supplies to repair the training device and to replenish the repair parts used from the inventory furnished by the Government.

A.2.2.1 Berm Maintenance. The COMS Contractor shall maintain the earthen berms, timbers, concrete, and other forms of protection surrounding target mechanisms. This includes all supporting efforts as required to accomplish this task, such as: removing dirt to replace a timber/support and replacing dirt. The intent of this effort is for the COMS Contractor to be fully responsible for the protection of the target mechanisms from direct fire. Damage to a target mechanism due to direct fire is presumed to be from inadequate target protection and the COMS Contractor is responsible for replacing these damaged mechanisms at his expense. The COMS Contractor must demonstrate to the COR that the damage was caused by something other than inadequate protection, such as in the case of a hit by a ricocheted projectile. Such contested target damage must be brought immediately to the attention of the COR for determination. Loss of target use/capability due to lack of/degraded berm maintenance by the COMS Contractor will result in the target/targets being considered "down" for degraded operation calculations (chargeable downtime). In addition, the Contractor is responsible for re-burying any of the down range wiring which becomes exposed due to wind, water, or live fire erosion.

Range Firing Position Maintenance. The COMS Contractor shall maintain the earthen berms, timbers, concrete, and other forms of support for all range infantry and/or armor firing positions. This includes all supporting efforts as required to accomplish this task such as: removing dirt to replace a timber/support and replacing dirt. The capability of the firing position to support range operations will be determined by the COR. The COR may declare the range up to 10% degraded if the maintenance of firing positions is not adequate.

Fill/Dirt Materials Requirements. In conjunction with COMS Contractor maintenance of berms, firing positions, tank trails and tracking roads, the Contractor shall obtain natural fill/dirt materials from the immediate areas surrounding the berms, firing positions, tank trails and tracking roads. When these materials are not available, the COR will coordinate use of base resources to provide material to the COMS Contractor.

A.2.2.2 Target Maintenance. The Contractor shall be responsible for installing the 3-D infantry targets on the mechanisms and ensuring that the laser hit detectors and/or ballistic hit sensors are attached to each target and are fully operational.

The COMS Contractor shall replace the 3-D infantry targets when they are no longer serviceable.

A.2.2.3 Laser Hit Detectors. Laser hit detectors, laser hit detector harnesses, laser target interfaces, MILES target interface devices, interconnecting cabling and batteries for the laser detector equipment will be provided to the Contractor as GFE. The Contractor shall install this equipment on the targets in accordance with the training scenario requirements. The Contractor shall ensure that this equipment is fully functional and capable of detecting hits by the RETS equipment. The Contractor shall replace any of this equipment which fails with other GFE provided by the COR. The corrective maintenance of this equipment will be by the Government unless such damage was caused by negligence on the part of the COMS Contractor.

A.2.2.4 Thermalized Targets. The Contractor shall respond to the requirements of the training scenarios by providing thermalized targets when and where requested. The pattern of the thermalization to be installed on the targets will be provided to the Contractor by the COR. If the weapons systems being used are compatible and the atmospheric, wind or weather conditions permit the proper thermal signature from no-power thermal material, such material shall be adequate. If any of the aforementioned conditions preclude the use of no-power thermal material, heated thermal targets will be required. The Contractor, at Contractor's expense, shall procure (or fabricate) the necessary heated panels or blankets to meet the training requirements. These panels or blankets shall work on 120VAC or batteries. The contractor shall also be responsible for the procurement, maintenance, and replacement of the batteries. Thermalization material using other than the 120VAC or batteries may be used if such material provides an adequate thermal signature and is approved by the COR. The Contractor shall be responsible for the repair, patching, and/or replacement of thermal material, panels, blankets, or interconnecting cabling that fails, including if such failure was caused by damage from live fire. Targets that are to be thermalized in accordance with the training scenario are considered 100% down when such thermalization fails. If such failures are caused by live fire, chargeable downtime will not commence until the Contractor is provided adequate time to make repairs to the target. The COR will make the final decision when chargeable downtime commences.

A.2.3 Small Arms Sound Simulators. The Contractor shall ensure that adequate supplies of oxygen and propane gas are available for the small arms sound simulators (rifle fire simulators) to meet all of the scheduled training requirements. The Contractor shall be responsible for filling/refilling, from commercial sources at Contractor expense, all oxygen and propane gas cylinders used on the range.

A.2.4 Repair Parts Salvage. During the period of this contract Infantry Target Mechanisms (ITM's), Junction Boxes (JB's), Small Arms Sound Simulators (SASS), and other ancillary equipment may be damaged beyond repair by direct hits by live fire rounds or other means beyond the Contractors control. Whenever an ITM, JB, SASS, or other piece of ancillary equipment is damaged beyond repair, the Contractor shall report this to the COR, recommend replacement of the damaged unit, and salvage whatever parts possible once replacement has been authorized by the COR. These parts shall be used for repair of other RETS ITM'S, JB's, SASS, or other ancillary devices as appropriate, and shall be added to the current inventory and shall remain the property of the Government. Equipment damaged beyond economical repair will be replaced by the Government, when the COR determines such damage is not the result of Contractor negligence, abuse, and/or Contractor failure to accomplish required preventive, planned or corrective maintenance including all range maintenance responsibilities.

A.3 Major Hardware Items.

EQUIPMENT LISTING	QUANTITY
RANGE CONTROL STATION (RCS)	1
The RETS RCS consists of the following:	
a. Control Console CPU, Keyboard, & Monitor	
b. Scoring Printer	
c. Range Interface Adapter (RIA)	
d. Panel Assembly, Tower Junction Box (TJB)	
e. Signal Distribution Assembly (SDA)	
f Tower Communications System	
INFANTRY MOVING TARGET CARRIER (IMTC)	12
INFANTRY TARGET MECHANISM (ITM)	144
INTERCONNECTING BOX,LOW POWER (ICB,LP)	144
INTERCONNECTING BOX, HIGH POWER (ICB,HP)	12
3-DIMENSIONAL INFANTRY TARGETS	144
SMALL ARMS SOUND SIMULATOR	12
MUZZLE FLASH SIMULATOR	12

A.4 Range Degraded Operation Matrix.

PERCENT OF DEGRADATION

NUMBER OF SYSTEMS FAILED

SYSTEM	1	2	3	4	5	6	7	8	9	10	20	30	40	50	75	100
1.TARGETRY																
IMTC (12)	5	10	15	20	25	30	35	40	45	50						
ITM (144)	1	2	3	4	5	6	7	8	9	10	20	30	40	50	75	100
SASS (12)	2	4	6	8	10	12	14	16	18	20						

MFS (12)	1	2	3	4	5	6	7	8	9	10						
2. RCS																
COMPUTER	100															
PRINTER	30															
SDA	100															
TJB	100															
RIA	100															
3.OPERATOR	100															

NOTE: The total down percentage of the Range will be determined by totaling the down percentages for all the individual components/systems. For example if the scoring printer and five of the ITMs are down, the total down percentage would be 30% + 5% = 35%. The sum of the parts does not add up to 100% in all cases, since some of the systems are more critical than others. For example the printer is about 1% of the hardware but the system is down (30%) when it is not operational.

2. Acronyms:

IMTC = Infantry Moving Target Carrier
ITM = Infantry Target Mechanism
SASS = Small Arms Sound Simulator
MFS = Muzzle Flash Simulator
RCS = Range Control Station
RIA = Range Interface Adapter

A.5 Office, Storage and Maintenance Space. In addition to the office, storage, and maintenance spaces at the Main Camp Area, at Range 103 the Contractor will be provided one Storage building and one Range Control Tower. A Head Facility for use by both Government and Contractor personnel is available at the range.

A.6 Office Furniture and Equipment. The following office furniture will be provided by the Government for use in the Range Control Tower.

Quantity	Description
2	Drafting Chairs
1	Office Chair (Swivel)
1	2-Drawer Filing Cabinet
1	Wall Clock

A.7 Consumables. All consumables including batteries shall be provided by the Contractor. Some examples of consumables to be provided by the Contractor are:

Paint, Petroleum/Oils and Lubricants (POL), Data CDs, Printer Paper, Printer Cartridges, Fuses, Bulbs, Janitorial Supplies, Filters, Belts, 3-D Targets, etc.

A.8 Tools and Test Equipment. Only one Fault Isolation Adapter (sometimes called a Range Control Adapter) shall be furnished by the Government. The COMS Contractor shall be responsible for its maintenance. No additional tools or test equipment will be provided by the Government

A.9 Spares and Repair Parts. See paragraph 3.6 of the Basic SOW.

A.10 Inspections. The Government will perform periodic contract compliance inspections and operational readiness and maintenance checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections in providing the availability of the system and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph A.12.

A.11 Technical Data Support Package (TDSP). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training device.

A.12 Operating Hours and Planned Scheduling Requirements. Range 103 will be scheduled for a maximum of 500 hours per year. Weekend and holiday training hours will be the same as weekday training. The only holidays observed at Range 103 are Christmas Day (Dec 25) and New Years Day (Jan 1).

A.12.1 RETS Range Flexibility. Up to one-third (1/3) of the fiscal year range operating hours may be shifted among any RETS Ranges located at the MAGTF Training Command. The COR will provide 24 hours notice prior to adjusting operating hours from one range to another range. In addition, units using the RETS Ranges may request, through the COR, an extension of training time for a scheduled, in-progress training evolution. The maximum extension granted will be two (2) hours and only five (5) extensions will be granted monthly, all ranges inclusive. The COMS Contractor will be provided a minimum of two hours notice by the COR for any training time extensions. Any hourly extensions granted will be credited against the yearly operational hours for the range.

A.12.2 Scheduled Range Usage.

a. Training will be scheduled for a maximum of 10 hours per day.

b. The Contractor will be provided a minimum of 24 hours notice for all changes to the training schedule.

c. A normal scheduling day is a period of 24 hours, not necessarily 0000 to 2400; a scheduled usage could start at any time during the 24 hours of the day.

d. In the event a training unit fails to arrive within one hour of their scheduled start time or fails to notify the COMS Contractor of anticipated late arrival within one hour of the scheduled start time or leaves prior to scheduled end of training, the COMS Contractor shall contact the COR for further instructions. After hours or if for some other reason the COR is not available, the Contractor shall contact Range Control (Bearmat) for further instructions.

e. Scheduled usage for demonstrations will be credited as actual usage.

A.13 Janitorial Requirements. COMS CONTRACTOR shall maintain all assigned areas as directed by the COR. At R103 these areas shall include the RCS (Bldg 2295), the Storage Shed (Bldg 2297), and the Head (Bldg 2298). All cleaning supplies shall be provided by the COMS Contractor. Examples of janitorial services are:

(1) Daily:
- (a) Empty trashcans and ashtrays
- (b) Sweep floor
- (c) Refill Toilet Paper Holders
- (d) Refill Paper Towel Holders
- (e) Refill Soap Dispensers

(2) Weekly:
- (a) Dust furniture and equipment
- (b) Clean windows
- (c) Damp mop
- (d) Clean sinks, toilets, & urinals

(3) Monthly:
- (a) Clean air conditioner filter.

A.14 Location of Training Device/System. Range 103 is located in the Range Training Area at MAGTF Training Command, Twentynine Palms, and CA. Range 103 is located approximately 6 miles from the Main Camp Area of MAGTF Training Command.

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B.1 Description

LOCATION: MAGTF TRAINING COMMAND, TWENTYNINE PALMS, CA
RANGE NO: 107
TYPE RANGE: AUTOMATED FIELD FIRE (INFANTRY SQUAD ASSAULT)

COMS Contractor Mobilization Date - 1 December 2007
COMS Contractor Support Date - 1 January 2008

Range 107 is a permanent installation used for familiarization and live fire training of troops with their organic weapons. The range allows troops firing to practice patrolling and attacking enemy defensive positions. The range allows the troop to engage stationary and moving infantry targets at unknown distances, including multiple target scenarios. The range provides for realistic combat training for Marine infantry squads under conditions simulating an actual battlefield.

The range has facilities for coordinating the remote control of 4 moving and 52 stationary infantry targets that are permanently emplaced on suitable terrain. Operators, located in a range control tower, utilize a Range Control System (RCS) to monitor and observe the entire range operation. Located in concrete emplacements at varying distances are the 56 remote controlled targets that provide a realistic environment for the training scenario. The targets are located at positions that simulate the enemy in a defensive position.

R107 EQUIPMENT LISTING:	QUANTITY
RANGE CONTROL STATION (RETS)	1
INFANTRY TARGET MECHANISM (ITM)	56
INFANTRY MOVING TARGET CARRIER (IMTC)	4
SMALL ARMS SOUND EFFECTS SIMULATOR	12
SIGNAL AND POWER DISTRIBUTION SYSTEMS	

Remoted Target System (RETS). The RETS is composed of individual target equipments and simulators designed to provide the USMC with standard hardware to satisfy infantry live-fire training needs. The RETS system includes infantry stationary and moving target hardware and miscellaneous live-fire simulation equipment as well as associated interface equipment. The RETS equipment has been selected and installed to provide range configurations for infantry training. From the Range Control Station (RCS), the operator has the option of developing scenarios for RETS automatic target operation or using established target scenarios that have been loaded by Data CD or other suitable media. The

following paragraphs describe the principle components of the Remote Targeted System:

Range Control Station (RCS). The RCS consists of the hardware required to provide manual and automatic remote control of the target equipment and which provides hard copy printout of trainee performance. The RCS is normally operated by a single operator in the presence of the Range Safety Officer (RSO). The RCS is capable of:

a. Controlling armor and infantry target mechanisms, moving target carriers, hostile fire simulators, muzzle flash simulators and armor smoke and flash simulators

b. Displaying malfunctions of all target mechanisms and target carriers

c. Accumulating and displaying scores for each target or selected groups of targets

d. Recording (on the scoring printer) the score for each target or selected groups of targets by operator or preprogrammed command

The RCS has been designed so that the computer is user friendly, enabling a trained operator to quickly write and edit a standard 10 to 15-minute range scenario.

Infantry Target Mechanism (ITM). The ITM may be installed either as a stationary target lifter or as a moving target lifter when mounted on the Infantry Moving Carrier. The ITM holds a three dimensional, self-healing, plastic target that is configured to look like a soldier. The ITM can use either a single or double target arm. The former lifts one target, the other two. The mechanism is capable of lifting its target(s) in winds up to 35 mph preventing all but the most minor movement. It can also be used in conjunction with the Night Muzzle Flash Simulator or Infantry Hostile Fire Simulator.

Infantry Moving Target Carrier (IMTC). The IMTC is an electronically controlled mechanism that simulates a running man moving from one concealed position to another. The carriage mounts an ITM and a Muzzle Flash Simulator. The IMTC is capable of moving a target forward or backward in either the up or down position. It has three speeds, which must be selected at the mechanism and cannot be selected remotely.

Muzzle Flash Simulator (Infantry Night Muzzle Flash Simulator) (MFS). The MFS simulates the muzzle flash of small arms weapons. It utilizes light-emitting diodes reflecting off the target surface to provide the visual effect. The MFS operates either single shot or automatic fire at a rate of 600 rounds per minute.

It receives its commands through the ITM. To be effective it must be located 11 to 18 inches in front of the ITM and angled toward the face of the target.

Small Arms Sound Simulator (Infantry Hostile Fire Simulator) (SASS). The SASS provides realistic sound simulation of a single shot and automatic rifle fire. The automatic mode has a rate of fire of 600 rounds per minute. The SASS consists of a tubular, gun-like barrel with a combustion chamber. A mixture of oxygen and propane gas is ignited in the combustion chamber by a spark plug producing the sound. It receives its commands through the ITM and is usually located in the same emplacement; however it may be located as far as 30 feet away (the length of its cable).

Note: The MFS and SASS operate independently, but can be operated simultaneously.

Interconnecting Box, High/Low Power (Low/High Power Junction Box) (LPJB) (HPJB). The Interconnecting Box (ICB) provides interface between the underground data and power cables and the targetry equipment. It provides power and data cable transient protection, 24VDC power for use by the target equipment and circuit breaker electrical protection. The high power junction box is used exclusively with the Infantry Moving Target Carrier. The low power junction box is used with all other RETS targetry equipment.

Three-Dimensional Infantry Targets. The three-dimensional plastic self-healing targets are shaped like a person, head to mid-thigh, painted to simulate a soldier holding a rifle at port arms. Thermal imaging targets are sometimes used to conduct night training.

NAMES, PSEUDONYMS AND ACRONYMS FOR RANGE EQUIPMENT

NAMES	PSEUDONYMS	ACRONYM
Range Control Station	The Tower, The Computer	RCS
Infantry Target Mechanism	Infantry Lifter, Lifter	ITM
Stationary Infantry Target	Infantry Lifter, Lifter	SIT
Moving Infantry Target	Infantry Mover, Mover, Cart, Buggy	MIT
Infantry Moving Target Carrier	Infantry Mover, Mover, Cart, Buggy	IMTC
Interconnecting Box, Low Power	Low Power Junction Box, J-Box, JB	LPJB
Interconnecting Box, High Power	High Power Junction Box, J-Box, JB	HPJB
Small Arms Sound Simulator	Infantry Hostile Fire Simulator, Rifle Fire Simulator, Machinegun Simulator, RFS	SASS
Infantry Night Muzzle Flash Simulator	Muzzle Flash Simulator	MFS
Target Holding Mechanism, Tank Gunnery	Armor Lifter, Armor Target, Lifter	THMTG
Tank Target Mechanism	Armor Lifter, Armor Target, Lifter	TTM
Stationary Armor Target	Armor Lifter, Armor Target, Lifter	SAT
Moving Armor Target	Armor Mover, Mover, Cart, Buggy	MAT

Armor Moving Target Carrier	Armor Mover, Mover, Cart, Buggy	AMTC
Visual Flash Simulator	Strobe Light, Strobe	VFS
Battle Effects Simulator	Omega, Omega-36, Omega-60	BES
Hostile Fire Simulator	Joanell, Hoffman	HFS
Armor Target Kill Simulator	Joanell, Hoffman	ATKS
Interconnecting Box, Target	Target Interface Unit	TIU
Three Dimensional Target	Ivan, Plastic Silhouette, Silhouette	
Armor Target	Target, Armor Silhouette, Flank Target, Frontal Target, Threat Target	

B.1.1 Range Communication System. The range communication system used on Range 107 will be provided and installed by the COMS Contractor at Contractor expense. This system at a minimum shall consist of one (1) 2-way radio in each Contractor vehicle and one (1) radio in the Range Control Tower. These radios will be used to keep in constant communication with the USMC Range Control Facility at BEARMAT (as required by base regulations) and for Contractor communications between vehicles, the Range Control Station (RCS), and other facilities. These radios shall conform to the specifications provided by the Government. These radios shall be considered GFE and will be programmed and maintained by the Government and shall remain as Government property at the end of the contract.

B.2 Operation and Maintenance Requirements

B.2.1 Operation. The Contractor shall provide RETS operators during normal operating hours, make-up, and additional training periods to facilitate the conduct of training. The Contractor shall provide for the initial start-up of the RETS training system, software load, system readiness check-out, and insertion of initial training conditions and parameters in response to published schedules (including any revisions thereto). The Contractor shall insure that the RETS equipment is operationally ready at the commencement of each scheduled training session. The Contractor shall respond to specific direction from the COR, for desired initial conditions of controls and targets including type and quantity for the range. The Contractor shall be responsible for the operation and control of the RETS throughout the accomplishment of the scheduled training mission. The Contractor shall have the ability to create training scenarios for the RETS, and when the system is not being used for scheduled training requirements, shall assist RETS users in the creation of new scenarios which will be stored on Data CD or other suitable media for future use on the range. The Contractor shall be available to provide operational demonstrations of the training device when it is not being used for scheduled training requirements. The Contractor shall work closely with and assist the RETS users in employing the training system to its maximum capabilities. (Note: all scenarios created by the Contractor shall be considered Government property.)

B.2.2 Maintenance. COMS Contractor maintenance responsibilities include organizational, intermediate, and depot level maintenance (preventative and corrective) for all target systems and equipment listed in this Appendix, which includes target pits, low/high power junction boxes, target carriers, target mechanisms, flash simulators, three dimensional targets, armor targets, hostile fire simulators, pits' drainage, all connecting cables up to the power source, cabling inside the control tower, control systems, communication systems, all connecting cables within the Range Complex, all down-range wiring, and the down-range wiring access pits. COMS Contractor is responsible for maintenance of target pits. Maintenance of the target pits by the COMS Contractor is limited to removal of foreign material (e.g. sand, dirt) that might inhibit the operation of the target system or prevent drainage of the pit. In addition, the COMS Contractor is responsible for acquisition, at Contractor's expense, for all supplies to repair the training device and to replenish any repair parts used from inventory furnished by the Government.

The Contractor shall be responsible for installing the 3-D infantry targets in the mechanisms and ensuring that the laser hit detectors and/or ballistic hit sensors are attached to each target and are fully operational. The Contractor shall also be responsible for maintaining the targets once mounted on the target mechanisms. This shall include repainting and patching as required to maintain the integrity of the target such that the ballistic hit sensors can properly sense impacts anywhere on the target surface and/or laser rangefinders used by the Marines will "range" properly. When targets have been repaired to such a state that further repairs will not provide for the satisfactory transmission of vibrations from rounds impacting on the target to the ballistic hit sensors (in order to cause that impact to be detected) that target shall be replaced. The COR will have the final authority on whether a target is repairable or needs to be replaced. Unless specifically requested otherwise by the scenario, a target mechanism that has a target installed which is in such a state of repair that it cannot properly detect hits, shall be considered 100% down.

B.2.2.1 Berm Maintenance. The COMS Contractor shall maintain the earthen berms, timbers, concrete, and other forms of protection surrounding target mechanisms. This includes all supporting efforts as required to accomplish this task, such as: removing dirt to replace a timber/support and replacing dirt. The intent of this effort is for the COMS Contractor to be fully responsible for the protection of the target mechanisms from direct fire. Damage to a target mechanism due to direct fire is presumed to be from inadequate target protection and the COMS Contractor is responsible for replacing these damaged mechanisms at his expense. The COMS Contractor must demonstrate to the COR that the damage was caused by something other than inadequate protection, such as in the case of a hit by a ricocheted projectile. Such

contested target damage must be brought immediately to the attention of the COR for determination. Loss of target use/capability due to lack of/degraded berm maintenance by the COMS Contractor will result in the target/targets being considered "down" for degraded operation calculations (chargeable downtime). In addition, the Contractor is responsible for re-burying any of the down range wiring which becomes exposed due to wind, water, or live fire erosion.

Range Firing Position Maintenance. The COMS Contractor shall maintain the earthen berms, timbers, concrete, and other forms of support for all range infantry and/or armor firing positions. This includes all supporting efforts as required to accomplish this task such as: removing dirt to replace a timber/support and replacing dirt. The capability of the firing position to support range operations will be determined by the COR. The COR may declare the range up to 10% degraded if the maintenance of firing positions is not adequate.

Fill/Dirt Materials Requirements. In conjunction with COMS Contractor maintenance of berms, firing positions, tank trails and tracking roads, the Contractor shall obtain natural fill/dirt materials from the immediate areas surrounding the berms, firing positions, tank trails and tracking roads. When these materials are not available, the COR will coordinate use of base resources to provide material to the COMS Contractor.

B.2.2.2 Laser Hit Detectors. Laser hit detectors, laser hit detector harnesses, laser target interface devices, MILES target interface devices, interconnecting cabling, laser retroreflectors, and batteries for the laser detector equipment will be provided to the Contractor as GFE. The Contractor shall install this equipment on the targets in accordance with the training scenario's requirements. The Contractor shall ensure that this equipment is fully functional and capable of detecting hits by the RETS equipment. The Contractor shall replace any of this equipment which fails with other GFE provided by the COR. The corrective maintenance of this equipment will be by others unless such damage was caused by negligence on the part of the COMS Contractor.

B.2.2.3 Thermalized Targets. Thermalized Targets. The Contractor shall respond to the requirements of the training scenarios by providing thermalized targets when and where requested. The pattern of the thermalization to be installed on the targets will be provided to the Contractor by the COR. If the weapons systems being used are compatible and the atmospheric, wind or weather conditions permit the proper thermal signature from "no-power" thermal material, such material shall be adequate. If any of the aforementioned conditions preclude the use of "no-power" thermal material, "heated" thermal targets will be required. The Contractor, at Contractor's expense, shall procure (or fabricate)

the necessary heated panels or blankets to meet the training requirements. These panels or blankets shall work on 120VAC or batteries. The contractor shall also be responsible for the procurement, maintenance, and replacement of the batteries. Thermalization material using other than the 120VAC or batteries may be used if such material provides an adequate thermal signature and is approved by the COR. The Contractor shall be responsible for the repair, patching, and/or replacement of thermal material, panels, blankets, or interconnecting cabling which fail, including if such failure was caused by damage from live fire. Targets that are to be thermalized in accordance with the training scenario are considered 100% down when such thermalization fails. If such failures are caused by live fire, chargeable downtime will not commence until the Contractor is provided adequate time to make repairs to the target. The COR will make the final decision when chargeable downtime commences.

B.2.3 Small Arms Sound Simulators. The Contractor shall ensure that adequate supplies of oxygen and propane gas are available for the small arms sound simulators (rifle fire simulators) to meet all of the scheduled training requirements. The Contractor shall be responsible for filling/refilling, from commercial sources at Contractor expense, all oxygen and propane gas cylinders used on the range.

B.2.4 Repair Parts Salvage. During the period of this contract Infantry Target Mechanisms (ITM's), Junction Boxes (JB's), Small Arms Sound Simulators (SASS), and other ancillary equipment may be damaged beyond repair by direct hits by live fire rounds or other means beyond the Contractor's control. Whenever an ITM, JB, SASS, or other piece of ancillary equipment is damaged beyond repair, the Contractor shall report this to the COR, recommend replacement of the damaged unit, and salvage whatever parts possible once replacement has been authorized by the COR. These parts shall be used for repair of other RETS ITM's, JB's, SASS, or other ancillary devices as appropriate, and shall be added to the current inventory and shall remain the property of the Government. Equipment damaged beyond economical repair will be replaced by the Government, when the COR determines such damage is not the result of Contractor negligence, abuse, and/or Contractor failure to accomplish required preventive, planned or corrective maintenance.

B.3 Major Hardware Items.

EQUIPMENT LISTING:	QUANTITY
RANGE CONTROL STATION (RCS)	1

The RETS RCS consists of the following:

a. Control Console CPU, Keyboard, & Monitor
b. Scoring Printer
c. Range Interface Adapter (RIA)

d. Panel Assembly, Tower Junction Box (TJB)
e. Signal Distribution Assembly (SDA)
f Tower Communications System

INFANTRY MOVING TARGET CARRIER (IMTC)	4
INFANTRY TARGET MECHANISM (ITM)	56
INTERCONNECTING BOX, LOW POWER (ICB, LP)	52
INTERCONNECTING BOX, HIGH POWER (ICB, HP)	4
3-D INFANTRY TARGETS	56
SMALL ARMS SOUND SIMULATOR	12
MUZZLE FLASH SIMULATOR	12

B.4 Range Degraded Operation Matrix.

PERCENT OF DEGRADATION

NUMBER OF SYSTEMS FAILED

SYSTEM	1	2	3	4	5	6	7	8	9	10	20	30	40	50
1.TARGETRY														
IMTC (4)	15	30	40	50										
ITM (56)	1	3	5	7	9	12	15	20	25	30	45	60	100	
SASS (12)	1	2	3	4	5	6	7	8	9	10				
MFS (12)	1	2	3	4	5	6	7	8	9	10				
2. RCS														
COMPUTER	100													
PRINTER	30													
(SDA)	100													
(TJB)	100													
(RIA)	100													
3.OPERATOR	100													

NOTE:
1. The total down percentage of the Range will be determined by totaling the down percentages for all the individual components/systems. For example if the scoring printer and five of the ITMs are down, the total down percentage would be 30% + 9% = 39%. The sum of the parts does not add up to 100% in all cases, since some of the systems are more critical than others. For example the printer is about 1% of the hardware but the system is down (30%) when it is not operational.

2. Acronyms:
IMTC = Infantry Moving Target Carrier
ITM = Infantry Target Mechanism
SASS = Small Arms Sound Simulator
MFS = Muzzle Flash Simulator

RCS = Range Control Station
RIA = Range Interface Adapter
TJB = Tower Junction Box

B.5 Office, Storage and Maintenance Space. In addition to the office, storage, and maintenance spaces at the Main Camp Area, at Range 107 the Contractor will be provided one Range Control Tower. A Head Facility for use by both Government and Contractor personnel is available at the range.

B.6 Office Furniture and Equipment. The following office furniture will be provided by the Government for use in the Range Control Tower.

Quantity	Description
2	Drafting Chairs
1	Office Chair (Swivel)
1	2-Drawer Filing Cabinet
1	Wall Clock

B.7 Consumables. All consumables including batteries shall be provided by the Contractor. Some examples of consumables to be provided by the Contractor are:

Paint, Petroleum/Oils and Lubricants (POL), Data CDs, Printer Paper, Printer Cartridges, Fuses, Bulbs, Janitorial Supplies, Filters, Belts, 3-D Targets, etc.

B.8 Tools and Test Equipment. Only one Fault Isolation Adapter (sometimes called a Range Control Adapter) shall be furnished by the Government. The COMS Contractor shall be responsible for its maintenance. No additional tools or test equipment will be provided by the Government.

B.9 Spares and Repair Parts. See paragraph 3.6 of the basic SOW.

B.10 Inspections. The Government will perform periodic contract compliance inspections and operational readiness and maintenance checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections in providing the availability of the system and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph B.12.

B.11 Technical Data Support Package (TDSP). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training device.

B.12 Hours of Operation. Range 107 will be scheduled for a maximum of 500 hours per year. Weekend and holiday training hours will be the same as weekday training. The only holidays observed at Range 107 are Christmas Day (Dec 25) and New Years Day (Jan 1).

B.12.1 RETS Range Flexibility. Up to one-third (1/3) of the fiscal year range operating hours may be shifted among any RETS Ranges located at the MAGTF Training Command. The COR will provide 24 hours notice prior to adjusting operating hours from one range to another range. In addition, units using the RETS Ranges may request, through the COR, an extension of training time for a scheduled, in-progress training evolution. The maximum extension granted will be two (2) hours and only five (5) extensions will be granted monthly, all ranges inclusive. The COMS Contractor will be provided a minimum of two hours notice by the COR for any training time extensions. Any hourly extensions granted will be credited against the yearly operational hours for the range.

B.12.2 Planned Scheduled Usage.

a. Training will be scheduled for a maximum of 10 hours per day.

b. The Contractor will be provided a minimum of 24 hours notice for all changes to the training schedule.

c. A normal scheduling day is a period of 24 hours, not necessarily 0000 to 2400; a scheduled usage could start at any time during the 24 hours of the day.

d. In the event a training unit fails to arrive within one hour of their scheduled start time or fails to notify the COMS Contractor of anticipated late arrival within one hour of the scheduled start time or leaves prior to scheduled end of training, the COMS Contractor shall contact the COR for further instructions. After hours or if for some other reason the COR is not available, the Contractor shall contact Range Control (Bearmat) for further instructions.

e. Scheduled usage for demonstrations will be credited as actual usage.

B.13 Janitorial Requirements. COMS CONTRACTOR shall maintain all assigned areas as directed by the COR. At R107 these areas shall include the RCS (Bldg 2515) and the Head (Bldg 2518). All cleaning supplies shall be provided by the COMS Contractor. Examples of janitorial services are:

(1) Daily:

(a) Empty trashcans and ashtrays
(b) Sweep floor
(c) Refill Toilet Paper Holders
(d) Refill Paper Towel Holders
(e) Refill Soap Dispensers

(2) Weekly:
(a) Dust furniture and equipment
(b) Clean windows
(c) Damp mop
(d) Clean sinks, toilets, & urinals

B.14 Location of Training Device/System. Range 107 is located in the Range Training Area at MAGTF Training Command, Twentynine Palms, and CA. Range 107 is located approximately 8 miles from the Main Camp Area of MAGTF Training Command.

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C.1 Description

LOCATION: MAGTF TRAINING COMMAND, TWENTYNINE PALMS, CA
RANGE NO: 108
TYPE RANGE: INFANTRY SQUAD BATTLE COURSE

COMS Contractor Mobilization Date - 1 December 2007
COMS Contractor Support Date - 1 January 2008

R108 EQUIPMENT LISTING:	QUANTITY
RANGE CONTROL STATION	1
INFANTRY TARGET MECHANISM	28
INFANTRY MOVING TARGET CARRIER	6
TANK TARGET MECHANISM (TTM)	6
ARMOR MOVING TARGET CARRIER	1
MORTAR SIMULATOR DEVICE	14
SIGNAL AND POWER DISTRIBUTION SYSTEMS	

The Infantry Squad Battle Course (ISBC) is used to train and maintain the proficiency of Marine rifle squads in attacking and overcoming enemy strategic strongholds on the battlefield. The range allows troops to train for the assault and destruction of fixed and fortified enemy positions. The ISBC is designed with five different objective areas with varying enemy defensive positions guarding each area. The range provides for realistic combat training under conditions simulating an actual battlefield.

Operators, located in a range control tower, utilize a Range Control System (RCS) to monitor and observe the entire range operation. The ISBC provides facilities for coordinating the remote control of 6 stationary armor targets, 1 moving armor target, 6 moving infantry targets, 22 stationary infantry targets, 22 infantry hostile fire simulators, 14 armor targets kill simulators and 14 mortar simulators which are permanently emplaced on suitable terrain. In addition, for added realism, there are simulated enemy bunkers and trenchlines throughout the range. The mix and variety of targets allow for the employment of all weapons organic to a Marine rifle squad.

C.1.1 Remoted Target System (RETS). The RETS is composed of individual target equipment and simulators designed to provide the USMC with standard hardware to satisfy infantry and armor live-fire training needs. The RETS system includes infantry stationary and moving target hardware, armor stationary and moving target hardware, miscellaneous live-fire simulation equipment, as well as associated interface equipment. The RETS equipment has been selected and installed to provide range configurations for infantry,

armor, and combined arms training. From the Range Control Station (RCS), the operator has the option of developing scenarios for RETS automatic target operation or of using established target scenarios that have been loaded by software. The following paragraphs describe the principal components of the Remote Targeted System.

Range Control Station (RCS). The RCS consists of the hardware required to provide manual and automatic remote control of the target equipment and which provides hard copy printout of trainee performance. The RCS is normally operated by a single operator in the presence of the Range Safety Officer (RSO). The RCS is capable of:

a. Controlling armor and infantry target mechanisms, moving target carriers, hostile fire simulators, muzzle flash simulators and armor smoke and flash simulators

b. Displaying malfunctions of all target mechanisms and target carriers

c. Accumulating and displaying scores for each target or selected groups of targets

d. Recording (on the scoring printer) the score for each target or selected groups of targets by operator or preprogrammed command

The RCS has been designed so that the computer is user friendly, enabling a trained operator to quickly write and edit a standard 10 to 15-minute range scenario.

Infantry Target Mechanism (ITM). The ITM may be installed either as a stationary target lifter or as a moving target lifter when mounted on the Infantry Moving carrier. The ITM holds a three dimensional, self-healing, plastic target that is configured to look like a soldier. The ITM can use either a single or double target arm. The former lifts one target, the other two. The mechanism is capable of lifting its target(s) in winds up to 35 mph preventing all but the most minor movement. It can also be used in conjunction with the Night Muzzle Flash Simulator or Infantry Hostile Fire simulator.

Infantry Moving Target Carrier (IMTC). The IMTC is an electronically controlled mechanism that simulates a running man moving from one concealed position to another. The carriage mounts an ITM and a Muzzle Flash simulator. The IMTC is capable of moving a target forward or backward in either the up or down position. It has three speeds, which must be selected at the mechanism and cannot be selected remotely.

Muzzle Flash Simulator (Infantry Night Muzzle Flash Simulator) (MFS). The MFS simulates the muzzle flash of small arms weapons. It utilizes light-emitting diodes reflecting off the target surface to provide the visual effect. The MFS operates either single shot or automatic fire at a rate of 600 rounds per minute. It receives its commands through the ITM. To be effective it must be located 11 to 18 inches in front of the ITM and angled toward the face of the target.

Small Arms Sound Simulator (Infantry Hostile Fire Simulator) (SASS). The SASS provides realistic sound simulation of a single shot and automatic rifle fire. The automatic mode has a rate of fire of 600 rounds per minute. The SASS consists of a tubular, gun-like barrel with a combustion chamber. A mixture of oxygen and propane gas is ignited in the combustion chamber by a spark plug producing the sound. It receives its commands through the ITM and is usually located in the same emplacement; however it may be located as far as 30 feet away (the length of its cable).

Note: The MFS and SASS operate independently, but can be operated simultaneously.

Tank Target Mechanism (TTM). The Tank Target Mechanism is a stationary armor lifter that is controlled by the RCS. It holds a two dimensional silhouette that is normally configured to look like a hostile armor vehicle. Control signals for the target and pyrotechnic operations are received at the target and it transmits hit counts and target status back RCS.

Battle Effects Simulator (BES) There are three different BESs that can be used on the range. The ATKS (also known as a Joanell Device, the Omega-36, and the Omega-60 all perform similar functions; although the ATKS and the Omegas do use different ammunition. These devices ignite pyrotechnic charges on command. When used with the Hostile Fire pyrotechnic cartridge, they simulate the flash and sound of tank main gunfire. When used with a steel-on-steel pyrotechnic cartridge, they simulate the sparks and flash occurring when a round impacts on an armor vehicle. In addition the Omegas can also be used with a Missile Launch or an Air Burst cartridge. The ATKS has twenty firing tubes. The Omega-36 has 36 firing tubes. The Omega-60 has 60 firing tubes. The BES is normally used in conjunction with an armor target lifter but may be used with an infantry target lifter or even as a stand-alone device (with the proper interface).

Armor Moving Target Carrier (AMTC). The AMTC simulates a vehicle (usually a hostile armor vehicle) moving from one concealed position to another. It receives its power through a busbar that runs along the berm retaining wall parallel with the track. It receives its commands via a radio link with the RCS. The AMTC realistically simulates a vehicle moving on the range, providing training in detecting, identifying and engaging moving targets.

Both the cart and the target lifter (a Heavy Lift Tank Target Mechanism (HLTTM) are electro-mechanically operated by separate systems.

Mortar Simulator Device (MSD). The MSD is actually a BES, TIU and LPJB that have been configured as a stand-alone device. When used in conjunction with a modified TIU, the stand alone BES is able to detonate pyrotechnics on command from the RCS. These pyrotechnics realistically simulate impacts and explosions of mortar rounds on the battlefield.

Interconnecting Box, Target Interface (TIU). The TIU is an electrical device used by the THM,TG, Gunfire Simulator and Track System, Target Training Set-armor. The TIU provides a limited power source to recharge the battery in the THM,TG. The TIU also encodes and sends status and hit information to the RCS.

Three-Dimensional Infantry Targets. The three-dimensional plastic self-healing targets are shaped like a person, head to mid-thigh, painted to simulate a soldier holding a rifle at port arms. Thermal imaging targets are sometimes used to conduct night training.

Armor Targets. The armor targets simulate stationary and moving hostile armor vehicles. The stationary target is an approximately 5 by 8 foot plywood structure mounted on the TTM, depicting a silhouette frontal view of an armor vehicle. The moving target is an approximately 8 by 20 foot plywood structure, depicting the side view of an armor vehicle, and is mounted on the AMTC. Thermal Imaging Targets are used to conduct night training.

Interconnecting Box, High/Low Power (Low/High Power Junction Box) (LPJB)(HPJB). The Interconnecting Box (ICB) provides interface between the underground data and power cables and the targetry equipment. It provides power and data cable transient protection, 24VDC power for use by the target equipment and circuit breaker electrical protection. The high power junction box is used exclusively with the Infantry Moving Target carrier. The low power junction box is used with all other RETS targetry equipment.

NAMES, PSEUDONYMS AND ACRONYMS FOR RANGE EQUIPMENT

NAMES	PSEUDONYMS	ACRONYM
Range Control Station	The Tower, The Computer	RCS
Infantry Target Mechanism	Infantry Lifter, Lifter	ITM
Stationary Infantry Target	Infantry Lifter, Lifter	SIT
Moving Infantry Target	Infantry Mover, Mover, Cart, Buggy	MIT
Infantry Moving Target Carrier	Infantry Mover, Mover, Cart, Buggy	IMTC
Interconnecting Box, Low Power	Low Power Junction Box, J-Box, JB	LPJB

Interconnecting Box, High Power	High Power Junction Box, J-Box, JB	HPJB
Small Arms Sound Simulator	Infantry Hostile Fire Simulator, Rifle Fire Simulator, Machinegun Simulator, RFS	SASS
Infantry Night Muzzle Flash Simulator	Muzzle Flash Simulator	MFS
Target Holding Mechanism, Tank Gunnery	Armor Lifter, Armor Target, Lifter	THMTG
Tank Target Mechanism	Armor Lifter, Armor Target, Lifter	TTM
Stationary Armor Target	Armor Lifter, Armor Target, Lifter	SAT
Moving Armor Target	Armor Mover, Mover, Cart, Buggy	MAT
Armor Moving Target Carrier	Armor Mover, Mover, Cart, Buggy	AMTC
Visual Flash Simulator	Strobe Light, Strobe	VFS
Battle Effects Simulator	Omega, Omega-36, Omega-60	BES
Hostile Fire Simulator	Joanell, Hoffman	HFS
Armor Target Kill Simulator	Joanell, Hoffman	ATKS
Interconnecting Box, Target	Target Interface Unit	TIU
Three Dimensional Target	Ivan, Plastic Silhouette, Silhouette	
Armor Target	Target, Armor Silhouette, Flank Target, Frontal Target, Threat Target	

C.1.1.1 Range Communication System. The range communication system used on Range 108 will be provided and installed by the COMS Contractor at Contractor expense. This system at a minimum shall consist of one (1) 2-way radio in each Contractor vehicle and one (1) radio in the Range Control Tower. These radios will be used to keep in constant communication with the USMC Range Control Facility at BEARMAT (as required by base regulations)and for Contractor communications between vehicles, the Range Control Station (RCS), and other facilities. These radios shall conform to the specifications provided by the Government. These radios shall be considered GFE and will be programmed and maintained by the Government and shall remain as Government property at the end of the contract.

C.2 Operation and Maintenance Requirements

C.2.1 Operation. The Contractor shall provide RETS operators during normal operating hours, make-up, and additional training periods to facilitate the conduct of training. The Contractor shall provide for the initial start-up of the RETS training system, software load, system readiness check-out, and insertion of initial training conditions and parameters in response to published schedules (including any revisions thereto). The Contractor shall insure that the RETS equipment is operationally ready at the commencement of each scheduled training session. The Contractor shall respond to specific direction from the COR, for desired initial conditions of controls and targets including type and quantity for the range. The Contractor shall be responsible for the operation and control of the RETS throughout the accomplishment of the scheduled training mission. The

Contractor shall have the ability to create training scenarios for the RETS, and when the system is not being used for scheduled training requirements, shall assist RETS users in the creation of new scenarios which will be stored on Data CD or other suitable media for future use on the range. The Contractor shall be available to provide operational demonstrations of the training device when it is not being used for scheduled training requirements. Operational demonstrations of the training device will be considered part of the Scheduled Training Requirements as delineated in paragraph C.12. The Contractor shall work closely with and assist the RETS users in employing the training system to its maximum capabilities. (Note: all scenarios created by the Contractor shall be considered Government property.)

C.2.2 Maintenance. COMS Contractor maintenance responsibilities include organizational, intermediate, and depot level maintenance (preventative and corrective) for all target systems and equipment listed in this Appendix, which includes target pits, low/high power junction boxes, target carriers, target mechanisms, flash simulators, three dimensional targets, armor targets, hostile fire simulators, pits' drainage, all connecting cables up to the power source, cabling inside the control tower, control systems, communication systems, all connecting cables within the Range Complex, all down-range wiring, and the down-range wiring access pits. COMS Contractor is responsible for maintenance of target pits. Maintenance of the target pits by the COMS Contractor includes removal of foreign material (e.g. sand, dirt) that might inhibit the operation of the target system or prevent drainage of the pit. In addition, the COMS Contractor is responsible for acquisition, at Contractor's expense, for all supplies to repair the training device and to replenish any repair parts used from inventory furnished by the Government.

C.2.2.1 Berm Maintenance. The COMS Contractor shall maintain the earthen berms, timbers, concrete, and other forms of protection surrounding target mechanisms. This includes all supporting efforts as required to accomplish this task, such as: removing dirt to replace a timber/support and replacing dirt. The intent of this effort is for the COMS Contractor to be fully responsible for the protection of the target mechanisms from direct fire. Damage to a target mechanism due to direct fire is presumed to be from inadequate target protection and the COMS Contractor is responsible for replacing these damaged mechanisms at his expense. The COMS Contractor must demonstrate to the COR that the damage was caused by something other than inadequate protection, such as in the case of a hit by a ricocheted projectile. Such contested target damage must be brought immediately to the attention of the COR for determination. Loss of target use/capability due to lack of/degraded berm maintenance by the COMS Contractor will result in the target/targets being

considered "down" for degraded operation calculations (chargeable downtime). In addition, the Contractor is responsible for re-burying any of the down range wiring which becomes exposed due to wind, water, or live fire erosion.

Range Firing Position Maintenance. The COMS Contractor shall maintain the earthen berms, timbers, concrete, and other forms of support for all range infantry and/or armor firing positions including the simulated enemy bunkers and trench line on Range 108. This includes all supporting efforts as required to accomplish this task such as: removing dirt to replace a timber/support and replacing dirt and maintaining the original depth of the enemy bunker, trench line, and other firing positions. The capability of the firing position to support range operations will be determined by the COR. The COR may declare the range up to 10% degraded if the maintenance of firing positions is not adequate.

Fill/Dirt Materials Requirements. In conjunction with COMS Contractor maintenance of berms, firing positions, tank trails and tracking roads, the Contractor shall obtain natural fill/dirt materials from the immediate areas surrounding the berms, firing positions, tank trails and tracking roads. When these materials are not available, the COR will coordinate use of base resources to provide material to the COMS Contractor.

C.2.2.2 Target Fabrication and Maintenance. The Contractor shall be responsible for fabricating (or procuring through commercial sources) the target silhouettes used on the TTMs and AMTC. Generally these targets resemble the outline of threat armor vehicles but may be other patterns such as friendly armor vehicles, friendly-wheeled vehicles, threat wheeled vehicles, etc. The silhouette targets are usually constructed of plywood, lumber, glue, screws and nails; they may be constructed of other materials if approved by the COR. The silhouettes will require painting after fabrication. The targets shall be constructed to the specifications provided to the Contractor by the COR. The pattern, size, and color of the targets used in the range may vary from scenario to scenario and/or from target location to target location depending on the training requirements. In no case will a target exceed the maximum size or weight capacity of the target lifting mechanism upon which it is mounted. If no specifications in regards to these limits exist, the COR will make the final determination on the adequacy of the mechanism to lift the targets.

The Contractor shall be responsible for installing the targets in the mechanisms and ensuring that the laser hit detectors and/or ballistic hit sensors are attached to each target and are fully operational. The Contractor shall also be responsible for maintaining the targets once mounted on the target mechanisms. This shall include repainting and patching as required to maintain the integrity of the target such that the ballistic hit sensors can properly sense impacts anywhere on the

target surface and/or laser rangefinders used by the Marines will "range" properly. When targets have been repaired to such a state that further repairs will not provide for the satisfactory transmission of vibrations from rounds impacting on the target to the ballistic hit sensors (in order to cause that impact to be detected) that target shall be replaced. The COR will have the final authority on whether a target is repairable or needs to be replaced. Unless specifically requested otherwise by the scenario, a target mechanism that has a target installed which is in such a state of repair that it cannot properly detect hits, shall be considered 100% down.

C.2.2.2.1 Laser Hit Detectors. Laser hit detectors, laser hit detector harnesses, laser target interface devices, MILES target interface devices, interconnecting cabling, laser retroreflectors, and batteries for the laser detector equipment will be provided to the Contractor as GFE. The Contractor shall install this equipment on the targets in accordance with the training scenario's requirements. The Contractor shall ensure that this equipment is fully functional and capable of detecting hits. The Contractor shall replace any of this equipment which fails with other GFE provided by the COR. The corrective maintenance of this equipment will be by others unless such damage was caused by negligence on the part of the COMS Contractor.

C.2.2.2.2 Thermalized Targets. The Contractor shall respond to the requirements of the training scenario by providing thermalized targets (armor or infantry)when and where requested. The pattern of the thermalization to be installed on the targets will be provided to the Contractor by the COR. If the weapons systems being used are compatible; and atmospheric, wind, or weather conditions permit the proper thermal signature from "no power" thermal material; such material shall be adequate. If any of the aforementioned conditions preclude the use of "no-power" thermal material, "heated" thermal targets will be required. The Contractor, at Contractor's expense, shall procure (or fabricate) the necessary heated thermal panels or blankets to meet the training requirements. These panels or blankets shall work on 120 VAC or batteries. If the Contractor uses thermal material requiring batteries, the Contractor shall also be responsible for the procurement, maintenance, and replacement of the batteries. Thermalization material using other then the 120VAC or batteries may be used if such material provides an adequate thermal signature and is approved by the COR. The Contractor shall be responsible for the repair, patching, and/or replacement of thermal material, panels, blankets, or interconnecting cabling which fail, including if such failure was caused by damage from live fire. Targets that are to be thermalized in accordance with the training scenario are considered 100% down when such thermalization fails. If such failures are caused by live fire, chargeable downtime will not commence until the Contractor is

provided adequate time to make repairs to the target. The COR will make the final decision when chargeable downtime commences.

C.2.3 Small Arms Sound Simulator. The Contractor shall ensure that adequate supplies of oxygen and propane gas are available for the infantry hostile fire simulators (rifle fire simulators) to meet all of the scheduled training requirements. The Contractor shall be responsible for filling/refilling, from commercial sources at Contractor expense, all oxygen and propane gas cylinders used on the range.

C.2.3.1 Pyrotechnics. During daily and weekly preventative maintenance checks the Contractor shall determine which pyrotechnic devices (Gunfire Simulators) require reloading. The COMS Contractor shall be responsible for ordering and obtaining, from the MAGTF Training Command Magazine Area, the types and quantities of pyrotechnics required and transporting them to the device locations. The COMS Contractor is required to handle pyrotechnic charges, load and unload pyrotechnic devices, repackage and return pyrotechnics to the MAGTF Training Command Magazine Area as required, and is responsible for the maintenance of the components of the pyrotechnic charge firing mechanisms. All COMS Contractor activities involving pyrotechnics shall be in accordance with all Federal, State, local and MAGTF Training Command SOP regulations.

C.2.4 Repair Parts Salvage. During the period of this contract Tank Target Mechanisms (TTM's), Infantry Target Mechanisms (ITM's), Junction Boxes (JB's), Battle Effects Simulator (BES) , and other ancillary equipment may be damaged beyond repair by direct hits by live fire rounds, troop movements, or other means beyond the Contractor's control. Whenever a TT, ITM, JB, BES, or other piece of ancillary equipment is damaged beyond repair, the Contractor shall report this to the COR, recommend replacement of the damaged unit, and salvage whatever parts possible once replacement has been authorized by the COR. These parts shall be used for repair of other RETS TTM's, ITM's, JB's, GUFS's, or other ancillary devices as appropriate, and shall be added to the current inventory and shall remain the property of the Government. Equipment damaged beyond economical repair will be replaced by the Government, when the COR determines such damage is not the result of Contractor negligence, abuse, and/or Contractor failure to accomplish required preventive, planned or corrective maintenance including all range maintenance responsibilities.

C.3 Major Hardware Items.

EQUIPMENT LISTING:	QUANTITY
RANGE CONTROL STATION (RCS)	1

The RETS RCS consists of the following:
A Control Console CPU, Keyboard, & Monitor
b. Scoring Printer
c. Range Interface Adapter (RIA)
d. Signal Distribution Assembly (SDA)
e. Tower Communications System

TANK TARGET MECHANISM (TTM)	6
ARMOR MOVING TARGET CARRIER (AMTC)	1
INFANTRY MOVING TARGET CARRIER (IMTC)	6
INFANTRY TARGET MECHANISM (ITM)	28
DOUBLE TARGET ARM	5
TARGET INTERFACE UNIT (TIU)	21
Battle Effects Simulator (BES)	14
INTERCONNECTING BOX, LOW POWER (ICB,LP)	43
INTERCONNECTING BOX, HIGH POWER (ICB,HP)	6
ARMOR TARGETS	7
3-D INFANTRY TARGETS	32
SMALL ARMS SOUND SIMULATOR	22
MUZZLE FLASH SIMULATOR	28
MORTAR SIMULATOR DEVICE	14

C.4 Range Degraded Operation Matrix.

PERCENT OF DEGRADATION

	Number of Systems Failed												
	1	2	3	4	5	6	7	8	9	10	20	30	40
SYSTEM / SUBSYSTEM													
1. Target Systems													
ITM (28 ea)	2	4	6	8	10	12	14	16	18	20			
IMTC (6 ea)	5	10	15	20	25	30							
SASS (22 ea)	1	2	3	4	5	6	7	8	9	10	20		
MSD (14 ea)	2	4	6	8	10	12	14	16	18	20			
TTM (6 ea)	5	10	15	20	25	30							
AMTC (1 ea)	25												
MFS (28 ea)	1	2	3	7	9	12	15	20	25				
BES (14 ea)	2	4	6	8	10	12	14	16	18	20			

2. RCS													
Computer	100												
Printer	30												
Operator	100												
SDA.	100												
RIA	100												
TJB	100												

Notes:

1.The total down percentage of the range will be determined by totaling the down percentages for all of the individual components/systems. For example: if the scoring printer and five of the ITMs are down, the total down percentage would be 30%+10% =40%.

2. Acronyms:

ITM - Stationary Infantry Target
IMTC - Track System Target,Training
AMTC - Moving Armor Target
TTM - Stationary Armor Target
BES - Battle Effects Simulator
SASS - Small Arms Sound Simulator
MSD - Mortar Simulator Device
RCS - Range Control Station
RIA - Range Interface Adapter
TJB - Tower Junction Box
SDA - Signal Distribution Assembly

3.The sum of the parts does not add up to 100% in all cases, since some systems are more critical than others. For example, the RCS computer is only about 2% of the RETS hardware, but if it is down the system is 100% non-operational.

C.5 Office, Storage and Maintenance Space. In addition to the office, storage, and maintenance spaces at the Main Camp Area, at Range 108 the Contractor will be provided one Operations/Storage building, AMTC bunker, and a Range Control tower. A Head Facility for use by both Government and Contractor personnel is available at the range.

C.6 Office Furniture and Equipment. The Government will provide the following office furniture for use in the Range Control tower.

Description	Qty
Drafting Chairs	2
Office Chair (Swivel)	1
2-Drawer Filing Cabinet	1
Wall Clock	1

C.7 Consumables. All consumables including batteries (except as noted in Par 2.2.2.1) shall be provided by the Contractor. Some examples of consumables to be provided by the Contractor are:

Paint, Petroleum/Oils and Lubricants (POL), Data CDs, Printer Paper, Printer Cartridges, Fuses, Bulbs, Janitorial Supplies, Filters, Belts, 3-D Targets, etc.

C.8 Tools and Test Equipment. Only one Fault Isolation Adapter (sometimes called a Range Control Adapter) shall be furnished by the Government. The COMS Contractor shall be responsible for its maintenance. No additional tools or test equipment will be provided by the Government

C.9 Spares and Repair Parts. See paragraph 3.6 of the Basic SOW.

C.10 Inspections. The Government will perform periodic contract compliance inspections, operational readiness, and maintenance checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections in providing the availability of the system, and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph C.12.2

C.11 Technical Data Support Package (TDSP). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training device.

C.12 Hours of Operation. The ISBC will be scheduled for a maximum of 600 hours per year. Weekend and holiday training hours will be the same as weekday training. The only holidays observed at the ISBC are Christmas Day (Dec 25) and New Years Day (Jan 1).

C.12.1 RETS Range Flexibility. Up to one-third (1/3) of the fiscal year range operating hours may be shifted among any RETS Ranges located at the MAGTF Training Command. The COR will provide 24 hours notice prior to adjusting operating hours from one range to another range. In addition, units using the RETS Ranges may request, through the COR, an extension of training time for a scheduled, in-progress training evolution. The maximum extension granted will be two (2) hours and only five (5) extensions will be granted monthly, all ranges inclusive. The COMS Contractor will be provided a minimum of two hours notice by the COR for any training time extensions. Any hourly extensions granted will be credited against the yearly operational hours for the range.

C.12.2 Scheduled Range Usage.

a. Training will be scheduled for a maximum of 10 hours per day.

b. Contractor will be provided at least eight (8) hours of maintenance time between each scheduled use of the ISBC.

c. Normal scheduling day is a period of 24 hours, not necessarily 0000 hours to 2400 hours. For example, a scheduled usage could start at any time during the 24 hours of the day.

d. Contractor will be provided 24 hours notice for all schedule changes for the ISBC.

e. In the event a training unit fails to arrive within one hour of their scheduled start time or fails to notify the COMS Contractor of anticipated late arrival within one hour of the scheduled start time or leaves prior to scheduled end of training, the COMS Contractor shall contact the COR for further instructions. After hours or if for some other reason the COR is not available, the Contractor shall contact Range Control (Bearmat) for further instructions.

f. Scheduled usage for demonstrations will be credited as actual usage.

C.13 Janitorial Requirements. COMS Contractor shall maintain all assigned areas as directed by the COR. At R108 these areas shall include the RCS (Bldg 2525), the Maintenance Shed (Bldg 2526), the Ammo Shed (Bldg 2529), the AMTC Bunker (Bldg 2530), the Covered Mess (Bldg 2528), and the Head (Bldg 2527). All cleaning supplies shall be provided by the COMS Contractor. Examples of janitorial services are:

(1) Daily:
- (a) Empty trashcans and ashtrays
- (b) Sweep floor
- (c) Refill Toilet Paper Holders
- (d) Refill Paper Towel Holders
- (e) Refill Soap Dispensers

(2) Weekly:
- (a) Dust furniture and equipment
- (b) Clean windows
- (c) Damp mop
- (d) Clean sinks, toilets, & urinals

(3) Monthly:
- (a) Clean air conditioner filter.

C.14 Location of Training Device/System. The ISBC located at Range 108, which is in the Range Training Area at MAGTF Training Command, Twentynine Palms, and CA. Range 108 is located approximately 9 miles from the Main Camp Area of MAGTF Training Command.

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D.1 Description

USMC-8017

LOCATION: MAGTF TRAINING COMMAND, TWENTYNINE PALMS, CA
RANGE NO: 109
TYPE RANGE: ARMOR ANTI-ARMOR LIVE FIRE TRACKING RANGE

COMS Contractor Mobilization Date - 1 December 2007
COMS Contractor Support Date - 1 January 2008

The Armor Anti-Armor Live Fire Tracking Range is a permanent installation used for familiarization and training of troops with Light to heavy anti-armor weapons. The range allows troops to engage stationary and/or moving armor targets at both known and unknown distances including multiple target scenarios.

The range provides facilities for coordinating the remote control of 8 stationary armor targets, 4 moving armor targets, and 24 hostile fire simulators permanently emplaced on suitable terrain. The range also provides an improved trail for use by wheeled vehicles acting as tracking targets for the anti-armor gunners. The range provides for realistic combat training for individuals or crews under conditions simulating an actual battlefield.

Operators, located in a range control tower, utilize a Range Control System (RCS) to monitor and observe the entire range operation. Located in concrete emplacements at varying distances are the 12 remote controlled targets and 24 hostile fire simulators which provide a realistic environment for the training scenario. The targets are located at distances which cover the range of minimum to maximum engagement for all of the anti-armor weapons utilized on the range. The tracking road utilizes various terrain features and distances to vary the degree of difficulty tracking targets.

R109 EQUIPMENT LISTING:	QUANTITY
RANGE CONTROL STATION	1
MOVING ARMOR TARGET (MAT)	4
TARGET HOLDING MECHANISM TANK GUNNERY (THM, TG)	8
Battle Effects Simulator (BES)	24
SIGNAL AND POWER DISTRIBUTION SYSTEMS	

D.1.1 Remoted Target System (RETS). The RETS is composed of individual target equipment and simulators designed to provide the USMC with standard hardware to satisfy infantry and armor live-fire training needs. The RETS includes infantry and armor stationary and moving target hardware and miscellaneous live-fire simulation equipment as well as associated interface equipment. From the Range Control Station (RCS), the operator has the option of developing scenarios for the RETS automatic target operation or using established target scenarios which have been loaded by Data CD or other suitable media. The following paragraphs describe the principle components of the Remoted Target System:

Range Control Station (RCS). The RCS consists of the hardware required to provide manual and automatic remote control of the target equipment and which provides hard copy printout of trainee performance. The RCS is normally operated by a single operator in the presence of the Range Safety Officer (RSO). The RCS is capable of:

a. Controlling armor and infantry target mechanisms, moving target carriers, hostile fire simulators, muzzle flash simulators and armor smoke and flash simulators

b. Displaying malfunctions of all target mechanisms and target carriers

c. Accumulating and displaying scores for each target or selected groups of targets

d. Recording (on the scoring printer) the score for each target or selected groups of targets by operator or preprogrammed command

The RCS has been designed so that the computer is user friendly, enabling a trained operator to quickly write and edit a standard 10 to 15-minute range scenario.

Target Holding Mechanism, Tank Gunnery (THM,TG). The THM,TG is installed as a stationary target lifter. The THM,TG holds a two-dimensional, usually plywood, silhouette that is configured to look like a vehicle, usually a hostile armor vehicle. Control signals, including raise target, lower target, and activate Gunfire Simulator are received through the Target Interface Unit. The THM,TG receives its 12VDC power through the TIU.

Moving Armor Target (MAT). The MAT simulates a vehicle (usually a hostile armor vehicle) moving from one concealed position to another. It receives its power through a busbar that runs along the berm retaining wall parallel with the track. It receives its commands via a radio link with the RCS. The MAT realistically simulates a vehicle moving on the range, providing training in detecting, identifying and engaging moving targets. Both the cart and the target lifter are electrically powered.

Visual Flash Simulator (VFS). The VFS is a halogen spotlight which flashes when a hit is registered on either the THM.TG or the AMTC, producing an orange-red colored flash with duration of between 0.5 and 1.0 seconds. It is capable of reproducing a firing rate of 20 firings per minute. The VFS receives its control signals and power distribution from the AMTC or the THM,TG. The life expectancy of the lamp is 12,000 firings.

Battle Effects Simulator (BES) There are three different BESs that can be used on the range. The ATKS (also known as a Joanell Device, the Omega-36, and the Omega-60 all perform similar functions; although the ATKS and the Omegas do use different ammunition. These devices ignite pyrotechnic charges on command. When used with the Hostile Fire pyrotechnic cartridge, they simulate the flash and sound of tank main gunfire. When used with a steel-on-steel pyrotechnic cartridge, they simulate the sparks and flash occurring when a round impacts on an armor vehicle. In addition the Omegas can also be used with a Missile Launch or an Air Burst cartridge. The ATKS has twenty firing tubes. The Omega-36 has 36 firing tubes. The Omega-60 has 60 firing tubes. The BES is normally used in conjunction with an armor target lifter but may be used with an infantry target lifter or even as a stand-alone device (with the proper interface).

Interconnecting Box, Target Interface (TIU). The TIU is an electrical device used by the THM,TG, Gunfire Simulator and Track System, Target Training Set-Armor. The TIU provides a limited power source to recharge the battery in the THM,TG. The TIU also encodes and sends status and hit information to the RCS.

Interconnecting Box, High/Low Power (Low/High Power Junction Box) (LPJB)(HPJB). The Interconnecting Box (ICB) provides interface between the underground data and power cables and the targetry equipment. It provides power and data cable transient protection, 24VDC power for use by the target equipment and circuit breaker electrical protection. The high power junction box is used exclusively with the Infantry Moving Target Carrier. The low power junction box is used with all other RETS targetry equipment.

Armor Targets. The armor targets simulate stationary and moving hostile armor vehicles. The stationary target is an approximately 5X8-foot plywood structure mounted on the THM,TG depicting a silhouette frontal view of an armored vehicle. The moving target is an approximately 8X20 foot plywood structure mounted on an MAT depicting a silhouette side view of an armor vehicle. Thermal imaging targets are used to conduct night training.

NAMES, PSEUDONYMS AND ACRONYMS FOR RANGE EQUIPMENT

NAMES	PSEUDONYMS	ACRONYM
Range Control Station	The Tower, The Computer	RCS
Infantry Target Mechanism	Infantry Lifter, Lifter	ITM
Stationary Infantry Target	Infantry Lifter, Lifter	SIT
Moving Infantry Target	Infantry Mover, Mover, Cart, Buggy	MIT
Infantry Moving Target Carrier	Infantry Mover, Mover, Cart, Buggy	IMTC
Interconnecting Box, Low Power	Low Power Junction Box, J-Box, JB	LPJB
Interconnecting Box, High Power	High Power Junction Box, J-Box, JB	HPJB

Small Arms Sound Simulator	Infantry Hostile Fire Simulator, Rifle Fire Simulator, Machinegun Simulator, RFS	SASS
Infantry Night Muzzle Flash Simulator	Muzzle Flash Simulator	MFS
Target Holding Mechanism, Tank Gunnery	Armor Lifter, Armor Target, Lifter	THMTG
Tank Target Mechanism	Armor Lifter, Armor Target, Lifter	TTM
Stationary Armor Target	Armor Lifter, Armor Target, Lifter	SAT
Moving Armor Target	Armor Mover, Mover, Cart, Buggy	MAT
Armor Moving Target Carrier	Armor Mover, Mover, Cart, Buggy	AMTC
Visual Flash Simulator	Strobe Light, Strobe	VFS
Battle Effects Simulator	Omega, Omega-36, Omega-60	BES
Hostile Fire Simulator	Joanell, Hoffman	HFS
Armor Target Kill Simulator	Joanell, Hoffman	ATKS
Interconnecting Box, Target	Target Interface Unit	TIU
Three Dimensional Target	Ivan, Plastic Silhouette, Silhouette	
Armor Target	Target, Armor Silhouette, Flank Target, Frontal Target, Threat Target	

D.1.1.1 Range Communication System. The range communication system used on Range 109 will be provided and installed by the COMS Contractor at Contractor expense. This system at a minimum shall consist of one (1) 2-way radio in each Contractor vehicle and one (1) radio in the Range Control Tower. These radios will be used to keep in constant communication with the USMC Range Control Facility at BEARMAT (as required by base regulations) and for Contractor communications between vehicles, the Range Control Station (RCS), and other facilities. These radios shall conform to the specifications provided by the Government. These radios shall be considered GFE and will be programmed and maintained by the Government and shall remain as Government property at the end of the contract.

D.2 Operation and Maintenance Requirements

D.2.1 Operation. The Contractor shall provide RETS operators during normal operating hours, make-up, and additional training periods to facilitate the conduct of training. The Contractor shall provide for the initial start-up of the RETS training system, software load, system readiness check-out, and insertion of initial training conditions and parameters in response to published schedules (including any revisions thereto). The Contractor shall insure that the RETS equipment is operationally ready at the commencement of each scheduled training session. The Contractor shall respond to specific direction from the COR, for desired initial conditions of controls and targets including type and quantity for the range. The Contractor shall be responsible for the operation and control of the RETS throughout the accomplishment of the scheduled training mission.

The Contractor shall have the ability to create general training scenarios for the RETS, and when the system is not being used for scheduled training requirements, shall assist RETS users

in the creation of new scenarios which will be stored on Data CD or other suitable media for future use on the range. The Contractor shall be available to provide operational demonstrations of the training device when it is not being used for scheduled training requirements. Operational demonstrations of the training device will be considered part of the Scheduled Training Requirements as delineated in paragraph D.12 The Contractor shall work closely with and assist the RETS users in employing the training system to its maximum capabilities. (Note: All scenarios created by the COMS Contractor shall be considered Government property.)

D.2.2 Maintenance. COMS Contractor maintenance responsibilities include organizational, intermediate, and depot level maintenance (preventative and corrective) for all target systems and equipment listed in this Appendix, which includes target pits, low/high power junction boxes, target carriers, target mechanisms, flash simulators, three dimensional targets, armor targets, hostile fire simulators, pits drainage, all connecting cables up to the power source, cabling inside the control tower, control systems, communication systems, all connecting cables within the AALFTR, all down-range wiring, and the down-range wiring access pits. COMS Contractor is responsible for maintenance of target pits. Maintenance of the target pits by the COMS Contractor includes removal of all non-ordnance foreign material (e.g. sand, dirt) that might inhibit the operation of the target system or prevent drainage of the pit. In addition, the COMS Contractor is responsible for acquisition, at Contractor's expense, for all supplies to repair the training device and to replenish any repair parts used from inventory furnished by the Government.

D.2.2.1 Berm Maintenance. The COMS Contractor shall maintain the earthen berms, timbers, concrete, and other forms of protection surrounding target mechanisms. This includes all supporting efforts as required to accomplish this task, such as: removing dirt to replace a timber/support and replacing dirt. The intent of this effort is for the COMS Contractor to be fully responsible for the protection of the target mechanisms from direct fire. Damage to a target mechanism due to direct fire is presumed to be from inadequate target protection and the COMS Contractor is responsible for replacing these damaged mechanisms at his expense. The COMS Contractor must demonstrate to the COR that the damage was caused by something other than inadequate protection, such as in the case of a hit by a ricocheted projectile. Such contested target damage must be brought immediately to the attention of the COR for determination. Loss of target use/capability due to lack of/degraded berm maintenance by the COMS Contractor will result in the target/targets being considered down for degraded operation calculations (chargeable downtime). In addition, the Contractor is responsible for re-

burying any of the down range wiring which becomes exposed due to wind, water, or live fire erosion.

Range Firing Position Maintenance. The COMS Contractor shall maintain the earthen berms, timbers, concrete, and other forms of support for all range infantry and/or armor firing positions. This includes all supporting efforts as required to accomplish this task such as: removing dirt to replace a timber/support and replacing dirt. The capability of the firing position to support range operations will be determined by the COR. The COR may declare the range up to 10% degraded if the maintenance of firing positions is not adequate

Tracking Roads Maintenance. The COMS contractor shall be responsible for the maintenance of all tracking roads on this range (approximately 5 miles) in accordance with the following:

(1) Normal cyclic maintenance of tracking roads will be done four times each year at the direction of the COR. Additionally, the COR may require corrective maintenance to be done up to four additional times, where damage, deterioration, or other factors require repair or restoration. The contractor will be given 5 days notice for both normal cyclic and for corrective maintenance.

(2) At each cyclic maintenance the tracking roads will be graded, crowned, compacted, and ditched. Grading is performed on the full length and width of the tracking roads and performed to repair surface defects and irregularities (holes, ruts, corrugation, and washouts). Soils may be taken from parallel ditches and used to fill holes and restore uniformity of grade and crown. Graded roads shall have a three (3) inch slope from the crown at the center line to each side to ensure proper drainage. Ditches shall be pulled to a 3 to 1 slope. Abutments between earthen tracking roads and concrete road segments will be smooth and compacted. When the cyclic maintenance has been successfully completed, the tracking road will be capable of accommodating comfortable transiting by commercial vehicles. The COR will determine what is comfortable transiting.

(3) Corrective maintenance will be called for when in the judgment of the COR, damage or deterioration is sufficient to require correction. The portions of tracking road needing corrective maintenance will be completed to the same standard required for normal cyclic maintenance. Note: Culverts are sometimes ineffective in this type of terrain. The COMS contractor is not responsible for the replacement of culverts; however, he may be tasked to repair a segment of road from which a culvert has washed away as a normal part of any cyclic or corrective maintenance effort.

Fill/Dirt Materials Requirements. In conjunction with COMS Contractor maintenance of berms, firing positions, tank trails and tracking roads, the Contractor shall obtain natural fill/dirt materials from the immediate areas surrounding the berms, firing positions, tank trails and tracking roads. When these materials

are not available, the COR will coordinate use of base resources to provide material to the COMS Contractor.

D.2.2.2 Target Fabrication and Maintenance. The Contractor shall be responsible for fabricating (or procuring through commercial sources) the target silhouettes used on the THM,TG and AMTC. Generally these targets resemble the outline of threat armor vehicles but may be other patterns such as friendly armor vehicles, friendly-wheeled vehicles, threat wheeled vehicles, etc. The silhouette targets are usually constructed of plywood, lumber, glue, screws and nails; they may be constructed of other materials if approved by the COR. The silhouettes will require painting after fabrication. The targets shall be constructed to the specifications provided to the Contractor by the COR. The pattern, size, and color of the targets used in the range may vary from scenario to scenario and/or from target location to target location depending on the training requirements. In no case will a target exceed the maximum size or weight capacity of the target lifting mechanism upon which it is mounted. If no specifications in regards to these limits exist, the COR will make the final determination on the adequacy of the mechanism to lift the targets.

The Contractor shall be responsible for installing the targets in the mechanisms and ensuring that the laser hit detectors and/or ballistic hit sensors are attached to each target and are fully operational. The Contractor shall also be responsible for maintaining the targets once mounted on the target mechanisms. This shall include repainting and patching as required to maintain the integrity of the target such that the ballistic hit sensors can properly sense impacts anywhere on the target surface and/or laser rangefinders will range properly. When targets have been repaired to such a state that further repairs will not provide for the satisfactory transmission of vibrations from rounds impacting on the target to the ballistic hit sensors (in order to cause that impact to be detected) that target shall be replaced. The COR will have the final authority on whether a target is repairable or needs to be replaced. Unless specifically requested otherwise by the scenario, a target mechanism that has a target installed which is in such a state of repair that it cannot properly detect hits, shall be considered 100% down.

D.2.2.3 Laser Hit Detectors. Laser hit detectors, laser hit detector harnesses, laser target interface devices, MILES target interface devices, interconnecting cabling, laser retroreflectors, and batteries for the laser detector equipment will be provided to the Contractor as GFE. The COMS Contractor shall install this equipment on the targets in accordance with the training scenario's requirements. The COMS Contractor shall ensure that this equipment is fully functional and capable of detecting hits. The COMS Contractor shall replace any of this equipment which fails with other GFE provided by the COR. The

COMS Contractor shall repair/replace any equipment damaged as a result of negligence on the part of the COMS Contractor. The corrective maintenance of this equipment will be provided by others.

D.2.2.4 Thermalized Targets. The Contractor shall respond to the requirements of the training scenario by providing thermalized targets when and where requested. The pattern of the thermalization to be installed on the targets will be provided to the Contractor by the COR. If the weapons systems being used are compatible; and atmospheric, wind, or weather conditions permit the proper thermal signature from "no power" thermal material; such material shall be adequate. If any of the aforementioned conditions preclude the use of "no-power" thermal material, "heated" thermal targets will be required. The Contractor, at Contractor's expense, shall procure (or fabricate) the necessary heated thermal panels or blankets to meet the training requirements. These panels or blankets shall work on 120 VAC or batteries. If the Contractor uses thermal material requiring batteries, the Contractor shall also be responsible for the procurement, maintenance, and replacement of the batteries. Thermalization material using other then the 120VAC or batteries may be used if such material provides an adequate thermal signature and is approved by the COR. The Contractor shall be responsible for the repair, patching, and/or replacement of thermal material, panels, blankets, or interconnecting cabling which fail, including if such failure was caused by damage from live fire. Targets that are to be thermalized in accordance with the training scenario are considered 100% down when such thermalization fails. If such failures are caused by live fire, chargeable downtime will not commence until the Contractor is provided adequate time to make repairs to the target. The COR will make the final decision when chargeable downtime commences.

D.2.2.5 TOW Wire. The primary weapons systems to be utilized on the AALFTR are anti-armor guided missiles. The TOW weapons system is one of the primary weapons in this group. The TOW missile is electronically guided by a very thin wire that spools out behind the missile. This wire is commonly referred to as TOW wire. The Marines will be responsible for cleaning up and removing all TOW wire from the range after each scheduled use. However, for reasons of safety, the Contractor shall be responsible for removing any TOW wire which is tangled in any of the RETS equipment. Any damage done to the RETS equipment by TOW wire will be considered the same as damage by live fire.

D.2.3. Pyrotechnics. During daily and weekly preventative maintenance checks the Contractor shall determine which pyrotechnic devices (Gunfire Simulators) require reloading. The COMS Contractor shall be responsible for ordering and obtaining, from the MAGTF Training Command Magazine Area, the types and quantities of pyrotechnics required and transporting

them to the device locations. The COMS Contractor is required to handle pyrotechnic charges, load and unload pyrotechnic devices, repackage and return pyrotechnics to the MAGTF Training Command Magazine Area as required, and is responsible for the maintenance of the components of the pyrotechnic charge firing mechanisms. All COMS Contractor activities involving pyrotechnics shall be in accordance with all Federal, State, local and MAGTF Training Command SOP regulations.

D.2.4 Repair Parts Salvage. During the period of this contract Target Holding Mechanisms, Tank Gunnery (THM,TG's), Junction Boxes (JB's), Gunfire Simulators (GUFS's), and other ancillary equipment may be damaged beyond repair by direct hits by live fire rounds, troop movements, or other means beyond the Contractor's control. Whenever a THM,TG; JB, GUFS, or other piece of ancillary equipment is damaged beyond repair, the Contractor shall report this to the COR, recommend replacement of the damaged unit, and salvage whatever parts possible once replacement has been authorized by the COR. These parts shall be used for repair of other RETS THM,TG's, JB's, GUFS's, or other ancillary devices as appropriate, and shall be added to the current inventory and shall remain the property of the Government. Equipment damaged beyond economical repair will be replaced by the Government, when the COR determines such damage is not the result of Contractor negligence, abuse, and/or Contractor failure to accomplish required preventive, planned or corrective maintenance including all range maintenance responsibilities.

D.3 Major Hardware Items

EQUIPMENT LISTING:	QUANTITY
RANGE CONTROL STATION (RCS)	1
The RETS RCS consists of the following:	
a. Control Console CPU, Keyboard, & Monitor	
b. Scoring Printer	
c. Panel Assembly, Tower Junction Box (TJB)	
d. Signal Distribution Assembly (SDA)	
e. Tower Communications System	
f. Range Interface Adapter (RIA)	1
MOVING ARMOR TARGET (MAT)	4
TARGET HOLDING MECHANISM, TANK GUNNERY (THM,TG)	8
TARGET INTERFACE UNIT (TIU)	12
Battle Effects Simulator (BES)	24
INTERCONNECTING BOX, LOW POWER (ICB,LP)	12
FLASH SIMULATORS	12

D.4 Range Degraded Operation Matrix.

PERCENT OF DEGRADATION

	Number of Systems Failed											
	1	2	3	4	5	6	7	8	9	10	20	30
SYSTEM / SUBSYSTEM												
1. Target Systems:												
MAT (4ea)	20	40	60	80								
THM,TG (8ea)	5	10	15	20	25	30	35	40				
BES (24ea)	2	4	6	8	10	12	14	16	18	20	30	40
2. RCS												
Computer	100											
Printer	30											
Operator	100											
SDA	100											
RIA	100											
TJB	100											
3. RETS Operator	100											

Notes:
1. The total down percentage of the range will be determined by totaling the down percentages for all of the individual components/systems. For example: if the scoring printer and five of the THM,TG's are down, the total down percentage would be 30%+25% =55%.

Acronyms:
MAT = Moving Armor Target
THMTG = Target Holding Mechanism Tank Gunnery
Battle Effects Simulator (BES)
RCS = Range Control Station
RIA = Range Interface Adapter
TJB = Tower Junction Box
SDA = Signal Distribution Assembly

The sum of the parts does not add up to 100% in all cases since some systems are more critical than others. For example, the computer is only about 2% of the RETS hardware, but if it is down the system is 100% non-operational.

D.5 Office, Storage and Maintenance Space. In addition to the office, storage, and maintenance spaces at the Main Camp Area, at Range 109 the Contractor will be provided one Operations/Storage building, one Range Control Tower, and four AMTC maintenance bunkers. A Head Facility for use by both Government and Contractor personnel is available at the range.

D.6 Office Furniture and Equipment. The following office furniture will be provided by the Government for use in the Range Control Tower.

Description	Qty
Drafting Chairs	2
Office Chair (Swivel)	1
Two Drawer Filing Cabinet	1
Wall Clock	1

D.7 Consumables. All consumables, including batteries (except as noted in Par.2.2.2.3) shall be provided by the COMS Contractor. Some examples of consumables to be provided by the Contractor are as follows:

Paint, Petroleum/Oils and Lubricants (POL), Data CDs, Printer Paper, Printer Ribbons Cartridges, Fuses, Bulbs, Janitorial Supplies, Filters, Belts, etc.

D.8 Tools and Test Equipment. Only one Fault Isolation Adapter (sometimes called a Range Control Adapter) shall be furnished by the Government. The COMS Contractor shall be responsible for its maintenance. No additional tools or test equipment will be provided by the Government.

D.9 Spares and Repair Parts. See paragraph 3.6 of the Basic SOW.

D.10 Inspections. The Government will perform periodic contract compliance inspections, operational readiness, and maintenance checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections in providing the availability of the system, and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph D.12.

D.11 Technical Data Support Package (TDSP). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training device.

D.12 Operating Hours and Planned Scheduling Requirements. The AALFTR will be scheduled for a maximum of 800 hours per year. weekend and holiday training hours will be the same as weekday training. The only holidays observed at the AALFTR are Christmas Day (Dec. 25) and New Years Day (Jan 1).

D.12.1 RETS Range Flexibility. Up to one-third (1/3) of the fiscal year range operating hours may be shifted among any RETS Ranges located at the MAGTF Training Command. The COR will

provide 24 hours notice prior to adjusting operating hours from one range to another range. In addition, units using the RETS Ranges may request, through the COR, an extension of training time for a scheduled, in-progress training evolution. The maximum extension granted will be two (2) hours and only five (5) extensions will be granted monthly, all ranges inclusive. The COMS Contractor will be provided a minimum of two hours notice by the COR for any training time extensions. Any hourly extensions granted will be credited against the yearly operational hours for the range.

D.12.2 Scheduled AALFTR Usage.

a. Range will not be scheduled more than 12 consecutive hours for any single scheduled use.

b. COMS Contractor will be provided at least eight (8) hours of maintenance time between each scheduled use of the Range.

c. Normal scheduling day is a period of 24 hours, not necessarily 0001 hours to 2400 hours. Scheduled usage could start at any time during the 24 hours of the day.

d. COMS Contractor will be provided 24 hours notice for all scheduled changes for this range.

e. Use of the AALFTR for target tracking, MILES, PGTS, or scenario development will be considered the same as live fire in regards to scheduling requirements and will follow all of the requirements listed above.

f. In the event a training unit fails to arrive within one hour of their scheduled start time or fails to notify the COMS Contractor of anticipated late arrival within one hour of the scheduled start time or leaves prior to scheduled end of training, the COMS Contractor shall contact the COR for further instructions. After hours or if the COR is not available, the Contractor shall contact Range Control (Bearmat) for further instructions.

g. Scheduled usage for demonstrations will be credited as actual usage.

D.13 Janitorial Requirements. COMS CONTRACTOR shall maintain all assigned areas as directed by the COR. At R109 these areas shall include the AMTC Maint. Bunkers (Bldgs 2541, 2542, & 2543), the RCS (Bldg 2540), the Admin/Maint Shed (Bldg 2539), the Head (Bldg 2538), the Classroom (Bldg 2537), the Covered Bleachers (Bldg 2536), and the Covered Mess (Bldg 2535). All cleaning supplies shall be provided by the COMS Contractor. Examples of janitorial services are:

(1) Daily:
  (a) Empty trashcans and ashtrays
  (b) Sweep floor
  (c) Refill Toilet Paper Holders
  (d) Refill Paper Towel Holders
  (e) Refill Soap Dispensers

(2) Weekly:
  (a) Dust furniture and equipment
  (b) Clean windows
  (c) Damp mop
  (d) Clean sinks, toilets, & urinals

(3) Monthly:
  (a) Clean air conditioner filter.

D.14 Location of Training Device/System. The AALFTR is located at Range 109, which is in the Range Training Area at MAGTF Training Command, Twentynine Palms, Ca. Range 109 is located approximately 10 miles from the Main Camp Area of MAGTF Training Command.

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E.1 Description
LOCATION: MAGTF TRAINING COMMAND, TWENTYNINE PALMS, CA
RANGE NO: 113
TYPE RANGE: MULTI-PURPOSE MACHINE GUN RANGE

COMS Contractor Mobilization Date - 1 December 2007
COMS Contractor Support Date - 1 January 2008

The Multi-Purpose Machine Gun Range (MPMGR) is a permanent installation used for familiarization and live fire training of troops with light to heavy machine guns. The range allows troops to engage stationary and/or moving infantry targets at both known and unknown distances including multiple target scenarios.

The range provides facilities for coordinating the remote control of ten (10) moving infantry targets, ten (10) Tank Target Mechanisms, 130 stationary infantry targets and 20 infantry hostile fire simulators that are permanently emplaced on suitable terrain. The range provides for realistic combat training for individuals or crews under conditions simulating an actual battlefield.

Operators, located in a range control tower, utilize a Range Control System (RCS) to monitor and observe the entire range operation. Located in concrete emplacements at varying distances are the 140 remote controlled targets and 20 hostile fire simulators that provide a realistic environment for the training scenario. The targets are located at distances that cover a wide range of engagements for all of the various types of weapons utilized on the range.

R113 EQUIPMENT LISTING:	QUANTITY
RANGE CONTROL STATION (RETS)	1
INFANTRY TARGET MECHANISM (ITM)	140
INFANTRY MOVING TARGET CARRIER (IMTC)	10
TANK TARGET MECHANISM (TTM)	10
SIGNAL AND POWER DISTRIBUTION SYSTEMS	

E.1.1 Remote Engagement Target System (RETS). The RETS is composed of individual target equipment and simulators designed to provide the USMC with standard hardware to satisfy infantry live-fire training needs. The RETS includes infantry stationary and moving target hardware and miscellaneous live-fire simulation equipment as well as associated interface equipment. The RETS equipment has been selected and installed to provide range configurations for infantry training. From the Range Control Station (RCS), the operator has the option of developing scenarios for RETS automatic target operation or using

established target scenarios that have been loaded by Data CD or other suitable media. The following paragraphs describe the principle components of the Remote Targeted System:

"Range Control Station (RCS). The RCS consists of the hardware required to provide manual and automatic remote control of the target equipment and which provides hard copy printout of trainee performance. The RCS is normally operated by a single operator in the presence of the Range Safety Officer (RSO). The RCS is capable of:

a. controlling armor and infantry target mechanisms, moving target carriers, hostile fire simulators, muzzle flash simulators and armor smoke and flash simulators;

b. displaying malfunctions of all target mechanisms and target carriers;

c. accumulating and displaying scores for each target or selected groups of targets;

d. recording (on the scoring printer) the score for each target or selected groups of targets by operator or preprogrammed command.

The RCS has been designed so that the computer is user friendly, enabling a trained operator to quickly write and edit a standard 10 to 15 minute range scenario.

Infantry Target Mechanism (ITM). The ITM may be installed either as a stationary target lifter or as a moving target lifter when mounted on the Infantry Moving Carrier. The ITM holds a three dimensional, self healing, plastic target that is configured to look like a soldier. The ITM can use either a single or double target arm. The former lifts one target, the other two. The mechanism is capable of lifting its target(s) in winds up to 35 mph preventing all but the most minor movement. It can also be used in conjunction with the Night Muzzle Flash Simulator or Infantry Hostile Fire Simulator.

Infantry Moving Target Carrier (IMTC). The IMTC is an electronically controlled mechanism that simulates a running man moving from one concealed position to another. The carriage mounts an ITM and a Muzzle Flash Simulator. The IMTC is capable of moving a target forward or backward in either the up or down position. It has three speeds, which must be selected at the mechanism and cannot be selected remotely.

Muzzle Flash Simulator (Infantry Night Muzzle Flash Simulator) (MFS). The MFS simulates the muzzle flash of small arms weapons.

It utilizes light-emitting diodes reflecting off the target surface to provide the visual effect. The MFS operates either single shot or automatic fire at a rate of 600 rounds per minute. It receives its commands through the ITM. To be effective it must be located 11 to 18 inches in front of the ITM and angled toward the face of the target.

Small Arms Sound Simulator (Infantry Hostile Fire Simulator) (SASS). The SASS provides realistic sound simulation of a single shot and automatic rifle fire. The automatic mode has a rate of fire of 600 rounds per minute. The SASS consists of a tubular, gun-like barrel with a combustion chamber. A mixture of oxygen and propane gas is ignited in the combustion chamber by a spark plug producing the sound. It receives its commands through the ITM and is usually located in the same emplacement; however it may be located as far as 30 feet away (the length of its cable).

Note: The MFS and SASS operate independently, but can be operated simultaneously.

Tank Target Mechanism (TTM). The Tank Target Mechanism is a stationary armor lifter that is radio controlled. It holds a two dimensional silhouette that is normally configured to look like a hostile armor vehicle. Control signals for the target and pyrotechnic operations are received at the target and it transmits hit counts and target status back to either the Range Controller or the Computer Control Tower Interface, which makes the TTM compatible with the RETS system.

Interconnecting Box, Target Interface (TIU). The TIU is an electrical device used by the THM,TG, Gunfire Simulator and Track System, Target Training Set-Armor. The TIU provides a limited power source to recharge the battery in the THM,TG. The TIU also encodes and sends status and hit information to the RCS.

Interconnecting Box, High/Low Power (Low/High Power Junction Box) (LPJB)(HPJB). The Interconnecting Box (ICB) provides interface between the underground data and power cables and the targetry equipment. It provides power and data cable transient protection, 24VDC power for use by the target equipment and circuit breaker electrical protection. The high power junction box is used exclusively with the Infantry Moving Target Carrier. The low power junction box is used with all other RETS targetry equipment.

Three-Dimensional Infantry Targets. The three-dimensional plastic self-healing targets are shaped like a person, head to mid-thigh, painted to simulate a soldier holding a rifle at port arms. Thermal imaging targets are sometimes used to conduct night training.

NAMES, PSEUDONYMS AND ACRONYMS FOR RANGE EQUIPMENT

NAMES	PSEUDONYMS	ACRONYM
Range Control Station	The Tower, The Computer	RCS
Infantry Target Mechanism	Infantry Lifter, Lifter	ITM
Stationary Infantry Target	Infantry Lifter, Lifter	SIT
Moving Infantry Target	Infantry Mover, Mover, Cart, Buggy	MIT
Infantry Moving Target Carrier	Infantry Mover, Mover, Cart, Buggy	IMTC
Interconnecting Box, Low Power	Low Power Junction Box, J-Box, JB	LPJB
Interconnecting Box, High Power	High Power Junction Box, J-Box, JB	HPJB
Small Arms Sound Simulator	Infantry Hostile Fire Simulator, Rifle Fire Simulator, Machinegun Simulator, RFS	SASS
Infantry Night Muzzle Flash Simulator	Muzzle Flash Simulator	MFS
Target Holding Mechanism, Tank Gunnery	Armor Lifter, Armor Target, Lifter	THMTG
Tank Target Mechanism	Armor Lifter, Armor Target, Lifter	TTM
Stationary Armor Target	Armor Lifter, Armor Target, Lifter	SAT
Moving Armor Target	Armor Mover, Mover, Cart, Buggy	MAT
Armor Moving Target Carrier	Armor Mover, Mover, Cart, Buggy	AMTC
Visual Flash Simulator	Strobe Light, Strobe	VFS
Battle Effects Simulator	Omega, Omega-36, Omega-60	BES
Hostile Fire Simulator	Joanell, Hoffman	HFS
Armor Target Kill Simulator	Joanell, Hoffman	ATKS
Interconnecting Box, Target	Target Interface Unit	TIU
Three Dimensional Target	Ivan, Plastic Silhouette, Silhouette	
Armor Target	Target, Armor Silhouette, Flank Target, Frontal Target, Threat Target	

E.1.1 Range Communication System. A built-in PA system will be provided at the range as GFE. The remainder of the range communication system used on Range 113 will be provided and installed by the COMS Contractor at Contractor expense. This system at a minimum shall consist of one (1) 2-way radio in each Contractor vehicle and one (1) radio in the Range Control Tower. These radios will be used to keep in constant communication with the USMC Range Control Facility at BEARMAT (as required by base regulations) and for Contractor communications between vehicles, the Range Control Station (RCS), and other facilities. These radios shall conform to the specifications provided by the Government. These radios shall be considered GFE and will be programmed and maintained by the Government and shall remain as Government property at the end of the contract. The Contractor is responsible for the maintenance of the built in Range PA system.

E.2 Operation and Maintenance Requirements

E.2.1 Operation. COMS Contractor is responsible for total

operation of this Range, which includes but is not limited to the following:

(1) Operates the Range during training and when requested by the COR

(2) Configure Rifle Fire Simulators, Targetry and scenarios according to using unit requirements

(3) Assists using units in writing scenarios (all scenarios created by the COMS Contractor are the property of the Government).

(4) Apprises using units of the capabilities of the Range

(5) Provides a training evaluation printout to using units

(6) Trains newly assigned COMS Contractor personnel in the operation and maintenance of the Range

E.2.2 Maintenance. COMS Contractor maintenance responsibilities include organizational, intermediate, and depot level maintenance (preventative and corrective) for all target systems and equipment listed in this Appendix, which includes target pits, low/high power junction boxes, target carriers, target mechanisms, flash simulators, three dimensional targets, small arms sound simulators, pits' drainage, all connecting cables up to the power source, cabling inside the control tower, control systems, communication systems, all connecting cables within the Range Complex, all down-range wiring, and the down-range wiring access pits. COMS Contractor is responsible for maintenance of target pits. Maintenance of the target pits by the COMS Contractor includes removal of foreign material (e.g. sand, dirt) that might inhibit the operation of the target system or prevent drainage of the pit. In addition, the COMS Contractor is responsible for acquisition, at Contractor's expense, for all supplies to repair the training device and to replenish any repair parts used from inventory furnished by the Government.

E.2.2.1 Berm Maintenance. The COMS Contractor shall maintain the earthen berms, timbers, concrete, and other forms of protection surrounding target mechanisms. This includes all supporting efforts as required to accomplish this task, such as: removing dirt to replace a timber/support and replacing dirt. The intent of this effort is for the COMS Contractor to be fully responsible for the protection of the target mechanisms from direct fire. Damage to a target mechanism due to direct fire is presumed to be from inadequate target protection and the COMS Contractor is

responsible for replacing these damaged mechanisms at his expense. The COMS Contractor must demonstrate to the COR that the damage was caused by something other than inadequate protection, such as in the case of a hit by a ricocheted projectile. Such contested target damage must be brought immediately to the attention of the COR for determination. Loss of target use/capability due to lack of/degraded berm maintenance by the COMS Contractor will result in the target/targets being considered "down" for degraded operation calculations (chargeable downtime). In addition, the Contractor is responsible for re-burying any of the down range wiring which becomes exposed due to wind, water, or live fire erosion.

Range Firing Position Maintenance. The COMS Contractor shall maintain the earthen berms, timbers, concrete, and other forms of support for all range infantry and/or armor firing positions. This includes all supporting efforts as required to accomplish this task such as: removing dirt to replace a timber/support and replacing dirt. The capability of the firing position to support range operations will be determined by the COR. The COR may declare the range up to 10% degraded if the maintenance of firing positions is not adequate.

Fill/Dirt Materials Requirements. In conjunction with COMS Contractor maintenance of berms, firing positions, tank trails and tracking roads, the Contractor shall obtain natural fill/dirt materials from the immediate areas surrounding the berms, firing positions, tank trails and tracking roads. When these materials are not available, the COR will coordinate use of base resources to provide material to the COMS Contractor.

E.2.2.2 Target Maintenance. The Contractor shall be responsible for installing the **2-**D and 3-D Infantry targets on the mechanisms and ensuring that the laser hit detectors and/or ballistic hit sensors are attached to each target and are fully operational. The COMS Contractor shall replace the 3-D Infantry targets when they are no longer serviceable.

The Contractor shall be responsible for fabricating threat vehicle silhouette pop-up targets and infantry targets from suitable materials in accordance with Marine Corps (or Army) specifications and standards for target fabrication, which include size, durability, and markings. Target construction will include: design, fabrication, coloring, and applying required thermal and/or laser reflective properties and mounting them on target mechanisms located on Range 113 as required.

The Contractor shall be responsible for maintaining the targets once mounted on or attached to the target mechanisms. This shall include patching, repairing and repainting as required, and ensuring that the laser hit detectors and/or

ballistic hit sensors are properly attached to each target and are fully operational.

E.2.2.2.1 Laser Hit Detectors. Laser hit detectors, laser hit detector harnesses, laser target interface devices, MILES target interface devices, interconnecting cabling and batteries for the laser detector equipment will be provided to the Contractor as GFE. The Contractor shall install this equipment on the targets in accordance with the training scenario's requirements. The Contractor shall ensure that this equipment is fully functional and capable of detecting hits. The Contractor shall replace any of this equipment which fails with other GFE provided by the COR. The corrective maintenance of this equipment will be by the Government unless such damage was caused by negligence on the part of the COMS Contractor.

E.2.2.2.2 Thermalized Targets. The Contractor shall respond to the requirements of the training scenarios by providing thermalized targets when and where requested. The pattern of the thermalization to be installed on the targets will be provided to the Contractor by the COR. If the weapons systems being used are compatible and the atmospheric, wind or weather conditions permit the proper thermal signature from “no-power” thermal material, such material shall be adequate. If any of the aforementioned conditions preclude the use of “no-power” thermal material, “heated” thermal targets will be required. The Contractor, at Contractor's expense, shall procure (or fabricate) the necessary heated panels or blankets to meet the training requirements. These panels or blankets shall work on 120VAC or batteries. The contractor shall also be responsible for the procurement, maintenance, and replacement of the batteries. Thermalization material using other than the 120VAC or batteries may be used if such material provides an adequate thermal signature and is approved by the COR. The Contractor shall be responsible for the repair, patching, and/or replacement of thermal material, panels, blankets, or interconnecting cabling which fail, including if such failure was caused by damage from live fire. Targets that are to be thermalized in accordance with the training scenario are considered 100% down when such thermalization fails. If such failures are caused by live fire, chargeable downtime will not commence until the Contractor is provided adequate time to make repairs to the target. The COR will make the final decision when chargeable downtime commences.

E.2.3 Small Arms Sound Simulator. The Contractor shall ensure that adequate supplies of oxygen and propane gas are available for the small arms sound simulators (rifle fire simulators) to meet all of the scheduled training requirements. The Contractor shall be responsible for filling/refilling, from commercial

sources at Contractor expense, all oxygen and propane gas cylinders used on the range.

E.2.4 Repair Parts Salvage. During the period of this contract Infantry Target Mechanisms, Junction Boxes (JB's) and other ancillary equipment may be damaged beyond repair by direct hits by live fire rounds, troop movements, or other means beyond the Contractor's control. Whenever an ITM, JB or other piece of ancillary equipment is damaged beyond repair, the Contractor shall report this to the COR, recommend replacement of the damaged unit, and salvage whatever parts possible once replacement has been authorized by the COR. These parts shall be used for repair of other RETS ITM's, JB's or other ancillary devices as appropriate, and shall be added to the current inventory and shall remain the property of the Government. Equipment damaged beyond economical repair will be replaced by the Government, when the COR determines such damage is not the result of Contractor negligence, abuse, and/or Contractor failure to accomplish required preventive, planned or corrective maintenance including all range maintenance responsibilities.

E.3 Major Hardware Items.

EQUIPMENT LISTING:	QUANTITY
RANGE CONTROL STATION (RCS)	1
The RETS RCS consists of the following:	
a. Control Console CPU, Keyboard, & Monitor	
b. Scoring Printer	
c. Range Interface Adapter (RIA)	1
d. Panel Assembly, Tower Junction Box (TJB)	
e. Signal Distribution Assembly (SDA)	
f. Tower Communications System	
g. Target Radio Interface Adapter (TRIA)	
INFANTRY MOVING TARGET CARRIER (IMTC)	10
INFANTRY TARGET MECHANISM (ITM)	140
DOUBLE TARGET ARM	65
INTERCONNECTING BOX, LOW POWER (ICB,LP)	130
INTERCONNECTING BOX, HIGH POWER (ICB,HP)	10
3-D INFANTRY TARGETS	195
SMALL ARMS SOUND SIMULATOR	20
MUZZLE FLASH SIMULATOR	20
TANK TARGET MECHANISM (TTM)	10

E.4 Range Degraded Operation Matrix.

PERCENT OF DEGRADATION

NUMBER OF FAILED SYSTEMS

SYSTEM / SUBSYSTEM	1	2	3	4	5	6	7	8	10	20	30	40	50
1. Target Systems:													
IMTC (10ea)	2	4	6	8	10	12	14	16	20				
ITM (140ea)	1	2	3	4	5	6	7	8	10	20	30	40	50
SASS (20ea)	1	2	3	4	5	6	7	8	10	20			
TTM (10ea)	2	4	6	8	10	12	14	16	20				
2. RCS													
Computer	100												
Printer	30												
SDA	100												
RIA	100												
TJB	100												
TRIA	20												
3. RETS Operator	100												

Notes:
1. The total down percentage of the range will be determined by totaling the down percentages for all of the individual components/systems. For example: if the scoring printer and five of the ITMs are down, the total down percentage would be 30%+5% =35%.

2. Acronyms:
   IMTC = Infantry Moving Target Carrier
   ITM = Infantry Target Mechanism
   SASS = Small Arms Sound Simulator
   RCS = Range Control Station
   TTM = Tank Target Mechanism
   RIA = Range Interface Adapter
   TJB = Tower Junction Box
   SDA = Signal Distribution Assembly
   TRIA = Target Radio Interface Adapter

3. The sum of the parts does not add up to 100% in all cases, since some systems are more critical than others. For example, the computer is only about 1% of the RETS hardware, but if it is down the system is 100% non-operational.

E.5 Office, Storage and Maintenance Space. In addition to the office, storage, and maintenance spaces at the Main Camp Area, at Range 113 the Contractor will be provided one Range Control Tower, one Ammo Shed, and a Head Facility for use by both Government and Contractor personnel is available at the range.

E.6 Office Furniture and Equipment. The following office furniture will be provided by the Government for use in the Range Control Tower.

Description	Qty
Drafting Chairs	2
Office Chair (Swivel)	1
Two drawer Filing Cabinet	1
Wall Clock	1

E.7 Consumables. All consumables including batteries shall be provided by the Contractor. Some examples of consumables to be provided by the Contractor are:

Paint, Petroleum/Oils and Lubricants (POL), Data CDs, Printer Paper, Printer Cartridges, Fuses, Bulbs, Janitorial Supplies, Filters, Belts, 3-D Targets, etc.

E.8 Tools and Test Equipment. Only one Fault Isolation Adapter (sometimes called a Range Control Adapter) shall be furnished by the Government. The COMS Contractor shall be responsible for its maintenance. No additional tools or test equipment will be provided by the Government.

E.9 Spares and Repair Parts. See paragraph 3.6 of the Basic SOW.

E.10 Inspections. The Government will perform periodic contract compliance inspections, operational readiness, and maintenance checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections in providing the availability of the system, and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph E.12.

E.11 Technical Data Support Package (TDSP). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training device.

E.12 Operating Hours and Planned Scheduling Requirements. The MPMGR will be scheduled for a maximum of 800 hours per year. Weekend and holiday training hours will be the same as weekday training. The only holidays observed at the MPMGR are Christmas Day (Dec 25) and New Years Day (Jan 1).

E.12.1 RETS Range Flexibility. Up to one-third (1/3) of the fiscal year range operating hours may be shifted among any RETS

Ranges located at the MAGTF Training Command. The COR will provide 24 hours notice prior to adjusting operating hours from one range to another range. In addition, units using the RETS Ranges may request, through the COR, an extension of training time for a scheduled, in-progress training evolution. The maximum extension granted will be two (2) hours and only five (5) extensions will be granted monthly, all ranges inclusive. The COMS Contractor will be provided a minimum of two hours notice by the COR for any training time extensions. Any hourly extensions granted will be credited against the yearly operational hours for the range.

E.12.2 Planned Scheduled Usage.

a. Training will be scheduled for a maximum of 10 hours per day.

b. COMS Contractor will be provided 24 hours notice for all scheduled changes for this range.

c. A normal scheduling day is a period of 24 hours, not necessarily 0000 to 2400, a scheduled usage could start at any time during the 24 hours of the day.

d. In the event a training unit fails to arrive within one hour of their scheduled start time or fails to notify the COMS Contractor of anticipated late arrival within one hour of the scheduled start time or leaves prior to scheduled end of training, the COMS Contractor shall contact the COR for further instructions. After hours or if for some other reason the COR is not available, the Contractor shall contact Range Control (Bearmat) for further instructions.

e. Scheduled use for demonstrations will be credited as actual usage.

E.13 Janitorial Requirements. COMS CONTRACTOR shall maintain all assigned areas as directed by the COR. At R113 these areas shall include the RCS (Bldg 2565), the Ammo Shed (Bldg 2568), the Covered Mess (Bldg 2566), and the Head (Bldg 2567). All cleaning supplies shall be provided by the COMS Contractor. Examples of janitorial services are:

(1) Daily:
- (a) Empty trashcans and ashtrays
- (b) Sweep floor
- (c) Refill Toilet Paper Holders
- (d) Refill Paper Towel Holders
- (e) Refill Soap Dispensers

(2) Weekly:
  (a) Dust furniture and equipment
  (b) Clean windows
  (c) Damp mop
  (d) Clean sinks, toilets, & urinals

(3) Monthly:
  (a) Clean air conditioner filter.

E.14 Location of Training Device/System. The MPMGR is located at Range 113, which is in the Range Training Area at MAGTF Training Command, Twentynine Palms, CA. Range 113 is located approximately 12 miles from the Main Camp Area of MAGTF Training Command.

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F.1 Description and Quantity

LOCATION: MAGTF TRAINING COMMAND, TWENTYNINE PALMS, CA
RANGE NO: 500
TYPE RANGE: MULTIPURPOSE RANGE COMPLEX (MPRC)

COMS Contractor Mobilization Date - 1 December 2007
COMS Contractor Support Date - 1 January 2008

EQUIPMENT LISTING:	QUANTITY
RANGE CONTROL STATION (RCS)	1
MOVING ARMOR TARGET (MAT)	4
STATIONARY ARMOR TARGET (SAT)	31
STATIONARY INFANTRY TARGET (SIT)	98
MOVING INFANTRY TARGET (MIT)	12
BZO TARGET BUNKERS	35
LOW POWER JUNCTION BOX	38
HIGH POWER JUNCTION BOX	10
SMALL ARMS SOUND SIMULATOR (SASS)	20
MUZZLE FLASH SIMULATOR (MFS)	30
THREE DIMENSIONAL TARGET	98
VISUAL FLASH SIMULATOR (VFS)	18
ARMOR TARGETS	31
Battle Effects Simulator (BES)	36
INTERCONNECTING BOX, TARGET INTERFACE	18
FLIR CAMERA SYSTEM	1
RANGE COMMUNICATIONS SYSTEM	1

The primary purpose of the Multipurpose Range Complex (MPRC) at MAGTF Training Command is the annual gunnery re-qualification of crews for the resident armor units aboard the base. The range is also used for live fire training of various visiting units during the ten annual Combined Arms Exercises (CAX) held aboard the Combat Center. In addition, the MPRC is used on occasion for live fire training by mounted or dismounted infantry. The range has a mixture of targets representing “enemy” armored vehicles and “enemy” infantry, both moving and stationary.

Operators, located in a range control tower, utilize a Range Control System (RCS) to monitor and observe the entire range operation. The MPRC provides facilities for coordinating the remote control of (31) stationary armor targets, (4) moving armor targets, (98) stationary infantry targets, (12) moving infantry targets and (70) hostile fire and/or kill simulators. The mix and variety of targets allow for the employment of all infantry weapons and armor vehicles used in the Marine Corps.

F.1.1 Remoted Target System (RETS). The RETS is composed of individual target equipment and simulators designed to provide the USMC with standard hardware to satisfy infantry

and armor live-fire training needs. The RETS system includes infantry stationary and moving target hardware, armor stationary and moving target hardware, miscellaneous live-fire simulation equipment, as well as associated interface equipment. The RETS equipment has been selected and installed to provide range configurations for infantry, armor, and combined arms training. From the Range Control Station (RCS), the operator develops scenarios for RETS automatic target operation or uses established target scenarios loaded by Data CD or other suitable media. The following paragraphs describe the principal components of the Remote Targeted System.

Range Control Station (RCS). The RCS consists of the hardware required to provide manual and automatic remote control of the target equipments and which provides hard copy printout of trainee performance. The RCS is normally operated by a single operator in the presence of the Range Safety Officer (RSO). The RCS is capable of:

a. Controlling armor and infantry target mechanisms, moving target carriers, hostile fire simulators, muzzle flash simulators and armor smoke and flash simulators

b. Graphically displays malfunctions of all target mechanisms and target carriers

c. Accumulating and displaying scores for each target or selected groups of targets

d. Recording (on the scoring printer) the score for each target or selected groups of targets by operator or preprogrammed command

The RCS has been designed so that the computer is user friendly, enabling a trained operator to quickly write and edit a standard 10 to 15-minute range scenario. The hardware items described in the following elements make up the RCS.

Stationary Infantry Target (SIT). The SIT holds a three dimensional, self-healing, plastic target that is configured to look like a soldier. The SIT can use either a single or double target arm. The former lifts one target, the other two. The mechanism is capable of lifting its target(s) in winds up to 35 mph preventing all but the most minor movement. It can also be used in conjunction with the Night Muzzle Flash Simulator or Infantry Hostile Fire Simulator. The SITs used on the range are a mix of hardwired and radio controlled units.

Moving Infantry Target (MIT). The MIT is an electronically

controlled mechanism that simulates a man moving from one concealed position to another. The carriage mounts an infantry target lifter and a Muzzle Flash Simulator. The MIT is capable of moving a target forward or backward in either the up or down position. It has three speeds, which must be selected at the mechanism and cannot be selected remotely.

Muzzle Flash Simulator (Infantry Night Muzzle Flash Simulator) (MFS). The MFS simulates the muzzle flash of small arms weapons. It utilizes light-emitting diodes reflecting off the target surface to provide the visual effect. The MFS operates either single shot or automatic fire at a rate of 600 rounds per minute. It receives its commands through the ITM. To be effective it must be located 11 to 18 inches in front of the ITM and angled toward the face of the target.

Small Arms Sound Simulator (Infantry Hostile Fire Simulator) (SASS). The SASS provides realistic sound simulation of a single shot and automatic rifle fire. The automatic mode has a rate of fire of 600 rounds per minute. The SASS consists of a tubular, gun-like barrel with a combustion chamber. A mixture of oxygen and propane gas is ignited in the combustion chamber by a spark plug producing the sound. It receives its commands through the ITM and is usually located in the same emplacement, however it may be located as far as 30 feet away (the length of its cable).

Note: The MFS and SASS operate independently, but can be operated simultaneously.

"Stationary Armor Target (SAT). The SAT holds a two-dimensional, usually plywood, silhouette that is configured to look like a vehicle, usually a hostile armor vehicle. The SATs used on the range are a mix of hardwired and radio controlled units. Control signals, including raise target, lower target, and activate Gunfire Simulator are received through the Target Interface Unit or Radio Interface whichever is appropriate. The SAT receives its 12VDC power from a Deep Cycle Battery that is recharged by the TIU and/or Solar Panels."

Battle Effects Simulator (BES) There are three different BESs that can be used on the range. The ATKS (also known as a Joanell Device, the Omega-36, and the Omega-60 all perform similar functions; although the ATKS and the Omegas do use different ammunition. These devices ignite pyrotechnic charges on command. When used with the Hostile Fire pyrotechnic cartridge, they simulate the flash and sound of tank main gunfire. When used with a steel-on-steel pyrotechnic cartridge, they simulate the sparks and flash occurring when a round impacts on an armor vehicle. In addition the Omegas can also be used with a Missile Launch or an Air Burst cartridge. The ATKS has twenty firing tubes. The Omega-36 has 36 firing tubes. The Omega-60 has 60 firing tubes. The BES is normally used in conjunction with an armor target lifter

but may be used with an infantry target lifter or even as a stand-alone device (with the proper interface).

Visual Flash Simulator (VFS). The VFS is a halogen spotlight which flashes when a hit is registered on either the SAT or the MAT, producing an orange-red colored flash with a duration of between 0.5 and 1.0 seconds. It is capable of reproducing a firing rate of 20 firings per minute. The VFS receives its control signals and power distribution from the MAT or the SAT. The life expectancy of the lamp is 12,000 firings.

Moving Armor Target (MAT). The MAT simulates a vehicle (usually a hostile armor vehicle) moving from one concealed position to another. It receives its power through a busbar that runs along the berm retaining wall parallel with the track. It receives its commands via a radio link with the RCS. The MAT realistically simulates a vehicle moving on the range, providing training in detecting, identifying and engaging moving targets. Both the cart and the target lifter are electrically powered.

Interconnecting Box, Target Interface (TIU). The TIU is an electrical device used by the SAT and/or Gunfire Simulator. The TIU provides a limited power source to recharge the battery in the SAT. The TIU also encodes and sends status and hit information to the RCS.

Three-Dimensional Infantry Targets. The three-dimensional plastic self-healing targets are shaped like a person, head to mid-thigh, painted to simulate a soldier holding a rifle at port arms. Thermal imaging targets are sometimes used to conduct night training.

Armor Targets. The armor targets simulate stationary and moving vehicles. The stationary targets usually represent a silhouette frontal view of a hostile armor vehicle; but may represent other items such as friendly or civilian vehicles, bunkers, helicopters, groups of dismounted troops, etc. The stationary target is normally an approximately 5 by 8 foot structure (usually made of plywood but may be other materials) mounted on the SAT. The moving target is normally an approximately 8 by 20 foot structure (usually made of plywood but may be other materials) usually depicting the side view of an armor vehicle but may represent other items such as friendly or civilian vehicles, helicopters, etc, and is mounted on the MAT. Thermal Imaging Targets are used to conduct night training.

Interconnecting Box, High/Low Power (Low/High Power Junction Box) (LPJB)(HPJB). The Interconnecting Box (ICB) provides interface between the underground data and power cables and the targetry equipment. It provides power and data cable transient protection, 24VDC power for use by the target equipment and circuit

breaker electrical protection. The high power junction box is used exclusively with the *M*oving Infantry Target. The low power junction box is used with all other RETS targetry equipment.

Forward Looking Infrared Radar Camera (FLIR Camera). Installed in the Observation Tower is a Forward Looking Infrared Radar Camera (FLIR Camera), pan & tilt unit, control console, monitor, and VCR. The camera is used by the training units to monitor and record the progress of the gunnery training during exercises. The system is normally operated by the unit undergoing training, however the Contractor must know how to operate and troubleshoot the system in order to provide on-site training and support during exercises.

Bore Site and Zero Target Bunkers (BZO). Located at the south east end of R-500 is the BZO area. The BZO Target Area consists of 35 Target Bunkers arranged in five groups of seven. The seven bunkers in each group are in line and spaced 25 Meters apart. The five groups are ranged at 500, 800, 1000, 1200, and 1500 meters from the 50' x 110' concrete firing pad. Target Bunkers consists of wood reveted earthen berms 25 feet thick by 15 feet wide by 3 feet tall which protect the target holders. These target holders are 6"x6" steel tubes that are emplaced partially into the ground and held in place with concrete. These tubes used to hold the legs of the BZO target. An approximately 1500 meter long road allows access to all BZO target bunkers. The purpose of this range is for crews to site in weapon systems. It is mainly used by M1A1 battle tank and LAV-25 crews, however other weapon systems may be used. The Contractor is only responsible for the protective berms, firing pad, road, and target holders. The BZO targets are GFE and will be supplied by the using units

NAMES, PSEUDONYMS AND ACRONYMS FOR RANGE EQUIPMENT

NAMES	PSEUDONYMS	ACRONYM
Range Control Station	The Tower, The Computer	RCS
Infantry Target Mechanism	Infantry Lifter, Lifter	ITM
Stationary Infantry Target	Infantry Lifter, Lifter	SIT
Moving Infantry Target	Infantry Mover, Mover, Cart, Buggy	MIT
Infantry Moving Target Carrier	Infantry Mover, Mover, Cart, Buggy	IMTC
Interconnecting Box,Low Power	Low Power Junction Box, J-Box, JB	LPJB
Interconnecting Box,High Power	High Power Junction Box, J-Box, JB	HPJB
Small Arms Sound Simulator	Infantry Hostile Fire Simulator, Rifle Fire Simulator, Machinegun Simulator, RFS	SASS
Infantry Night Muzzle Flash Simulator	Muzzle Flash Simulator	MFS
Target Holding Mechanism,Tank Gunnery	Armor Lifter, Armor Target, Lifter	THMTG
Tank Target Mechanism	Armor Lifter, Armor Target, Lifter	TTM
Stationary Armor Target	Armor Lifter, Armor Target, Lifter	SAT
Moving Armor Target	Armor Mover, Mover, Cart, Buggy	MAT

Armor Moving Target Carrier	Armor Mover, Mover, Cart, Buggy	AMTC
Visual Flash Simulator	Strobe Light, Strobe	VFS
Battle Effects Simulator	Omega, Omega-36, Omega-60	BES
Hostile Fire Simulator	Joanell, Hoffman	HFS
Armor Target Kill Simulator	Joanell, Hoffman	ATKS
Interconnecting Box, Target	Target Interface Unit	TIU
Bore Site and Zero	Zero	BZO
Three Dimensional Target	Ivan, Plastic Silhouette, Silhouette	
Armor Target	Target, Armor Silhouette, Flank Target, Frontal Target, Threat Target	

F.1.2 Range Communication System. An intercom system between the range towers will be provided at the range as GFE. The remainder of the range communication system used on Range 500 will be provided and installed by the COMS Contractor at Contractor expense. This system at a minimum shall consist of one (1) 2-way radio in each Contractor vehicle, one (1) radio in the Range Control Tower, and one (1) radio in the Observation Tower. These radios will be used to keep in constant communication with the USMC Range Control Facility at BEARMAT (as required by base regulations) and for Contractor communications between vehicles, the Range Control Station (RCS), Observation Tower, and other facilities. These radios shall conform to the specifications provided by the Government. These radios shall be considered GFE and will be programmed and maintained by the Government and shall remain as Government property at the end of the contract. The Contractor is responsible for the maintenance of the intercom system.

F.2 Operation and Maintenance Requirements

F.2.1 Operation. COMS Contractor is responsible for total operation of this Range, which includes but is not limited to the following:

(1) Operates the Range during training and when requested by the COR

(2) Configure Rifle Fire Simulators, Targetry and scenarios according to using unit requirements

(3) Assists using units in writing scenarios (all scenarios created by the COMS Contractor are the property of the Government).

(4) Apprises using units of the capabilities of the Range

(5) Provides a training evaluation printout to using units

(6) Trains newly assigned COMS Contractor personnel in the operation and maintenance of the Range

(7) Operates the 15KW and 250KW generators

(8) Maintenance of the Photovoltaic (PV) Power System

(9) Assists using units in setting up and using the FLIR Camera System. Units will record their exercises on VHS Tapes supplied by the Contractor. These tapes will become GFE and will belong to the using units upon departing the range.

F.2.2 Maintenance. COMS Contractor maintenance responsibilities include organizational, intermediate, and depot level maintenance (preventative and corrective) for all target systems and equipment listed in this Appendix, which includes target pits, low/high power junction boxes, target carriers, target mechanisms, flash simulators, three dimensional targets, armor targets, hostile fire simulators, pits' drainage, all connecting cables up to the power source, cabling inside the control tower, control systems, communication systems, all connecting cables within the Multi-Purpose Range Complex, all down-range wiring, and the down-range wiring access pits. COMS Contractor is responsible for maintenance of target pits including BZO target bunkers. Maintenance of the target pits by the COMS Contractor includes removal of foreign material (e.g. sand, dirt) that might inhibit the operation of the target system or prevent drainage of the pit. In addition, the COMS Contractor is responsible for acquisition, at Contractor's expense, for all supplies to repair the training device and to replenish any repair parts used from inventory furnished by the Government.

The Contractor shall be responsible for operator maintenance (1st Echelon) of the 15KW and 250KW diesel generators and associated equipment during all scheduled training and when otherwise directed by the COR. Operator maintenance consists of checking the fluid levels, condition of filters, and paragraph F.2.2.4 below. All petroleum products (except fuel) required for the generators during these maintenance checks will be provided by the COMS Contractor and installed by the COMS Contractor.

F.2.2.1 Berm Maintenance. The COMS Contractor shall maintain the earthen berms, timbers, concrete, and other forms of protection surrounding target mechanisms. This includes all supporting efforts as required to accomplish this task, such as: removing dirt to replace a timber/support and replacing dirt. The intent of this effort is for the COMS Contractor to be fully responsible for the protection of the target mechanisms from direct fire. Damage to a target mechanism due to direct fire is presumed to be from inadequate target protection and the COMS Contractor is responsible for replacing these damaged mechanisms at his expense. The COMS Contractor must demonstrate to the COR that the damage was caused by something other than inadequate protection,

such as in the case of a hit by a ricocheted projectile. Such contested target damage must be brought immediately to the attention of the COR for determination. Loss of target use/capability due to lack of/degraded berm maintenance by the COMS Contractor will result in the target/targets being considered "down" for degraded operation calculations (chargeable downtime). In addition, the Contractor is responsible for re-burying any of the down range wiring which becomes exposed due to wind, water, or live fire erosion.

Range Firing Position Maintenance. The COMS Contractor shall maintain the earthen berms, timbers, concrete, and other forms of support for all range infantry and/or armor firing positions. This includes all supporting efforts as required to accomplish this task such as: removing dirt to replace a timber/support and replacing dirt. The capability of the firing position to support range operations will be determined by the COR. The COR may declare the range up to 10% degraded if the maintenance of firing positions is not adequate.

Tank Trail Maintenance. The COMS contractor shall be responsible for the maintenance of all tank trails and access roads on this range (approximately 25 Km) in accordance with the following:

(1) Normal cyclic maintenance of tank trails and access roads will be done four times each year at the direction of the COR. Additionally, the COR may require corrective maintenance to be done up to four additional times, where damage, deterioration, or other factors require repair or restoration. The contractor will be given 5 days notice for both normal cyclic and for corrective maintenance.

(2) At each cyclic maintenance the tank trails and access roads will be graded, crowned, compacted, and ditched. Grading is performed on the full length and width of the tank trails and performed to repair surface defects and irregularities (holes, ruts, corrugation, and washouts). Soils may be taken from parallel ditches and used to fill holes and restore uniformity of grade and crown. Graded roads shall have a three (3) inch slope from the crown at the center line on each side to ensure proper drainage. Ditches shall be pulled to a 3 to 1 slope. When the cyclic maintenance has been successfully completed, the tank trail or access road will be capable of accommodating comfortable transiting by two wheel drive vehicles and ditches will be free of debris and capable of unrestricted flow of water. The COR will determine what is comfortable transiting.

(3) Corrective maintenance will be called for when in the judgment of the COR, damage or deterioration is sufficient to require correction. The portions of tank trail needing corrective maintenance will be completed to the same standard required for normal cyclic maintenance. Note: Culverts are sometimes ineffective in this type of terrain. The COMS contractor is not responsible for the replacement of culverts; however, he may be tasked to repair a segment of road from which

a culvert has washed away as a normal part of any cyclic or corrective maintenance effort.

Fill/Dirt Materials Requirements. In conjunction with COMS Contractor maintenance of berms, firing positions, tank trails and tracking roads, the Contractor shall obtain natural fill/dirt materials from the immediate areas surrounding the berms, firing positions, tank trails and tracking roads or from pre-designated borrow areas. When these materials are not available, the COR will coordinate use of base resources to provide material to the COMS Contractor.

F.2.2.2 Target Fabrication and Maintenance. The Contractor shall be responsible for fabricating (or procuring through commercial sources) the target silhouettes used on the SAT and MAT. Generally these targets resemble the outline of threat armor vehicles but may be other patterns such as friendly armor vehicles, friendly-wheeled vehicles, threat wheeled vehicles, etc. The silhouette targets are usually constructed of plywood, lumber, glue, screws and nails; they may be constructed of other materials if approved by the COR. The silhouettes will require painting after fabrication. The targets shall be constructed to the specifications provided to the Contractor by the COR. The pattern, size, and color of the targets used in the range may vary from scenario to scenario and/or from target location to target location depending on the training requirements. In no case will a target exceed the maximum size or weight capacity of the target lifting mechanism upon which it is mounted. If no specifications in regards to these limits exist, the COR will make the final determination on the adequacy of the mechanism to lift the targets.

The Contractor shall be responsible for installing the targets in the mechanisms and ensuring that the laser hit detectors and/or ballistic hit sensors are attached to each target and are fully operational. The Contractor shall also be responsible for maintaining the targets once mounted on the target mechanisms. This shall include repainting and patching as required to maintain the integrity of the target such that the ballistic hit sensors can properly sense impacts anywhere on the target surface and/or laser rangefinders will “range” properly. When targets have been repaired to such a state that further repairs will not provide for the satisfactory transmission of vibrations from rounds impacting on the target to the ballistic hit sensors (in order to cause that impact to be detected) that target shall be replaced. The COR will have the final authority on whether a target is repairable or needs to be replaced. Unless specifically requested otherwise by the scenario, a target mechanism that has a target installed which is in such a state of repair that it cannot properly detect hits, shall be considered 100% down. During training events the Contractor may be required, at the discretion of the using unit, to repair targets that have been damaged or destroyed during the conduct of training. The Contractor shall not be responsible for repair and

replacement of targets used at the BZO Area

F.2.2.2.1 Laser Hit Detectors. Laser hit detectors, laser hit detector harnesses, laser target interface devices, MILES target interface devices, interconnecting cabling, laser retroreflectors, and batteries for the laser detector equipment will be provided to the Contractor as GFE. The Contractor shall install this equipment on the targets in accordance with the training scenario's requirements. The Contractor shall ensure that this equipment is fully functional and capable of detecting hits by the RETS equipment. The Contractor shall replace any of this equipment which fails with other GFE provided by the COR. The corrective maintenance of this equipment will be by others unless such damage was caused by negligence on the part of the COMS Contractor.

F.2.2.2.2 Thermalized Targets. The Contractor shall respond to the requirements of the training scenarios by providing thermalized targets when and where requested. The pattern of the thermalization to be (armor and/or infantry) installed on the targets will be provided to the Contractor by the COR. If the weapons systems being used are compatible and the atmospheric, wind or weather conditions permit the proper thermal signature from “no-power” thermal material, such material shall be adequate. If any of the aforementioned conditions preclude the use of “no-power” thermal material, “heated” thermal targets will be required. The Contractor, at Contractor expense, shall procure (or fabricate) the necessary heated panels or blankets to meet the training requirements. These panels or blankets shall work on 120VAC or batteries. The contractor shall also be responsible for the procurement, maintenance, and replacement of the batteries. Thermalization material using other than the 120VAC or batteries may be used if such material provides an adequate thermal signature and is approved by the COR. The Contractor shall be responsible for the repair, patching, and/or replacement of thermal material, panels, blankets, or interconnecting cabling which fail, including if such failure was caused by damage from live fire. Targets that are to be thermalized in accordance with the training scenario are considered 100% down when such thermalization fails. If such failures are caused by live fire, chargeable downtime will not commence until the Contractor is provided adequate time to make repairs to the target. The COR will make the final decision when chargeable downtime commences.

F.2.2.3 Diesel Fuel. The Government will supply all fuel for the diesel generators. The Contractor shall ensure that adequate supplies of diesel fuel are on hand at all times to meet all scheduled training requirements. The Contractor shall notify the COR when refilling of the fuel storage tanks is required. The Contractor shall plan on delivery of diesel fuel one week after the COR has been notified. The Contractor shall be responsible for all filtering and skimming required to keep

the diesel fuel in optimum usable condition.

F.2.2.4 Diesel Generators. The Contractor shall operate the diesel generators and all associated power distribution equipment during all scheduled training requirements and when otherwise directed by the COR. The Contractor shall fill out and maintain the generator's log books as required by base and local SOP. The Contractor shall keep the generator fuel containment sumps clear of all debris including water. The Contractor shall clean up all fuel spills which are the result of mechanical malfunctions of the generator or fuel system. Fuel spills caused by using units will be cleaned up by those units.

F.2.2.5 Photovoltaic (PV) Power System. The Range 500 Integrated PV Power System serves as an uninterruptable power supply for the range facilities. The Power System operates automatically and is intended to require minimal maintenance. The COMS Contractor shall maintain the Photovoltaic Power System in accordance with the following preventive maintenance schedule:

A. Daily (when range is scheduled):

1. Walk-around inspection, report damage or required corrective maintenance to the COR.

B. Weekly:

1. Change A/C filters
2. Back up performance data
3. Walk-around inspection if range has not been scheduled for seven days.

C. Monthly:

1. Check battery-watering system
2. Sample battery specific gravity
3. Check and clean as required PCU filters
4. Clean PCU heatsinks
5. Check PCU cooling fans
6. Fill water tank

D. Quarterly:

1. Wash modules
2. Change water filters

E. Semiannually:

1. Check sub-circuit voltage
2. Check AC/DC power cables
3. Check door enclosure seals

The COMS Contractor shall provide all consumables required for the preventive maintenance, to include fuses, filters, cleaning supplies and water. The COMS Contractor shall perform minor corrective maintenance actions such as changing defective batteries in the system's UPS, replaceable modules in the inverter, or defective solar panels in the system's solar panel array. When required these defective items will be procured by the Government and installed by the COMS Contractor. Major

corrective maintenance will be conducted by the Government and the COMS Contractor responsibility in this area is timely reporting via the COR. The COMS Contractor shall maintain records of all period checks. These records will be subject to review by the Government.

F.2.2.5 TOW Wire. One of the weapon systems to be utilized on the MPRC is anti-armor guided missiles. The TOW weapons system is one of the primary weapons in this group. The TOW missile is electronically guided by a very thin wire that spools out behind the missile. This wire is commonly referred to as TOW wire. The Marines will be responsible for cleaning up and removing all TOW wire from the range after each scheduled use. However, for reasons of safety, the Contractor shall be responsible for removing any TOW wire which is tangled in any of the RETS equipment. Any damage done to the RETS equipment by TOW wire will be considered the same as damage by live fire.

F.2.3 Pyrotechnics. During daily and weekly preventative maintenance checks the Contractor shall determine which pyrotechnic devices (Gunfire Simulators) or Battle Effects Simulators require reloading. The COMS Contractor shall be responsible for ordering and obtaining, from the MAGTF Training Command Magazine Area, the types and quantities of pyrotechnics required and transporting them to the device locations. The COMS Contractor is required to handle pyrotechnic charges, load and unload pyrotechnic devices, repackage and return pyrotechnics to the MAGTF Training Command Magazine Area as required, and is responsible for the maintenance of the components of the pyrotechnic charge firing mechanisms. All COMS Contractor activities involving pyrotechnics shall be in accordance with all Federal, State, local and MAGTF Training Command SOP regulations.

F.2.4 Rifle Fire Simulators. The Contractor shall ensure that adequate supplies of oxygen and propane gas are available for the rifle fire simulators to meet all scheduled training requirements. The Contractor shall be responsible for filling/refilling, from commercial sources, at Contractor expense, all oxygen and propane gas cylinders used on the range.

F.2.5 Repair Parts Salvage. During the period of this contract Stationary Armor Targets (SATs), Stationary Infantry Targets (SITs), and other ancillary equipment may be damaged beyond repair by direct hits by live fire rounds, tactical vehicles, or other means beyond the Contractor's control. Whenever a SAT, SIT, or other piece of ancillary equipment is damaged beyond repair, the Contractor shall report this to the COR, recommend replacement of the damaged unit, and salvage whatever parts possible once replacement has been authorized by the COR. These parts shall be used for repair of other RETS SATs, SITs, or

other ancillary devices as appropriate, and shall be added to the current inventory and shall remain the property of the Government. Equipment damaged beyond economical repair will be replaced by the Government, when the COR determines such damage was not the result of Contractor negligence, abuse, and/or Contractor failure to accomplish required preventive, planned or corrective maintenance, to include berm maintenance for target protection.

F.3 Major Hardware Items.

EQUIPMENT LISTING:	QUANTITY
RANGE CONTROL STATION (RCS)	1
The RETS RCS consists of the following:	
a. Control Console CPU, Keyboard, & Monitor	
b. Scoring Printer	
c. Panel Assembly, Tower Junction Box (TJB)	
d. Signal Distribution Assembly (SDA)	
e. Tower Communications System	
f. Range Interface Adapter (RIA)	
g. Target Radio Interface Adapter (TRIA)	
MOVING ARMOR TARGET (MAT)	4
STATIONARY ARMOR TARGET	31
STATIONARY INFANTRY TARGET	98
MOVING INFANTRY TARGET(MIT)	12
LOW POWER JUNCTION BOX	38
HIGH POWER JUNCTION BOX	10
SMALL ARMS SOUND SIMULATOR (SASS)	20
MUZZLE FLASH SIMULATOR (MFS)	30
THREE DIMENSIONAL TARGET	98
VISUAL FLASH SIMULATOR (VFS)	18
ARMOR TARGETS	31
Battle Effects Simulator (BES)	70
INTERCONNECTING BOX,TARGET INTERFACE	18
FLIR CAMERA SYSTEM	1
RANGE COMMUNICATIONS SYSTEM	1
BZO Target Bunkers	35

F.4 Degraded Operation Matrix.

Percent of Degradation

Number of Systems Failed												
1	2	3	4	5	10	20	30	40	50	60	70	80

SYSTEM / SUBSYSTEM													
1. Target Systems													
SIT (98 ea)	1	2	3	4	5	20	25	30	40	50	65	75	
MIT (12 ea)	5	10	15	20	25	30							
SASS (20 ea)	1	2	3	4	5	10	20						
MFS (30 ea)	0	1	1	2	2	5	10	15					
SAT (31 ea)	5	10	15	20	25	40	50	75					
MAT (4 ea)	20	30	40	50									
VFS (18 ea)	1	2	3	4	5	10							
BES (70 ea)	1	2	2	4	5	10	20	30	40	50	60	70	
FLIR (1 ea)	20												
BZO Bunkers	2	4	6	8	10	20	40	60					
2. RCS													
Computer	100												
Printer	30												
Operator	100												
SDA.	100												
TJB	100												
RIA	100												
TRIA	100												

1. The total down percentage of the Range will be determined by totaling the down percentages for all the individual components/systems. For example if the scoring printer and five of the SITs are down, the total down percentage would be 30% + 5% = 35%. The sum of the parts does not add up to 100% in all cases, since some of the systems are more critical than others. For example the computer is about 1% of the hardware but the entire system is down (100%) when it is not operational.

LEGEND:
SASS = Small Arms Sound Simulator
MAT = Moving Armor Target
VFS = Visual Flash Simulator
MFS = Muzzle Flash Simulator
BES = Battle Effect Simulator
MIT = Moving Infantry Target
SIT = Stationary Infantry Target
SAT = Stationary Armor Target
FLIR = Forward Looking Infrared Radar (Camera)
SDA = Signal Distribution Assembly
TJB = Tower Junction Box
RIA = Range Interface Adapter
TRIA = Target Radio Interface Adapter
BZO = Bore Site and Zero

F.5 Office, Storage and Maintenance Space. The Contractor will be provided adequate office, storage, and

maintenance space at the Main Camp Area. At the training device location the contractor will be provided the Range Control Station, one Observation Tower, one maintenance building, three MAT maintenance bunkers, and a head facility (for use by both Government and Contractor personnel).

F.6 Office Furniture and Equipment. The Government will provide the following office furniture for use in the Range Control Tower:

DESCRIPTION	Qty
Drafting Chairs	2
Office Chair (swivel)	1
Two-drawer filing cabinet	1
Wall clock	1

F.7 Consumables. COMS Contractor shall supply all consumables, including batteries (except as noted in par. 2.2.2.1), necessary for the operation and maintenance of the MPRC. Some examples of consumables needed for operation and maintenance of the MPRC are as follows:

Armor Targets (Thermal and Non-Thermal), 3-D Plastic Infantry Targets, Paint, Petroleum, Oils and Lubricants (POL), Data CDs, Computer Paper, Printer Cartridges, VHS Tapes, Fuses/Bulbs, Facilities Maintenance Supplies, Janitorial Supplies, Hydraulic Fluid, Cleaning Supplies, Filters/Belts, Supplies required to fabricate Targets, Oxygen Gas, Propane Gas, Nitrogen Gas.

F.8 Tools and Test Equipment. Only one Fault Isolation Adapter (sometimes called a Range Control Adapter) shall be furnished by the Government. The COMS Contractor shall be responsible for its maintenance. No additional tools or test equipment will be provided by the Government.

F.9 Spare and Repairable Parts. See SOW paragraph 3.6 of the Basic SOW.

F.10 Inspections. The Government will perform periodic contract compliance inspections, operational readiness, and maintenance checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections in providing the availability of the system, and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph F.12.1

F.11 Technical Data Support Package (TDSP)
The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training device

F.12 Operating Hours and Planned Scheduling Requirements. The MPRC will be scheduled for a maximum of 2200 hours per year at varying times over a seven day week. Weekend and holiday training hours will be the same as weekday training. The only holidays observed at the MPRC are Christmas Day (Dec. 25) and New Years Day (Jan 1).

F.12.1 RETS Range Flexibility. Up to one-third (1/3) of the fiscal year range operating hours may be shifted among any RETS Ranges located at the MAGTF Training Command. The COR will provide 24 hours notice prior to adjusting operating hours from one range to another range. In addition, units using the RETS Ranges may request, through the COR, an extension of training time for a scheduled, in-progress training evolution. The maximum extension granted will be two (2) hours and only five (5) extensions will be granted monthly, all ranges inclusive. The COMS Contractor will be provided a minimum of two hours notice by the COR for any training time extensions. Any hourly extensions granted will be credited against the yearly operational hours for the range.

F.12.2 Scheduled MPRC Usage.

a. Range will not be scheduled more than 16 hours for any single scheduled use.

b. Contractor will be provided at least eight (8) hours of maintenance time between each scheduled use of the MPRC.

c. Normal scheduling day is a period of 24 hours, not necessarily 0000 hours to 2400 hours. For example, a scheduled usage could start at any time during the 24 hours of the day.

d. Contractor will be provided 24 hours notice for all schedule changes for the MPRC.

e. In the event a training unit fails to arrive within one hour of their scheduled start time or fails to notify the COMS Contractor of anticipated late arrival within one hour of the scheduled start time or leaves prior to scheduled end of training, the COMS Contractor shall contact the COR for further instructions. After hours or if for some other reason the COR is not available, the Contractor shall contact Range Control (Bearmat) for further instructions.

f. Scheduled usage for demonstrations will be

credited as actual usage.

F.13 Janitorial Requirements COMS Contractor shall maintain all assigned areas as directed by the COR. At R500 these areas shall include the MAT Maint Bunkers (Bldgs 9007, 9008, & 9009), the RCS (Bldg 9001), the Admin/Maint Shed (Bldg 9003), the Head (Bldg 9000), the PV Facility (Bldg 9012), and the Observation Tower (Bldg 9018). ADD All cleaning supplies shall be provided by the COMS Contractor. Examples of janitorial services are:

1) Daily:
   (a) Empty trashcans and ashtrays
   (b) Sweep floor
   (c) Refill Toilet Paper Holders
   (d) Refill Paper Towel Holders
   (e) Refill Soap Dispensers

(2) Weekly:
   (a) Dust furniture and equipment
   (b) Clean windows
   (c) Damp mop
   (d) Clean sinks, toilets, & urinals

(3) Monthly:
   (a) Clean air conditioner filter.

F.14 Location. Range 500 is located in the Cleghorn Pass Training Area at MAGTF Training Command 29 Palms, Ca. It is approximately 12 miles (by road) from the Main Camp Area at MAGTF Training Command.

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G.14 Location of Training Device/System.....G-9

G.1 Description

LOCATION: MAGTF TRAINING COMMAND, TWENTYNINE PALMS, CA
RANGE NO: 1A
TYPE RANGE: UNKNOWN DISTANCE RIFLE RANGE (UDRR)

COMS Contractor Mobilization Date - 1 December 2007
COMS Contractor Support Date - 1 January 2008

EQUIPMENT LISTING:	QUANTITY
RANGE CONTROL STATION (RCS)	1
PORTABLE RANGE CONTROLLER (PRC)	2
INFANTRY TARGET MECHANISM (ITM)	140
3-D PLASTIC TARGETS	140
RANGE COMMUNICATIONS SYSTEM	1

Range 1A is a permanent installation used to support the Marine Corp's Combat Rifle Program (MCCRP). Specifically, Range 1A supports the Individual Training Standard 27 (ITS27) of the (MCCRP). The range consists of 20 lanes with 7 targets per lane for a total of 140 targets. The range uses Infantry Target Mechanisms (ITMs) that have been hardwired for power and are remote controlled by radio frequencies.

The range has facilities for coordinating the remote control of 140 stationary targets. An operator, located in a Range Control Tower utilizes the Range Control Station (RCS) to run the entire range operation. Located in earthen and wood emplacements at varying distances are the 140 remote controlled targets. The targets are located at distances between 150 and 500 meters from the firing line.

G.1.1 Equipment. A complete listing of all major hardware installed at R1A can be found in Paragraph G.3. These individual units make up the Unknown Distance Rifle Range (UDRR). The UDRR can be maintained in the field by personnel with minimal training. The UDRR training equipment is constructed on a modular basis so that the majority of field maintenance tasks involve nothing more than simple component replacement, allowing repair back at the maintenance shop. The following paragraphs describe the principle components of the Unknown Distance Rifle Range:

Range Control Station (RCS). The RCS consists of the hardware required to provide manual and automatic remote control of the target equipment and which provides hard copy printout of trainee performance. The RCS communicates with the ITMs via a two-way radio link. The RCS is normally operated by a single operator in the presence of the Range Safety Officer (RSO). The RCS is capable of:

a. Controlling infantry target mechanisms by commanding them to expose/conceal, set target groups, set the number of hits required to "kill" , and setting other hit attributes (bob, hit-fall, etc). The RCS sends these various commands to the ITMs and receives status and hit counts for display. Information from the targets such as status and hit counts is decoded, processed, and displayed on the RCS Monitor. The RCS allows the operator to enter, edit, store to memory, recall from memory, delete from memory and execute (run) programs.

b. Displaying malfunctions of all target mechanisms

c. Accumulating and displaying scores for each target or selected groups of targets

d. Recording (on the scoring printer) the score for each target or selected groups of targets by operator or preprogrammed command

The RCS has been designed so that the computer is user friendly, enabling a trained operator to quickly write and edit a standard 10 to 15-minute range scenario.

Portable Range Controller (PRC). The PRC is a handheld, programmable, battery operated, micro-processor based device which allows the range operator to remotely command the ITMs. The PRC has most of the same capabilities of the RCS. It is normally used as a back-up to the RCS or for down range trouble shooting. The PRC is powered by its own rechargeable battery pack, which includes its own charger.

Infantry Target Mechanisms (ITM). The ITM holds a three dimensional, self-healing, plastic target that is configured to look like a soldier. The ITM is microprocessor controlled and receives its commands and returns status and hit count information via radio link to the RCS or PRC. The mechanism is capable of lifting its target(s) in winds up to 35 mph preventing all but the most minor movement.

G.1.2 Range Communication System. A base telephone and a built-in PA system are provided at the range as GFE. The remainder of the range communication system used on Range 1A will be provided and installed by the COMS Contractor at Contractor expense. This system at a minimum shall consist of one (1) 2-way radio in each Contractor vehicle and one (1) radio in the Range Control Tower. These radios will be used to keep in constant communication with the USMC Range Control Facility at BEARMAT (as required by base regulations) and for Contractor communications between vehicles,

the Range Control Station (RCS), and other facilities. These radios shall conform to the specifications provided by the Government. These radios shall be considered GFE and will be programmed and maintained by the Government and shall remain as Government property at the end of the contract. The Contractor is responsible for the maintenance of the built in Range PA system

G.2 Operation and Maintenance Requirements

G.2.1 Operation. The Contractor shall provide range operators during normal operating hours, make-up, and additional training periods to facilitate the conduct of training. The Contractor shall insure that the UDRR equipment is operationally ready at the commencement of each scheduled training session. The Contractor shall respond to specific direction from the COR, for desired initial conditions of controls and targets. The Contractor shall have the ability to create general, minor training scenarios for the UDRR, and when the system is not being used for scheduled training requirements, shall assist UDRR users in the creation of new scenarios that will be stored for future use on the range. The Contractor shall work closely with and assist the UDRR users in employing the training system to its maximum capabilities. (Note: all scenarios created by the Contractor shall be considered Government property.)

G.2.2 Maintenance. The Contractor is responsible for all levels of maintenance, organizational, intermediate and depot (preventative and corrective) for all target systems and equipment listed in this appendix, which includes junction boxes, range controller computer system, Portable Range Controller (PRC), target mechanisms, target controllers, all connecting cables and all down range wiring within R1A and removal of all non-ordnance material (including water) from the target pits.. In addition, the Contractor is responsible for all supplies necessary to repair the training device and to replenish the repair parts used from the inventory furnished by the Government.

G.2.2.1 Berm Maintenance. The COMS Contractor shall maintain the earthen berms, timbers, concrete, and other forms of protection surrounding target mechanisms. This includes all supporting efforts as required to accomplish this task, such as: removing dirt to replace a timber/support and replacing dirt. The Contractor shall rebury any downrange cables that become exposed due to wind or water erosion. The intent of this effort is for the COMS Contractor to be fully responsible for the protection of the target mechanisms from direct fire. Damage to a target mechanism due to direct fire is presumed to be from inadequate target protection and the COMS Contractor is responsible for replacing these damaged mechanisms at his expense. The COMS Contractor must demonstrate to the COR that the damage was caused

by something other than inadequate protection, such as in the case of a hit by a ricocheted projectile. Such contested target damage must be brought immediately to the attention of the COR for determination. Loss of target use/capability due to lack of/degraded berm maintenance by the COMS Contractor will result in the target/targets being considered "down" for degraded operation calculations (chargeable downtime). In addition, the Contractor is responsible for re-burying any of the down range wiring which becomes exposed due to wind, water, or live fire erosion.

Range Firing Position Maintenance. The COMS Contractor shall maintain the earthen berms, timbers, concrete, and other forms of support for all range infantry firing positions including the firing berm, the firing positions, the simulated doorways, windows, rubble piles, and rooftops on R1A. This includes all supporting efforts as required to accomplish this task such as: removing and replacing timbers. The capability of the firing position to support range operations will be determined by the COR. The COR may declare the range up to 10% degraded if the maintenance of firing positions is not adequate.

Fill/Dirt Materials Requirements. In conjunction with COMS Contractor maintenance of berms and firing positions the Contractor shall obtain natural fill/dirt materials from the immediate areas surrounding the berms or firing positions. When these materials are not available, the COR will coordinate use of base resources to provide material to the COMS Contractor.

G.2.2.2 Target Maintenance. The Contractor shall be responsible for installing the 3-D infantry targets on the mechanisms and ensuring that the laser hit detectors and/or ballistic hit sensors are attached to each target and are fully operational. The COMS Contractor shall replace the 3-D infantry targets when they are no longer serviceable.

G.2.2.3 Laser Hit Detectors. Laser hit detectors, laser hit detector harnesses, laser target interfaces, MILES target interface devices, interconnecting cabling and batteries for the laser detector equipment will be provided to the Contractor as GFE. The Contractor shall install this equipment on the targets in accordance with the training scenario requirements. The Contractor shall ensure that this equipment is fully functional and capable of detecting hits by the targetry. The Contractor shall replace any of this equipment which fails with other GFE provided by the COR. The corrective maintenance of this equipment will be by the Government unless such damage was caused by negligence on the part of the COMS Contractor.

G.2.2.4 Thermalized Targets. The Contractor shall respond to the requirements of the training scenarios by providing thermalized targets when and where requested. The pattern of the thermalization to be installed on the targets will be provided to the Contractor by the COR. If the weapons systems being used are compatible and the atmospheric, wind or weather conditions permit the proper thermal signature from no-power thermal material, such material shall be adequate. If any of the aforementioned conditions preclude the use of no-power thermal material, heated thermal targets will be required. The Contractor, at Contractor's expense, shall procure (or fabricate) the necessary heated panels or blankets to meet the training requirements. These panels or blankets shall work on 220VAC or batteries. The contractor shall also be responsible for the procurement, maintenance, and replacement of the batteries. Thermalization material using other than the 220VAC or batteries may be used if such material provides an adequate thermal signature and is approved by the COR. The Contractor shall be responsible for the repair, patching, and/or replacement of thermal material, panels, blankets, or interconnecting cabling that fails, including if such failure was caused by damage from live fire. Targets that are to be thermalized in accordance with the training scenario are considered 100% down when such thermalization fails. If such failures are caused by live fire, chargeable downtime will not commence until the Contractor is provided adequate time to make repairs to the target. The COR will make the final decision when chargeable downtime commences.

G.2.3 Repair Parts Salvage. During the period of this contract Infantry Target Mechanisms (ITM's), Junction Boxes (JB's), Target Controllers (TC's), and other ancillary equipment may be damaged beyond repair by direct hits by live fire rounds or other means beyond the Contractor's control. Whenever an ITM, JB, TC, or other piece of ancillary equipment is damaged beyond repair, the Contractor shall report this to the COR, recommend replacement of the damaged unit, and salvage whatever parts possible once replacement has been authorized by the COR. These parts shall be used for repair of other UDRR ITM's, JB's, TC's, or other ancillary devices as appropriate, and shall be added to the current inventory and shall remain the property of the Government. Equipment damaged beyond economical repair will be replaced by the Government, when the COR determines such damage is not the result of Contractor negligence, abuse, and/or Contractor failure to accomplish required preventive, planned or corrective maintenance.

G.3 Major Hardware Items.

EQUIPMENT LISTING:	QUANTITY
RANGE CONTROL STATION	1

PORTABLE RANGE CONTROLLER (PRC)	2
INFANTRY TARGET MECHANISM (ITM)	140

G.4 Degraded Operation Matrix.

PERCENT OF DEGRADATION

	Number of Systems Failed											
SYSTEM / SUBSYSTEM	1	2	3	4	5	10	20	30	40	50	75	100
1. ITM (140ea)	1	2	3	4	5	10	20	30	40	50	75	90
2. PRC (2 EA)	25	50										
3. Range Comm System	40											
4. OPERATOR	100											
5. RCS (1 EA)	75											

Notes:
1. The total down percentage of the range will be determined by totaling the down percentages for all of the individual components/systems. For example: if one PRC and five of the ITMs are down, the total down percentage would be 5%+25%=30%

2. Acronyms:
   ITM = Infantry Target Mechanism
   PRC = Portable Range Controller
   RCS = Range Control Statement

3. The sum of the parts does not add up to 100% in all cases, since some systems are more critical than others. For example, the two PRCs are only about 1% of the UDRR hardware, but if they are down, the system is 50% down.

G.5 Office, Storage and Maintenance Space. In addition to the office, storage, and maintenance spaces at the Main Camp Area, at Range 1A the Contractor will be provided one Range Control Tower with attached Storage Shed (Bldg 2181).

G.6 Office Furniture and Equipment. No additional office furniture and/or equipment will be provided by the Government.

G.7 Consumables. All consumables, including batteries, will be provided by the Contractor. Some examples of consumables to be provided by the Contractor are as follows:

Paint, Petroleum/Oils and Lubricants (POL), Data CDs, Printer Paper, Printer Cartridges, Fuses, Bulbs, Janitorial Supplies, Filters, Belts, 3-D Targets, etc."

G.8 Tools and Test Equipment. No additional tools or test equipment will be provided to the COMS Contractor.

G.9 Spares and Repair Parts. See paragraph 3.6 of the basic SOW.

G.10 Inspections. The Government will perform periodic contract compliance inspections, operational readiness, and maintenance checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections in providing the availability of the system, and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph G.12

G.11 Technical Data Support Package (TDSP). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training device.

G.12 Hours of Operation. Range 1A will be scheduled for a maximum of 1000 hours per year. Weekend and holiday training hours will be the same as weekday training. The only holidays observed at the UDRR are Christmas Day (Dec 25) and New Years Day (Jan 1).

G.12.1 Scheduled Range Usage.

a. Training will be scheduled for a maximum of 16 hours per day.

b. The Contractor will be provided a minimum of 24 hours notice for all changes to the training schedule.

C. A normal scheduling day is a period of 24 hours, not necessarily 0000 to 2400; a scheduled usage could start at any time during the 24 hours of the day.

d. In the event a training unit fails to arrive within one hour of their scheduled start time or fails to notify the COMS Contractor of anticipated late arrival within one hour of the scheduled start time, the COMS Contractor shall contact the COR for further instructions.

e. Scheduled usage for demonstrations will be credited as actual usage.

f. COMS Contractor will be provided at least eight (8) hours of maintenance time between each scheduled use of the Range.

G.13 Janitorial Requirements. COMS CONTRACTOR shall maintain all assigned areas as directed by the COR. At R1A the assigned area

includes Bldg. 2181 (the Range Control Tower & attached storage shed). All cleaning supplies shall be provided by the COMS Contractor. Examples of janitorial services are:

(1) Daily:
  (a) Empty trashcans and ashtrays
  (b) Sweep floor

(2) Weekly:
  (a) Dust furniture and equipment
  (b) Clean windows
  (c) Damp mop

(3) Monthly:
  (a) Clean air conditioner filter

G.14 Location of Training Device/System. Range 1B is located at the Marksmanship Training Unit (MTU) area at MAGTF Training Command, Twentynine Palms, CA. Range 1A is located approximately 3 miles from the Main Camp Area of MAGTF Training Command.

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H.1 Description

LOCATION: MAGTF TRAINING COMMAND, TWENTYNINE PALMS, CA
RANGE NO: 2A
TYPE RANGE: COMBAT PISTOL COURSE

COMS Contractor Mobilization Date - 1 December 2007
COMS Contractor Support Date - 1 January 2008

EQUIPMENT LISTING	QUANTITY
RANGE CONTROL STATION (RCS)	1
PORTABLE RANGE CONTROLLER (PRC)	1
INFANTRY TARGET MECHANISM (ITM)	56
3-D PLASTIC TARGETS	56
RANGE COMMUNICATIONS SYSTEM	1
RADIO ADAPTER INTERFACE UNIT (RZ-10)	**14**

Range 2A is a permanent installation used to support the Marine Corp's Pistol Marksmanship Program. The range consists of 8 lanes with 7 targets per lane for a total of 56 target positions. The range uses Infantry Target Mechanisms (ITMs) that have been hardwired for power and are remote controlled using radio telemetry.

The range has facilities for coordinating the remote control of 56 stationary infantry targets that are permanently emplaced on suitable terrain. An operator, located in a range control tower, utilizes a Range Controller to run the entire range operation. Located in concrete emplacements at varying distances are the 56 remote controlled targets. The targets are located at distances between 5 and 30 meters from the firing line.

H.1.1 Equipment. A complete listing of all major hardware installed at R2A can be found in Paragraph H.3. These individual units make up the Combat Pistol Course (CPC). The CPC can be maintained in the field by personnel with minimal training. The CPC training equipment is constructed on a modular basis so that the majority of field maintenance tasks involve nothing more than simple component replacement, allowing repair back at the maintenance shop. The following paragraphs describe the principle components of the Combat Pistol Course:

Range Control Station (RCS). The RCS consists of the hardware required to provide manual and automatic remote control of the target equipment and which provides hard copy printout of trainee performance. The RCS communicates with the ITMs via a two-way radio link. The RCS is normally operated by a single operator in the presence of the Range Safety Officer (RSO). The RCS is capable of:

a. Controlling infantry target mechanisms by commanding them to expose/conceal, set target groups, set the number of hits required to "kill" , and setting other hit attributes (bob, hit-fall, etc). The RCS sends these various commands to the ITMs and receives status and hit counts for display. Information from the targets such as status and hit counts is decoded, processed, and displayed on the RCS Monitor. The RCS allows the operator to enter, edit, store to memory, recall from memory, delete from memory and execute (run) programs.

b. Displaying malfunctions of all target mechanisms

c. Accumulating and displaying scores for each target or selected groups of targets

d. Recording (on the scoring printer) the score for each target or selected groups of targets by operator or preprogrammed command

Portable Range Controller (PRC). The PRC is a handheld, programmable, battery operated, micro-processor based device which allows the range operator to remotely command the ITMs. The PRC has most of the same capabilities of the RCS. It is normally used as a back-up to the RCS or for down range trouble shooting. The PRC is powered by its own rechargeable battery pack, which includes its own charger.

Infantry Target Mechanisms (ITM). The ITM holds a three dimensional, self-healing, plastic target that is configured to look like a soldier. The ITM is microprocessor controlled and receives its commands and returns status and hit count information via radio link to the RCS or PRC. The mechanism is capable of lifting its target(s) in winds up to 35 mph preventing all but the most minor movement.

Infantry Target Mechanisms (ITM). The ITM holds a three dimensional, self-healing, plastic target that is configured to look like a soldier. The ITM is microprocessor controlled and receives its commands and returns status and hit count information via radio link to the RCS or PRC. The mechanism is capable of lifting its target(s) in winds up to 35 mph preventing all but the most minor movement.

H.1.2 Range Communication System. A built-in PA system will be provided at the range as GFE. The remainder of the range communication system used on Range 2A will be provided and installed by the COMS Contractor at Contractor expense. This system at a minimum shall consist of one (1) 2-way radio in each Contractor vehicle and one (1) radio in the Range Control Tower. These radios will be used to keep in constant communication with

the USMC Range Control Facility at BEARMAT (as required by base regulations) and for Contractor communications between vehicles, the Range Control Station (RCS), and other facilities. These radios shall conform to the specifications provided by the Government. These radios shall be considered GFE and will be programmed and maintained by the Government and shall remain as Government property at the end of the contract. The Contractor is responsible for the maintenance of the built in Range PA system.

H.2 Operation and Maintenance Requirements

H.2.1 Operation. The Contractor shall provide range operators during normal operating hours, make-up, and additional training periods to facilitate the conduct of training. The Contractor shall insure that the CPC equipment is operationally ready at the commencement of each scheduled training session. The Contractor shall respond to specific direction from the COR, for desired initial conditions of controls and targets. The Contractor shall have the ability to create training scenarios for the CPC, and when the system is not being used for scheduled training requirements, shall assist CPC users in the creation of new scenarios that will be stored for future use on the range. The Contractor shall work closely with and assist the CPC users in employing the training system to its maximum capabilities. (Note: all scenarios created by the Contractor shall be considered Government property.)

H.2.2 Maintenance. The Contractor is responsible for all levels of maintenance, organizational, intermediate and depot (preventative and corrective)for all target systems and equipment listed in this appendix, which includes junction boxes, range controllers, target mechanisms, target controllers, all connecting cables and all down range wiring within Range 2A and removal of all non-ordnance foreign material (including water) from the target pits. In addition, the Contractor is responsible for all supplies to repair the training device and to replenish the repair parts used from the inventory furnished by the Government.

H.2.2.1 Berm Maintenance. The COMS Contractor shall maintain the earthen berms, timbers, concrete, and other forms of protection surrounding target mechanisms. This includes all supporting efforts as required to accomplish this task, such as: removing dirt to replace a timber/support and replacing dirt. The intent of this effort is for the COMS Contractor to be fully responsible for the protection of the target mechanisms from direct fire. Damage to a target mechanism due to direct fire is presumed to be from inadequate target protection and the COMS Contractor is responsible for replacing these damaged mechanisms at his expense. The COMS Contractor must demonstrate to the COR that the damage was caused by something other than inadequate protection,

such as in the case of a hit by a ricocheted projectile. Such contested target damage must be brought immediately to the attention of the COR for determination. Loss of target use/capability due to lack of/degraded berm maintenance by the COMS Contractor will result in the target/targets being considered "down" for degraded operation calculations (chargeable downtime). In addition, the Contractor is responsible for re-burying any of the down range wiring which becomes exposed due to wind, water, or live fire erosion.

Range Firing Position Maintenance. The COMS Contractor shall maintain the earthen berms, timbers, concrete, and other forms of support for all range infantry and/or armor firing positions. This includes all supporting efforts as required to accomplish this task such as: removing dirt to replace a timber/support and replacing dirt. The capability of the firing position to support range operations will be determined by the COR. The COR may declare the range up to 10% degraded if the maintenance of firing positions is not adequate.

Fill/Dirt Materials Requirements. In conjunction with COMS Contractor maintenance of berms, firing positions, the Contractor shall obtain natural fill/dirt materials from the immediate areas surrounding the berms, and firing positions. When these materials are not available, the COR will coordinate use of base resources to provide material to the COMS Contractor.

H.2.2.2 Target Maintenance. The Contractor shall be responsible for installing the 3-D infantry targets on the mechanisms and ensuring that the ballistic hit sensors are attached to each target and are fully operational. The COMS Contractor shall replace the 3-D infantry targets when they are no longer serviceable.

H.2.3 Repair Parts Salvage. During the period of this contract Infantry Target Mechanisms (ITM's), Target Control Units (TCU's), and other ancillary equipment may be damaged beyond repair by direct hits by live fire rounds or other means beyond the Contractor's control. Whenever an ITM, TCU, or other piece of ancillary equipment is damaged beyond repair, the Contractor shall report this to the COR, recommend replacement of the damaged unit, and salvage whatever parts possible once replacement has been authorized by the COR. These parts shall be used for repair of other CPC ITM's, TCU's, or other ancillary devices as appropriate, and shall be added to the current inventory and shall remain the property of the Government. Equipment damaged beyond economical repair will be replaced by the Government, when the COR determines such damage is not the result of Contractor negligence, abuse, and/or Contractor failure to accomplish required preventive, planned or corrective maintenance.

H.3 Major Hardware Items.

EQUIPMENT LISTING:	QUANTITY
Range Control Station (RCS)	1
The RCS consists of the following:	
a. Control Console CPU, Keyboard, & Monitor	
b. Scoring Printer	
c. Range Interface Adapter (RIA)	
d. Target Radio Interface Adapter (TRIA)	
e. Range Communications System	
INFANTRY TARGET MECHANISM (ITM)	56
Portable Range Controller	1
3-DIMENSIONAL INFANTRY TARGETS	56
RADIO ADAPTER INTERFACE UNIT (RZ-10)	**14**

H.4 Degraded Operation Matrix.

PERCENT OF DEGRADATION

	Number of Systems Failed													
SYSTEM	1	2	3	4	5	6	7	8	9	10	20	30	40	50
1.TARGETRY														
ITM (56)	2	4	6	8	10	12	14	16	18	20	40	60	80	90
PRC (1)	25													
RZ-10	**5**	**8**	**12**	**15**	**18**	**21**	**24**	**30**	**40**	**50**				
2. RCS														
COMPUTER	75													
PRINTER	30													
TRIA	100													
RIA	100													
OPERATOR	100													
Range Comm.	50													

Notes:

1. The total down percentage of the range will be determined by totaling the down percentages for all of the individual components/systems. For example: if scoring printer and five of the ITMs are down, the total down percentage would be 30%+10% =20%.

2. Acronyms:
   ITM = Infantry Target Mechanism
   RCS = Range Control System
   PRC = Portable Range Controller
   RIA = Range Interface Adapter
   TRIA = Target Radio Interface Adapter

3. The sum of the parts does not add up to 100% in all cases, since some systems are more critical than others. For example, the Computer is only about 1% of the CPC hardware, but if it is down the system is 75% non-operational.

H.5 Office, Storage and Maintenance Space. In addition to the office, storage, and maintenance spaces at the Main Camp Area, at Range 2A the Contractor will be provided one Range Control Tower with attached Storage Shed (Bldg 2170).

H.6 Office Furniture and Equipment. No additional office furniture will be provided by the Government.

H.7 Consumables. All consumables, including batteries, will be provided by the Contractor. Some examples of consumables to be provided by the Contractor are as follows:

Paint, Petroleum/Oils and Lubricants (POL), Data CDs, Printer Paper, Printer Cartridges, Fuses, Bulbs, Janitorial Supplies, Filters, Belts, 3-D Targets, etc.

H.8 Tools and Test Equipment. No additional tools or test equipment will be provided.

H.9 Spares and Repair Parts. See paragraph 3.6 of the Basic SOW.

H.10 Inspections. The Government will perform periodic contract compliance inspections, operational readiness, and maintenance checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections in providing the availability of the system, and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph H.12

H.11 Technical Data Support Package (TDSP). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training device.

H.12 Hours of Operation. Range 2A will be scheduled for a maximum of 250 hours per year; this includes up to ten (10) weekends per year at no additional cost to the Government. No Contractor operation is required. COMS Contractor shall be available “on-call” to perform corrective maintenance during the normal scheduled working hours. Equipment failures occurring outside normal scheduled working hours shall be repaired the following workday.

H.12.1 Scheduled Range Usage.

a. Training will be scheduled for a maximum of 8 hours per day

b. The Contractor will be provided a minimum of 24 hours notice for all changes to the training schedule.

C. A normal scheduling day is a period of 24 hours, not necessarily 0000 to 2400; a scheduled usage could start at any time during the 24 hours of the day.

d. In the event a training unit fails to arrive within one hour of their scheduled start time or fails to notify the COMS Contractor of anticipated late arrival within one hour of the scheduled start time or leaves prior to scheduled end of training, the COMS Contractor shall contact the COR for further instructions.

e. Scheduled usage for demonstrations will be credited as actual usage.

f. COMS Contractor will be provided at least eight (8) hours of maintenance time between each scheduled use of the Range.

H.13 Janitorial Requirements. There are no COMS CONTRACTOR janitorial requirements associated with this effort.

H.14 Location of Training Device/System. Range 2A is located at the Marksmanship Training Unit (MTU) area at MAGTF Training Command, Twentynine Palms, CA. Range 2A is located approximately 3 miles from the Main Camp Area of MAGTF Training Command.

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J.1 Description

RANGE 111 (MAC FACILITY)
LOCATION: MAGTF TRAINING COMMAND, TWENTYNINE PALMS, CA

COMS Contractor Mobilization Date - 1 December 2007
COMS Contractor Support Date - 1 January 2008

Range 111 is a permanent installation designed and organized to support advanced training in war fighting skills required for operations in an urban environment. The MAC (MOUT Assault Course) is a live fire range used to teach basic urban war fighting techniques at the individual and small unit (squad) levels.

J.1.1 MOUT **Assault Course (MAC).** The MAC consists of six (6) independent live fire stations. Each station is separated from the others by a system of berms and earthen walls. All of the stations can be equipped with automated targets. All stations have an observation-control station. All six stations may be in a HOT status simultaneously provided all safety requirements are met.
The stations are as follows:

a. Station 1 (Dodge City). Single-story building. The building contains up to ten automated targets in five rooms. Initial entry may be made through either one of several windows or doors.

b.Station 2 (Destiny Doorway). A single/double-story wooden building with a building façade in front. Contains up to ten automated targets in two rooms. Initial entry is made through one of four doorways with subsequent entry to the rooms through either a doorway or window.

c. Station 3 (Grenadier Gunnery). A two-story façade wooden structure having five windows and one doorway. Automated targets may be installed in any or all of the openings.

d. Station 4 (Clearing Techniques Building). Single-story wooden building. Contains up to six automated targets in three rooms. Initial entry may be made through either of two windows or a door.

e. Station 5 (Vault and Fight). A one-story wooden building. Contains up to six automated targets in two rooms. Initial entry is through a pre-constructed mouse hole.

f. Station 6 (Shooting House). A single story structure made of Shock Absorbing Concrete (SACON) and wood. Contains up to fifteen targets in six rooms. Small arms and/or fragmentation grenades may be used to clear any of the rooms.

An additional Training Enhancement has been added to meet requirements for Marines to shift fire from close-in urban fighting to engage long range threats in the same environment. Support for this scenario at the R111 MOUT facility utilizes additional

strategically placed portable targetry and wooden facades. As Marines get to the end of the lanes 1 or 2 of the existing MOUT facility, they will have to shift and engage targets that have been placed out at various locations 200 to 300 meters away.

J.2 Operation and Maintenance Requirements

J.2.1 Operation. The facility will utilize portable, electromechanical target devices such as the Portable Infantry Target System (PITS) during training. The COMS Contractor shall not be responsible for operation of the range and training devices during normal training periods, however the Contractor shall ensure that the equipment is operationally ready at the commencement of each scheduled training session and shall remain at the range the entire time it is being used in order to provide training, assist the MAC users, and perform repairs as needed. The Contractor shall be responsible for the installation and removal of targets on the range to include the installation of target silhouettes and attachment of hit sensors. The Contractor shall respond to specific direction from the Government representative for desired initial condition of the devices. The Contractor shall work closely with the MAC users in employing the training devices to their maximum capabilities. The Contractor shall be fully capable of operating each system in order to troubleshoot the system and fault-isolate malfunctions. The Contractor shall be available to provide operational demonstrations of the range and training systems during periods other then normal operational use by the Marine Corps. Operational demonstrations will be considered part of the Planned Scheduling Requirements as delineated in paragraph J.12.1. Unless training is scheduled for consecutive days, the Contractor shall remove the target devices after completion of scheduled training and place back in storage. If training ends after normal working hours (1600) the Contractor shall remove target devices at the beginning of the next workday.

J.2.2 Maintenance. COMS Contractor maintenance responsibilities include organizational, intermediate, and depot level maintenance (preventative and corrective) for all equipment listed in this appendix, which includes but is not limited to target mechanisms, battery chargers, batteries, battery eliminators, three dimensional targets, small arms sound simulators (SES,BES), communication systems, and all down range wiring. In addition, the COMS Contractor is responsible for acquisition, at Contractor's expense, for all supplies to repair the training device and to replenish any repair parts used from inventory furnished by the Government.

J.2.2.1 Target Maintenance. The Contractor shall be responsible for installing the 3-D infantry targets and/or life size mannequins on the mechanisms and ensuring that the laser hit detectors and/or ballistic hit sensors are attached to each target and are fully operational. The COMS Contractor shall replace the 3-D infantry targets and/or life size

mannequins when they are no longer serviceable.

J.2.2.1.1 Laser Hit Detectors. As required for training, laser hit detectors, laser hit detector harnesses, laser target interface devices, MILES target interface devices, interconnecting cabling, laser retro reflectors, and batteries for the laser detector equipment will be provided to the Contractor as GFE. If required, the COMS Contractor shall install this equipment on the targets in accordance with the training scenario's requirements. The COMS Contractor shall ensure that this equipment is fully functional and capable of detecting hits by the infantry targets. The COMS Contractor shall replace any of this equipment which fails with other GFE provided by the COR. The COMS Contractor shall repair/replace any equipment damaged as a result of negligence on the part of the COMS Contractor. Others will provide the corrective maintenance of this equipment. As required by the training scenario, the COMS Contractor shall remove any previously installed MILES/Laser Equipment, returning targets to live-fire capability.

J.2.2.1.2 Thermalized Targets. The Contractor shall respond to the requirements of the training scenarios by providing thermalized targets when and where requested. The pattern of the thermalization to be installed on the targets will be provided to the Contractor by the COR. If the weapons systems being used are compatible and the atmospheric, wind or weather conditions permit the proper thermal signature from no-power thermal material, such material shall be adequate. If any of the aforementioned conditions preclude the use of no-power thermal material, heated thermal targets will be required. The Contractor, at Contractor's expense, shall procure (or fabricate) the necessary heated panels or blankets to meet the training requirements. These panels or blankets shall work on 120VAC or batteries. The contractor shall also be responsible for the procurement, maintenance, and replacement of the batteries. Thermalization material using other than the 120VAC or batteries may be used if such material provides an adequate thermal signature and is approved by the COR. The Contractor shall be responsible for the repair, patching, and/or replacement of thermal material, panels, blankets, or interconnecting cabling which fail, including if such failure was caused by damage from live fire. Targets which are to be thermalized in accordance with the training scenario are considered 100% down when such thermalization fails. If such failures are caused by live fire, chargeable downtime will not commence until the Contractor is provided adequate time to make repairs to the target. The COR will make the final decision when chargeable downtime commences.

J.2.2.2 Range Communication System. A built-in PA system will be provided at the range as GFE. The remainder of the range communication system used on the MAC training facility will be provided installed by the COMS Contractor at Contractor expense. This system at a minimum shall consist of one (1) 2-way VHF FM radio in each Contractor vehicle and one (1) radio in the Range Control Tower. These radios will be used to keep in constant communication with the USMC Range Control Facility

(as required by base regulations) for communications between COMS Contractor personnel and other facilities. These radios shall conform to the specifications provided by the Government. These radios shall be considered GFE and will be programmed and maintained by the Government and shall remain as Government property at the end of the contract. The Contractor shall be responsible for the maintenance of the built-in range PA system.

J.2.3 Real Property Maintenance

J.2.3.1. Structure Maintenance. The COMS Contractor is responsible for the maintenance of the live fire facades/structures situated throughout the facility. Maintenance includes all areas of upkeep, repair and/or replacement. As applicable to the structure, this includes but is not limited to: board siding, sandbags, support timbers, roof repair, ballistic shielding, stairs and ladder wells, window and door frames, and SACON panels. Contractor repair/replacement of non-structural support items (such as board siding) shall be initiated when 40% of the surface area has been damaged/destroyed. Contractor repair/replacement of structural support items such as timbers, trusses, roofs, etc. or any item providing physical support for Marine personnel such as steps, stairs, railings, landings, etc. will be at the direction of the MAGTF Training Command, 29 Palms representative tasked to certify the safety of the house. On a recurring basis, the contractor shall inspect these structures and replace/repair or sand smooth any protruding material that may constitute a puncture hazard to personnel/equipment. The COMS Contractor shall be responsible for the upkeep of the bullet traps, ballistic hit shields, and SACON panels located in the various structures. SACON panels require replacement when bullets begin to penetrate more than 2/3 (66%) of the way through a panel (as measured from the front of the panel to the back of the bullet) anywhere on the panels' surface. Upkeep shall include emptying the traps as needed and replacing the rubber bullet-trapping material and SACON panels as needed.

The intent of this effort is for the COMS Contractor to be fully responsible for the integrity of the structures and for the protection of the target mechanisms from direct fire. Damage to a target mechanism due to direct fire is presumed to be from inadequate target protection and the COMS Contractor is responsible for replacing these damaged mechanisms at his expense. The COMS Contractor must demonstrate to the COR that the damage was caused by something other than inadequate protection, such as in the case of a hit by a ricocheted projectile. Such contested target damage must be brought immediately to the attention of the COR for determination. Loss of target use/availability due to lack of/degraded structure maintenance by the COMS Contractor will result in the target/targets being considered down for degraded operation calculations (chargeable downtime).

J.2.3.2 Berm Maintenance. The COMS Contractor shall maintain the earthen berms, timbers, concrete, and other forms of protection

surrounding target mechanisms; and separating the lanes from each other. This includes all supporting efforts as required to accomplish this task, such as: removing dirt to replace a timber/support and replacing dirt. The intent of this effort is for the COMS Contractor to be fully responsible for the protection of the target mechanisms from direct fire. Damage to a target mechanism due to direct fire is presumed to be from inadequate target protection and the COMS Contractor is responsible for replacing these damaged mechanisms at his expense. The COMS Contractor must demonstrate to the COR that the damage was caused by something other than inadequate protection, such as in the case of a hit by a ricocheted projectile or an indirect fire weapon. Such contested target damage must be brought immediately to the attention of the COR for determination. Loss of target use/capability due to lack of/degraded berm maintenance by the COMS Contractor will result in the target/targets being considered "down" for degraded operation calculations (chargeable downtime).

J.2.4 Repair Parts Salvage. During the period of this contract, equipment may be damaged beyond repair by direct/indirect live-fire rounds, troop movements or other means beyond the control of the COMS Contractor. Whenever equipment is damaged beyond repair, the Contractor shall report this to the COR, recommend replacement of the damaged unit, and salvage whatever parts possible once replacement has been authorized by the COR. These parts shall be used for repair of other pieces of equipment as appropriate, and shall be added to the current inventory and shall remain the property of the Government. Equipment damaged beyond economical repair will be replaced by the Government, when the COR determines such damage is not the result of Contractor negligence, abuse, and/or Contractor failure to accomplish required preventive, planned or corrective maintenance.

J.3 Major Hardware Items

EQUIPMENT LISTING:	QUANTITY
Portable Pop-up Infantry Targets	66
"Manikin Mike" Targets	10
Vertical Target Lifter (Heavy)	5
Horizontal Target Lifter (Heavy)	5
Portable Moving Infantry Targets	2
12V Batteries	84
Battery Charging System	1
Hand Held Controllers	8
Small Arms Sound Simulator	6
Hostile Fire/Moonlight Adapter	30
PA System	1
Down Range Wiring System	1

J.4 Degraded Operation Matrix.

PERCENT OF DEGRADATION

SYSTEM/SUBSYSTEM	NUMBER OF SYSTEMS FAILED										
Range 111 (MAC)	1	2	3	4	5	10	20	35	45	55	70
Infantry Target Mech.	2	4	6	8	12	24	30	50	70	80	100

Vert Target Mech	10	20	30	40	50						
Horz Target Mech	10	20	30	40	50						
Moving Infantry Tgts	15	30									
Manikin Mike Targets	5	10	15	20	25	50					
12V Batteries	3	6	9	12	15	18	30	45	60	90	100
Hand Held Controllers	20	40	60	80	100						
Comm. System	40										
Down Range Wiring	1	6	9	12	15	18	30	45	60	90	100
Small Arms Sound Sim.	5	10	15	20	25						
PA System	40										
Down Range Wiring	50										

Notes:
1. Acronyms:
   MOUT = Military Operations in Urban Terrain.
   MAC = MOUT Assault Course (live-fire).

J.5 Office, Storage and Maintenance Space. In addition to any office, storage, and maintenance spaces at the Main Camp Area, at MOUT/MAC Facility the Contractor will be provided one office/storage room and one Range Control Tower. A Head Facility for use by both Government and Contractor personnel is available at the range.

J.6 Office Furniture and Equipment. The Government will not provide any additional office furniture and/or equipment.

J.7 Consumables. All consumables including batteries (except as noted in Par J.2.2.1.3 (MILES equip.) will be provided by the Contractor. Some examples of consumables to be provided by the Contractor are as follows: Paint, Petroleum/Oils and Lubricants (POL), Fuses, Bulbs, Janitorial Supplies, Filters, ballistic shielding, Belts, Fiberglass/Plywood, wooden boards, nails, Thermal Material, 3-D Targets, target mannequins, clothing for mannequins, Etc.

J.8 Tools and Test Equipment. The Government will not provide any additional tools and/or test equipment.

J.9 Spares **and Repair Parts**. See paragraph 3.6 of the basic SOW for this contract.

J.10 Inspections. The Government will perform periodic contract compliance inspections, operational readiness, and maintenance checks on a scheduled and unscheduled basis, Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections by ensuring that the system is available, and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of the training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph J.12.1

J.11 Technical Data Support Package (TDSP). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training device.

J.12 Operating Hours and Planned Scheduling Requirements. The MAC facility will be scheduled for a maximum of 800 hours per year. Training will be scheduled at various times within a regular seven (7) day week. Weekend and holiday training hours will be the same as weekday training. The only holidays observed at the MAC Facility are Christmas Day (Dec 25) and New Years Day (Jan 1).

J.12.1 Scheduled MAC Facility Usage.

a. The Contractor will be provided a minimum of 24 hours notice for all changes to the training schedule for the MAC Facility.

b. The facility will not be scheduled more than 16 hours for any single scheduled use.

c. Normal scheduling day is a period of 24 hours, not necessarily 0001 hours to 2400 hours. Scheduled usage could start at any time during the 24 hours of the day.

d. In the event a training unit fails to arrive within one hour of their scheduled start time or fails to notify the COMS Contractor of anticipated late arrival within one hour of the scheduled start time or leaves prior to scheduled end of training, the COMS Contractor shall contact the COR for further instructions. After hours or if for some other reason the COR is not available, the Contractor shall contact Range Control (Bearmat) for further instructions.

e. The Contractor will be provided at least eight (8) hours of maintenance between each scheduled use of the MAC Facility. Some or all of this maintenance period may be during periods of darkness.

f. Use of the MAC Facility for MILES and/or scenario development will be considered the same as regular scheduled training.

g. Scheduled usage for demonstrations will be credited as actual usage.

J.13 Janitorial Requirements. COMS CONTRACTOR shall maintain all assigned areas as directed by the COR. At R111 these areas shall include the RCS (Bldg 2553), the Storage Shed (Bldg 2556), and the Head (Bldg 2554). The COMS Contractor shall provide all cleaning supplies and equipment. Examples of janitorial services are:

(1) Daily (when in use):
- (a) Empty trash cans.
- (b) Sweep floor.
- (c) Refill Toilet Paper Holders
- (d) Refill Paper Towel Holders
- (e) Refill Soap Dispensers

(2) Weekly:
  (a) Dust furniture and equipment
  (b) Clean windows
  (c) Damp mop
  (d) Clean sinks, toilets, & urinals

J.14 Location of Training Device/System. The MAC Facility is located in the Range Training Area at the MAGTF Training Command approximately 11 miles from the Mainside Area of MAGTF Training Command, 29 Palms.

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K.1 Description

LOCATION: MAGTF TRAINING COMMAND, TWENTYNINE PALMS, CA
RANGE NO: 400
TYPE RANGE: COMPANY ASSAULT

COMS Contractor Mobilization Date - 1 December 2007
COMS Contractor Support Date - 1 January 2008

EQUIPMENT LISTING	QUANTITY
HAND HELD CONTROLLER (HHC)	2
PORTABLE INFANTRY TARGET (PIT)	60
BATTLE EFFECTS SIMULATOR (BES)	6
PORTABLE ARMOR TARGET (PAT)	2
RIFLE FIRE SIMULATOR (RFS)	12

Range 400 is a permanent installation used for familiarization and live fire training of troops with their organic weapons. The range allows troops to maneuver and fire and to engage stationary infantry targets located in fixed protective downrange positions. The range provides for realistic combat training for Marine infantry squads under conditions simulating an actual battlefield.

The range uses one or two Hand Held Controllers(HHC)for coordinating the remote control of up to 60 Portable Infantry Targets (PITS), 2 Portable Armor Targets (PATS), 12 Rifle Fire Simulators (RFS), and 6 Battle Effects Simulators (BES) that are emplaced in downrange protective bunkers. Operators utilize the HHC to monitor and control the entire range operation.

Hand Held Controller (HHC). The HHC is a programmable, microprocessor controlled, portable range control console, which utilizes digital data radio frequency modulation techniques to remotely control downrange target equipment. Target commands may be entered by the operator manually via keyboard, or generated automatically from a previously programmed scenario. A liquid crystal display (LCD) is used to display status and target hits to the operator. The HHC is operated by a single operator in the presence of the Range Safety Officer.

Portable Infantry Target (PIT). The Portable Infantry Target (PIT) is a pop-up type electromechanical actuator which exposes and conceals a silhouette target on command. The PIT registers hits on the target. The PIT is remote radio controlled from the HHC. The PIT is unarmored and requires suitable sheltered emplacement from live fire. The PIT is man-portable and suited for permanent or temporary installation in a sheltered emplacement. The mechanism is powered from a 12VDC rechargeable battery. The PIT holds a three dimensional, self-healing, plastic target that is configured to look like a soldier. The PIT can use either a single or double target arm. The former lifts one target, the other two.

Portable Armor Target (PAT). The Portable Armor Target (PAT) is a pop-up type electromechanical actuator which exposes and conceals a silhouette target on command. The PAT registers hits on the target. The PAT is remote radio controlled from the HHC. The PAT is unarmored and requires suitable sheltered emplacement from live fire. The PAT is man-portable and suited for permanent or temporary installation in a sheltered emplacement. The mechanism is powered from a 12VDC rechargeable battery. It holds a two dimensional silhouette that is normally configured to look like a hostile armor vehicle. Control signals for the target and pyrotechnic operations are received at the target and it transmits hit counts and target status back at the HHC.

Battle Effects Simulator (BES). The Battle Effects Simulator (BES) is a device that ignites pyrotechnic charges on command. When used with the appropriate pyrotechnic cartridge, it simulates the flash and sound of tank main gunfire. When used with a steel-on-steel pyrotechnic cartridge, it simulates the sparks and flash occurring when a round impacts on an armor vehicle. The BES receives its power and command signals from the PIT, PAT, or may be configured as a stand-alone device.

Rifle Fire Simulator (RFS). The RFS provides realistic sound simulation of a single shot and automatic rifle fire. The automatic mode has a rate of fire of 600 rounds per minute. The RFS consists of a tubular, gun-like barrel with a combustion chamber. A mixture of oxygen and propane gas is ignited in the combustion chamber by a spark plug producing the sound. It receives its commands through the ITM and is usually located in the same emplacement, however it may be located as far as 30 feet away (the length of its cable).

Three-Dimensional Infantry Targets. The three-dimensional plastic self-healing targets are shaped like a person, head to mid-thigh, painted to simulate a soldier holding a rifle at port arms.

Armor Targets. The armor targets simulate stationary hostile armor vehicles. The stationary armor target is an approximately 5 by 8 foot plywood structure mounted on the PAT, depicting a silhouette frontal view of an enemy threat vehicle. Thermal Imaging Targets are used to conduct night training.

K.1.1 Range Communication System. There is no range communication system installed at this range. The Contractor, at a minimum, shall have one (1) 2-way VHF FM radio in each Contractor vehicle. These radios will be used to keep in constant communication with the USMC Range Control Facility at BEARMAT (as required by base regulations) for Contractor communications between vehicles and other facilities. These radios shall conform to the specifications provided by the Government. These radios shall be considered GFE and will be programmed and maintained by the Government and shall remain as Government property at the end of the contract.

K.2 Operation and Maintenance Requirements

K.2.1 Operation. The Contractor shall provide range operators during normal operating hours, make-up, and additional training periods to facilitate the conduct of training. The Contractor shall provide for the initial start-up of the range training system, software load, system readiness check-out, and insertion of initial training conditions and parameters in response to published schedules (including any revisions thereto). The Contractor shall insure that the range equipment is operationally ready at the commencement of each scheduled training session. The Contractor shall respond to specific direction from the COR, for desired initial conditions of controls and targets including type and quantity for the range. The Contractor shall be responsible for the operation and control of the range throughout the accomplishment of the scheduled training mission. The Contractor shall have the ability to create training scenarios for the range, and when the system is not being used for scheduled training requirements, shall assist range users in the creation of new scenarios that will be stored for future use on the range. The Contractor shall be available to provide operational demonstrations of the training device when it is not being used for scheduled training requirements. Operational demonstrations of the training device will be considered part of the Scheduled Training Requirements as delineated in paragraph K.12. The Contractor shall work closely with and assist the range users in employing the training system to its maximum capabilities. (Note: all scenarios created by the Contractor shall be considered Government property.)

K.2.2 Maintenance. The Contractor is responsible for all levels of maintenance, (organizational, intermediate, and depot; preventative and corrective) for all target systems and equipment listed in this appendix, which includes, hand held controllers, target mechanisms, battle effects simulators, target silhouettes, drainage of the target pits, all connecting cables and all down range wiring within R410A, any down range wiring access pits, and removal of all (non-live ordnance) foreign material (including water) from the target pits. In addition, the Contractor is responsible for all supplies to repair the training device and to replenish the repair parts used from the inventory furnished by the Government.

K.2.2.1 Berm Maintenance. The COMS Contractor shall maintain the earthen berms, timbers, concrete, and other forms of protection surrounding target mechanisms. This includes all supporting efforts as required to accomplish this task, such as: removing dirt to replace a timber/support and replacing dirt. The intent of this effort is for the COMS Contractor to be fully responsible for the protection of the target mechanisms from direct fire. Damage to a target mechanism due to direct fire is presumed to be from inadequate target protection and the COMS Contractor is responsible for replacing these damaged mechanisms at his expense. The COMS Contractor must demonstrate to the COR that the damage was caused by something other than inadequate protection, such as in the case of a hit by a ricocheted projectile or an indirect fire weapon. Such contested target damage must be brought immediately to the attention of the COR for determination. Loss of target use/capability due to lack of/degraded berm maintenance by the COMS

Contractor will result in the target/targets being considered "down" for degraded operation calculations (chargeable downtime). In addition, the Contractor is responsible for re-burying any of the down range wiring that becomes exposed due to wind, water, or live fire erosion.

Fill/Dirt Materials Requirements. In conjunction with COMS Contractor maintenance of berms and target positions the Contractor shall obtain natural fill/dirt materials from the immediate areas surrounding the berms and target positions. When these materials are not available, the COR will coordinate use of base resources to provide material to the COMS Contractor.

K.2.2.2 Target Maintenance. The Contractor shall be responsible for installing the 3-D infantry targets on the mechanisms and ensuring that the laser hit detectors and/or ballistic hit sensors are attached to each target and are fully operational. The COMS Contractor shall replace the 3-D infantry targets when they are no longer serviceable.

K.2.2.3 Laser Hit Detectors. Laser hit detectors, laser hit detector harnesses, laser target interfaces, MILES target interface devices, interconnecting cabling and batteries for the laser detector equipment will be provided to the Contractor as GFE. The Contractor shall install this equipment on the targets in accordance with the training scenario requirements. The Contractor shall ensure that this equipment is fully functional and capable of detecting hits by the range equipment. The Contractor shall replace any of this equipment which fails with other GFE provided by the COR. The corrective maintenance of this equipment will be by the Government unless such damage was caused by negligence on the part of the COMS Contractor.

K.2.2.4 Thermalized Targets. The Contractor shall respond to the requirements of the training scenarios by providing thermalized targets when and where requested. The pattern of the thermalization to be installed on the targets will be provided to the Contractor by the COR. If the weapons systems being used are compatible and the atmospheric, wind or weather conditions permit the proper thermal signature from no-power thermal material, such material shall be adequate. If any of the aforementioned conditions preclude the use of no-power thermal material, heated thermal targets will be required. The Contractor, at Contractor's expense, shall procure (or fabricate) the necessary heated panels or blankets to meet the training requirements. These panels or blankets shall work on 12VDC batteries. The contractor shall also be responsible for the procurement, maintenance, and replacement of the batteries. Thermalization material using other than the 12VDC batteries may be used if such material provides an adequate thermal signature and is approved by the COR. The Contractor shall be responsible for the repair, patching, and/or replacement of thermal material, panels, blankets, or interconnecting cabling that fails, including if such failure was caused by damage from live fire. Targets that are to be thermalized in accordance with the training scenario are considered 100% down when such thermalization fails. If such failures are caused by live fire, chargeable downtime will not commence until the Contractor is provided adequate time to make repairs to the target. The

COR will make the final decision when chargeable downtime commences.

K.2.3 Pyrotechnics. During daily and weekly preventative maintenance checks the Contractor shall determine which pyrotechnic devices (Battle Effects Simulators) require reloading. The COMS Contractor shall be responsible for ordering and obtaining, from the MAGTF Training Command representative, the types and quantities of pyrotechnics required, picking them up from the MAGTFTC Magazine Area, and transporting them to the device locations. The COMS Contractor is required to handle pyrotechnic charges, load and unload pyrotechnic devices, repackage and return pyrotechnics to the MAGTF Training Command Magazine Area as required, and is responsible for the maintenance of the components of the pyrotechnic charge firing mechanisms. All COMS Contractor activities involving pyrotechnics shall be in accordance with all Federal, State, local and MAGTF Training Command SOP regulations.

K.2.4 Rifle Fire Simulators. The Contractor shall ensure that adequate supplies of oxygen and propane gas are available for the rifle fire simulators to meet all scheduled training requirements. The Contractor shall be responsible for filling/refilling, from commercial sources, at Contractor expense, all oxygen and propane gas cylinders used on the range.

K.2.4 Repair Parts Salvage. During the period of this contract Portable Infantry Targets (PITs), Portable Armor Targets (PATs), Battle Effects Simulators (BESs), Hand Held Controllers(HHCs), and other ancillary equipment may be damaged beyond repair by direct hits by live fire rounds or other means beyond the Contractors control. Whenever a PIT, BES, RFS, or other piece of ancillary equipment is damaged beyond repair, the Contractor shall report this to the COR, recommend replacement of the damaged unit, and salvage whatever parts possible once replacement has been authorized by the COR. These parts shall be used for repair of other range PITs, PATs, BESs, HHCs, or other ancillary devices as appropriate, and shall be added to the current inventory and shall remain the property of the Government. Equipment damaged beyond economical repair will be replaced by the Government, when the COR determines such damage is not the result of Contractor negligence, abuse, and/or Contractor failure to accomplish required preventive, planned or corrective maintenance including all range maintenance responsibilities.

K.3 Major Hardware Items.

EQUIPMENT LISTING	QUANTITY
HAND HELD CONTROLLER (HHC)	2
PORTABLE INFANTRY TARGET (PIT)	60
3-DIMENSIONAL INFANTRY TARGETS	60
BATTLE EFFECTS SIMULATOR (BES)	6
PORTABLE ARMOR TARGET (PAT)	2
2D ARMOR SILHOUTTE	2
RIFLE FIRE SIMULATORS (RFS)	12

K.4 Degraded Operation Matrix.

PERCENT OF DEGRADATION

			Number of Systems Failed												
SYSTEM	1	2	3	4	5	6	7	8	9	10	20	30	40	50	60
1.TARGETRY															
PIT (60)	1	2	3	4	5	6	7	8	9	20	30	50	65	80	100
PAT (2)	10	25													
RFS (12)	5	10	15	20	25	30	35	40	45	50					
BES (6)	5	10	15	20	25	30									
2. HHC	25	100													

NOTE: The total down percentage of the Range will be determined by totaling the down percentages for all the individual components/systems. For example if one of the HHCs and five of the PITs are down, the total down percentage would be 25% + 5% = 30%. The sum of the parts does not add up to 100% in all cases, since some of the systems are more critical than others. For example the HHC is about 1% of the hardware but the system is down (25%) when it is not operational.

2. Acronyms:
PIT = Portable Infantry Target
PAT = Portable Armor Target
BES = Battle Effects Simulator
HHC = Hand Held Controller
RFS = Rifle Fire Simulator

K.5 Office, Storage and Maintenance Space. No additional maintenance or storage spaces will be provided.

K.6 Office Furniture and Equipment. No additional office furniture or equipment will be provided.

K.7 Consumables. All consumables, including batteries, shall be provided by the Contractor. Some examples of consumables to be provided by the Contractor are:
Paint, Petroleum/Oils and Lubricants (POL), Computer Data CDs, Printer Paper, Printer Cartridges, Fuses, Bulbs, Janitorial Supplies, Filters, Belts, 3-D Targets, etc.

K.8 Tools and Test Equipment. No additional tools or test equipment will be provided by the Government.

K.9 Spares and Repair Parts. See paragraph 3.6 of the Basic SOW.

K.10 Inspections. The Government will perform periodic contract compliance inspections and operational readiness and maintenance checks

on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections in providing the availability of the system and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph K.12.

K.11 Technical Data Support Package (TDSP). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training device.

K.12 Operating Hours and Planned Scheduling Requirements. Range 400 will be scheduled for a maximum of 150 days per year. Weekend and holiday training hours will be the same as weekday training. The only holidays observed at Range 400 are Christmas Day (Dec 25) and New Years Day (Jan 1).

K.12.1 RETS Range Flexibility. Up to one-third (1/3) of the fiscal year range operating hours may be shifted among any RETS Ranges located at the MAGTF Training Command. The COR will provide 24 hours notice prior to adjusting operating hours from one range to another range. In addition, units using the RETS Ranges may request, through the COR, an extension of training time for a scheduled, in-progress training evolution. The maximum extension granted will be two (2) hours and only five (5) extensions will be granted monthly, all ranges inclusive. The COMS Contractor will be provided a minimum of two hours notice by the COR for any training time extensions. Any hourly extensions granted will be credited against the yearly operational hours for the range.

K.12.2 Scheduled Range Usage.

a. Training will be scheduled for a maximum of 10 hours per day.

b. The Contractor will be provided a minimum of 24 hours notice for all changes to the training schedule.

c. A normal scheduling day is a period of 24 hours, not necessarily 0000 to 2400; a scheduled usage could start at any time during the 24 hours of the day.

d. In the event a training unit fails to arrive within one hour of their scheduled start time or fails to notify the COMS Contractor of anticipated late arrival within one hour of the scheduled start time or leaves prior to scheduled end of training, the COMS Contractor shall contact the COR for further instructions. After hours or if for some other reason the COR is not available, the Contractor shall contact Range Control (Bearmat) for further instructions.

e. Scheduled usage for demonstrations will be credited as actual usage.

K.13 Janitorial Requirements. COMS CONTRACTOR shall maintain all assigned areas as directed by the COR. All cleaning supplies shall be provided by the COMS Contractor. Examples of janitorial services are:

(1) Daily:
- (a) Empty trashcans and ashtrays
- (b) Sweep floor

(2) Weekly:
- (a) Dust furniture and equipment
- (b) Clean windows
- (c) Damp mop

(3) Monthly:
- (a) Clean air conditioner filter.

K.14 Location of Training Device/System. Range 400 is located in the Cleghorn Range Training Area at the MAGTF Training Command, Twentynine Palms, CA. Range 400 is located approximately 9 miles from the Main Camp Area of MAGTF Training Command.

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L.1 Description

LOCATION: MAGTF TRAINING COMMAND, TWENTYNINE PALMS, CA
RANGE NO: 410A
TYPE RANGE: PLAOON HASTY ATTACK

COMS Contractor Mobilization Date - 1 December 2007
COMS Contractor Support Date - 1 January 2008

EQUIPMENT LISTING	QUANTITY
HAND HELD CONTROLLER (HHC)	2
PORTABLE INFANTRY TARGET (PIT)	60
BATTLE EFFECTS SIMULATOR (BES)	6
PORTABLE ARMOR TARGET (PAT)	2
RIFLE FIRE SIMULATOR (RFS)	12

Range 410A is a permanent installation used for familiarization and live fire training of troops with their organic weapons. The range allows troops to maneuver and fire and to engage stationary infantry targets located in fixed protective downrange positions. The range provides for realistic combat training for Marine infantry squads under conditions simulating an actual battlefield.

The range uses one or two Hand Held Controllers(HHC)for coordinating the remote control of up to 60 Portable Infantry Targets (PITS), 2 Portable Armor Targets (PATS), 12 Rifle Fire Simulators (RFS), and 6 Battle Effects Simulators (BES) that are emplaced in downrange protective bunkers. Operators utilize the HHC to monitor and control the entire range operation.

Hand Held Controller (HHC). The HHC is a programmable, microprocessor controlled, portable range control console, which utilizes digital data radio frequency modulation techniques to remotely control downrange target equipment. Target commands may be entered by the operator manually via keyboard, or generated automatically from a previously programmed scenario. A liquid crystal display (LCD) is used to display status and target hits to the operator. The HHC is operated by a single operator in the presence of the Range Safety Officer.

Portable Infantry Target (PIT). The Portable Infantry Target (PIT) is a pop-up type electromechanical actuator which exposes and conceals a silhouette target on command. The PIT registers hits on the target. The PIT is remote radio controlled from the HHC. The PIT is unarmored and requires suitable sheltered emplacement from live fire. The PIT is man-portable and suited for permanent or temporary installation in a sheltered emplacement. The mechanism is powered from a 12VDC rechargeable battery. The PIT holds a three dimensional, self-healing, plastic target that is configured to look like a soldier. The PIT

can use either a single or double target arm. The former lifts one target, the other two.

Portable Armor Target (PAT). The Portable Armor Target (PAT) is a pop-up type electromechanical actuator which exposes and conceals a silhouette target on command. The PAT registers hits on the target. The PAT is remote radio controlled from the HHC. The PAT is unarmored and requires suitable sheltered emplacement from live fire. The PAT is man-portable and suited for permanent or temporary installation in a sheltered emplacement. The mechanism is powered from a 12VDC rechargeable battery. It holds a two dimensional silhouette that is normally configured to look like a hostile armor vehicle. Control signals for the target and pyrotechnic operations are received at the target and it transmits hit counts and target status back at the HHC.

Battle Effects Simulator (BES). The Battle Effects Simulator (BES) is a device that ignites pyrotechnic charges on command. When used with the appropriate pyrotechnic cartridge, it simulates the flash and sound of tank main gunfire. When used with a steel-on-steel pyrotechnic cartridge, it simulates the sparks and flash occurring when a round impacts on an armor vehicle. When used with a black smoke pyrotechnic cartridge, it simulates the column of black smoke seen when a vehicle has been killed and is burning. The BES receives its power and command signals from the PIT, PAT, or may be configured as a stand-alone device.

Rifle Fire Simulator (RFS). The RFS provides realistic sound simulation of a single shot and automatic rifle fire. The automatic mode has a rate of fire of 600 rounds per minute. The RFS consists of a tubular, gun-like barrel with a combustion chamber. A mixture of oxygen and propane gas is ignited in the combustion chamber by a spark plug producing the sound. It receives its commands through the ITM and is usually located in the same emplacement; however it may be located as far as 30 feet away (the length of its cable).

Three-Dimensional Infantry Targets. The three-dimensional plastic self-healing targets are shaped like a person, head to mid-thigh, painted to simulate a soldier holding a rifle at port arms.

Armor Targets. The armor targets simulate stationary hostile armor vehicles. The stationary armor target is an approximately 5 by 8 foot plywood structure mounted on the PAT, depicting a silhouette frontal view of an enemy threat vehicle. Thermal Imaging Targets are used to conduct night training.

L.1.1 Range Communication System. There is no range communication system installed at this range. The Contractor, at a minimum, shall have one (1) 2-way VHF FM radio in each Contractor vehicle. These radios will be used to keep in

constant communication with the USMC Range Control Facility at BEARMAT (as required by base regulations) for Contractor communications between vehicles and other facilities. These radios shall conform to the specifications provided by the Government. These radios shall be considered GFE and will be programmed and maintained by the Government and shall remain as Government property at the end of the contract.

L.2 Operation and Maintenance Requirements

L.2.1 Operation. The Contractor shall provide range operators during normal operating hours, make-up, and additional training periods to facilitate the conduct of training. The Contractor shall provide for the initial start-up of the range training system, software load, system readiness check-out, and insertion of initial training conditions and parameters in response to published schedules (including any revisions thereto). The Contractor shall insure that the range equipment is operationally ready at the commencement of each scheduled training session. The Contractor shall respond to specific direction from the COR, for desired initial conditions of controls and targets including type and quantity for the range. The Contractor shall be responsible for the operation and control of the range throughout the accomplishment of the scheduled training mission. The Contractor shall have the ability to create training scenarios for the range, and when the system is not being used for scheduled training requirements, shall assist range users in the creation of new scenarios that will be stored for future use on the range. The Contractor shall be available to provide operational demonstrations of the training device when it is not being used for scheduled training requirements. Operational demonstrations of the training device will be considered part of the Scheduled Training Requirements as delineated in paragraph L.12. The Contractor shall work closely with and assist the range users in employing the training system to its maximum capabilities. (Note: all scenarios created by the Contractor shall be considered Government property.)

L.2.2 Maintenance. The Contractor is responsible for all levels of maintenance, (organizational, intermediate, and depot; preventative and corrective) for all target systems and equipment listed in this appendix, which includes, hand held controllers, target mechanisms, battle effects simulators, target silhouettes, drainage of the target pits, all connecting cables and all down range wiring within R410A, any down range wiring access pits, and removal of all (non-live ordnance) foreign material (including water) from the target pits. In addition, the Contractor is responsible for all supplies to repair the training device and to replenish the repair parts used from the inventory furnished by the Government.

L.2.2.1 Berm Maintenance. The COMS Contractor shall maintain the earthen berms, timbers, concrete, and other forms of protection

surrounding target mechanisms. This includes all supporting efforts as required to accomplish this task, such as: removing dirt to replace a timber/support and replacing dirt. The intent of this effort is for the COMS Contractor to be fully responsible for the protection of the target mechanisms from direct fire. Damage to a target mechanism due to direct fire is presumed to be from inadequate target protection and the COMS Contractor is responsible for replacing these damaged mechanisms at his expense. The COMS Contractor must demonstrate to the COR that the damage was caused by something other than inadequate protection, such as in the case of a hit by a ricocheted projectile or an indirect fire weapon. Such contested target damage must be brought immediately to the attention of the COR for determination. Loss of target use/capability due to lack of/degraded berm maintenance by the COMS Contractor will result in the target/targets being considered "down" for degraded operation calculations (chargeable downtime). In addition, the Contractor is responsible for re-burying any of the down range wiring that becomes exposed due to wind, water, or live fire erosion.

Fill/Dirt Materials Requirements. In conjunction with COMS Contractor maintenance of berms and target positions the Contractor shall obtain natural fill/dirt materials from the immediate areas surrounding the berms and target positions. When these materials are not available, the COR will coordinate use of base resources to provide material to the COMS Contractor.

L.2.2.2 Target Maintenance. The Contractor shall be responsible for installing the 3-D infantry targets on the mechanisms and ensuring that the laser hit detectors and/or ballistic hit sensors are attached to each target and are fully operational. The COMS Contractor shall replace the 3-D infantry targets when they are no longer serviceable.

L.2.2.3 Laser Hit Detectors. Laser hit detectors, laser hit detector harnesses, laser target interfaces, MILES target interface devices, interconnecting cabling and batteries for the laser detector equipment will be provided to the Contractor as GFE. The Contractor shall install this equipment on the targets in accordance with the training scenario requirements. The Contractor shall ensure that this equipment is fully functional and capable of detecting hits by the range equipment. The Contractor shall replace any of this equipment which fails with other GFE provided by the COR. The corrective maintenance of this equipment will be by the Government unless such damage was caused by negligence on the part of the COMS Contractor.

L.2.2.4 Thermalized Targets. The Contractor shall respond to the requirements of the training scenarios by providing thermalized targets when and where requested. The pattern of the thermalization to be installed on the targets will be provided to the Contractor by the COR. If the weapons systems being used are

compatible and the atmospheric, wind or weather conditions permit the proper thermal signature from no-power thermal material, such material shall be adequate. If any of the aforementioned conditions preclude the use of no-power thermal material, heated thermal targets will be required. The Contractor, at Contractor's expense, shall procure (or fabricate) the necessary heated panels or blankets to meet the training requirements. These panels or blankets shall work on 12VDC batteries. The contractor shall also be responsible for the procurement, maintenance, and replacement of the batteries. Thermalization material using other than the 12VDC batteries may be used if such material provides an adequate thermal signature and is approved by the COR. The Contractor shall be responsible for the repair, patching, and/or replacement of thermal material, panels, blankets, or interconnecting cabling that fails, including if such failure was caused by damage from live fire. Targets that are to be thermalized in accordance with the training scenario are considered 100% down when such thermalization fails. If such failures are caused by live fire, chargeable downtime will not commence until the Contractor is provided adequate time to make repairs to the target. The COR will make the final decision when chargeable downtime commences.

L.2.3 Pyrotechnics. During daily and weekly preventative maintenance checks the Contractor shall determine which pyrotechnic devices (Battle Effects Simulators) require reloading. The COMS Contractor shall be responsible for ordering and obtaining, from the MAGTF Training Command representative, the types and quantities of pyrotechnics required, picking them up from the MAGTFTC Magazine Area, and transporting them to the device locations. The COMS Contractor is required to handle pyrotechnic charges, load and unload pyrotechnic devices, repackage and return pyrotechnics to the MAGTF Training Command Magazine Area as required, and is responsible for the maintenance of the components of the pyrotechnic charge firing mechanisms. All COMS Contractor activities involving pyrotechnics shall be in accordance with all Federal, State, local and MAGTF Training Command SOP regulations.

L.2.4 Rifle Fire Simulators. The Contractor shall ensure that adequate supplies of oxygen and propane gas are available for the rifle fire simulators to meet all scheduled training requirements. The Contractor shall be responsible for filling/refilling, from commercial sources, at Contractor expense, all oxygen and propane gas cylinders used on the range.

L.2.5 Repair Parts Salvage. During the period of this contract Portable Infantry Targets (PITs), Portable Armor Targets (PATs), Battle Effects Simulators (BESs), Hand Held Controllers(HHCs), and other ancillary equipment may be damaged beyond repair by direct hits by live fire rounds or other means beyond the Contractors control. Whenever a PIT, BES, SASS, or other piece of ancillary equipment is damaged beyond repair, the Contractor

shall report this to the COR, recommend replacement of the damaged unit, and salvage whatever parts possible once replacement has been authorized by the COR. These parts shall be used for repair of other range PITs, PATs, BESs, HHCs, or other ancillary devices as appropriate, and shall be added to the current inventory and shall remain the property of the Government. Equipment damaged beyond economical repair will be replaced by the Government, when the COR determines such damage is not the result of Contractor negligence, abuse, and/or Contractor failure to accomplish required preventive, planned or corrective maintenance including all range maintenance responsibilities.

L.3 Major Hardware Items.

EQUIPMENT LISTING	QUANTITY
HAND HELD CONTROLLER (HHC)	2
PORTABLE INFANTRY TARGET (PIT)	60
3-DIMENSIONAL INFANTRY TARGETS	60
BATTLE EFFECTS SIMULATOR (BES)	6
PORTABLE ARMOR TARGET (PAT)	2
2D ARMOR SILHOUTTE	2
RIFLE FIRE SIMULATORS (RFS)	12

L.4 Range Degraded Operation Matrix.

PERCENT OF DEGRADATION

			Number of Systems Failed												
SYSTEM	1	2	3	4	5	6	7	8	9	10	20	30	40	50	60
1.TARGETRY															
PIT (60)	1	2	3	4	5	6	7	8	9	20	30	50	65	80	100
PAT (2)	10	25													
RFS (12)	5	10	15	20	25	30	35	40	45	50					
BES (6)	5	10	15	20	25	30									
2. HHC	25	100													

NOTE: The total down percentage of the Range will be determined by totaling the down percentages for all the individual components/systems. For example if one of the HHCs and five of the PITs are down, the total down percentage would be 25% + 5% = 30%. The sum of the parts does not add up to 100% in all cases, since some of the systems are more critical than others. For example the HHC is about 1% of the hardware but the system is down (25%) when it is not operational.

2. Acronyms:
PIT = Portable Infantry Target
PAT = Portable Armor Target

BES = Battle Effects Simulator
HHC = Hand Held Controller
RFS = Rifle Fire Simulator

L.5 Office, Storage and Maintenance Space. No additional maintenance or storage spaces will be provided.

L.6 Office Furniture and Equipment. No additional office furniture or equipment will be provided.

L.7 Consumables. All consumables, including batteries, shall be provided by the Contractor. Some examples of consumables to be provided by the Contractor are:
Paint, Petroleum/Oils and Lubricants (POL), Data CDs, Printer Paper, Printer Cartridges, Fuses, Bulbs, Janitorial Supplies, Filters, Belts, 3-D Targets, etc.

L.8 Tools and Test Equipment. No additional tools or test equipment will be provided by the Government.

L.9 Spares and Repair Parts. See paragraph 3.6 of the Basic SOW.

L.10 Inspections. The Government will perform periodic contract compliance inspections and operational readiness and maintenance checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections in providing the availability of the system and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph L.12.

L.11 Technical Data Support Package (TDSP). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training device.

L.12 Operating Hours and Planned Scheduling Requirements. Range 410A will be scheduled for a maximum of 150 days per year. Weekend and holiday training hours will be the same as weekday training. The only holidays observed at Range 410A are Christmas Day (Dec 25) and New Years Day (Jan 1).

L.12.1 RETS Range Flexibility. Up to one-third (1/3) of the fiscal year range operating hours may be shifted among any RETS Ranges located at the MAGTF Training Command. The COR will provide 24 hours notice prior to adjusting operating hours from one range to another range. In addition, units using the RETS Ranges may request, through the COR, an extension of training time for a scheduled, in-progress training evolution. The maximum extension granted will be two (2) hours and only five (5)

extensions will be granted monthly, all ranges inclusive. The COMS Contractor will be provided a minimum of two hours notice by the COR for any training time extensions. Any hourly extensions granted will be credited against the yearly operational hours for the range.

L.12.2 Scheduled Range Usage.

a. Training will be scheduled for a maximum of 10 hours per day.

b. The Contractor will be provided a minimum of 24 hours notice for all changes to the training schedule.

c. A normal scheduling day is a period of 24 hours, not necessarily 0000 to 2400; a scheduled usage could start at any time during the 24 hours of the day.

d. In the event a training unit fails to arrive within one hour of their scheduled start time or fails to notify the COMS Contractor of anticipated late arrival within one hour of the scheduled start time or leaves prior to scheduled end of training, the COMS Contractor shall contact the COR for further instructions. After hours or if for some other reason the COR is not available, the Contractor shall contact Range Control (Bearmat) for further instructions.

e. Scheduled usage for demonstrations will be credited as actual usage.

L.13 Janitorial Requirements. COMS CONTRACTOR shall maintain all assigned areas as directed by the COR. All cleaning supplies shall be provided by the COMS Contractor. Examples of janitorial services are:

(1) Daily:
- (a) Empty trashcans and ashtrays
- (b) Sweep floor

(2) Weekly:
- (a) Dust furniture and equipment
- (b) Clean windows
- (c) Damp mop

(3) Monthly:
- (a) Clean air conditioner filter.

L.14 Location of Training Device/System. Range 410A is located in the Cleghorn Range Training Area at the MAGTF Training Command, Twentynine Palms, CA. Range 410A is located approximately 9 miles from the Main Camp Area of MAGTF Training Command.

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M.1 Description

LIVE-FIRE MOUT TRAINING COMPLEX. Currently includes Ranges 205 and 210 and associated training areas. Additional training areas/capabilities may be added in the future.

LOCATION: MAGTF TRAINING COMMAND, TWENTYNINE PALMS, CA

COMS Contractor Mobilization Date – 1 December 2007
COMS Contractor Support Date – 1 January 2008

The training complex currently consists of a company-sized live fire and maneuver MOUT training area (Range 210) and a multi-vehicle convoy live fire and maneuver training area (range 205). The live fire complexes consist of 3 types of structures; (Type 1) modular, nonpermanent, breachable/sizeable enclosed structures, live-fire capable internally/externally up to 7.62mm (occasionally up to 40mm TP will be fired at the external walls), (Type 2) modular, nonpermanent, empty, partially sizeable, enclosed structures, live-fire capable internally/externally up to 7.62mm (occasionally up to 40mm TP will be fired at the external walls), and (Type 3) nonpermanent, enterable 3-sided façade structures. Individual and small units up to company size will conduct foot, mobile, mechanized and/or armor patrols up to and through the two sites. Operations will be conducted during both day and night. Individual, crew served and indirect fires will be employed with 5.56mm and 7.62mm ball ammunition (and occasionally up to 40mm TP fired at the external walls) used to fire at targets and structures within the MOUT area and larger weapon systems directed at targets in outlying areas. Fire and maneuver will occur along and between primary and secondary streets and access ways. Type 1 and Type 2 structures will additionally have capability to support and sustain fires at internally placed targets. Both training facilities will contain dispersed structures to support 360 degree training of fire and maneuver. Both locations will require varying degrees of real property maintenance. Roads will be of variable width allowing and limiting vehicle movement. Primary roads shall be capable of supporting armored vehicle movement.

M.1.1 Company Live Fire and Maneuver MOUT Training Complex. (Range 210)

The Company Live Fire MOUT complex is located within the Bullion Training Area. The MOUT facility is located in the vicinity of grid 04590701-04820631-05350722-05580653. The MOUT facility is laid out in a geotypical representation of a Middle Eastern rural village. External walls forming courtyards are constructed adjacent to and around some structures. In addition these external walls run parallel to streets and forward of structure entrances, which is similar to Middle Eastern rural villages. Construction includes the following types of structures:

Live Fire Modular Non-permanent Structures (Type 1).
The Type 1 structures support live fire in buildings capable of being entered with interconnecting rooms and hallways. The structures are constructed of bullet absorbing material (SACON) capable of absorbing live fire (SRTA, 5.56mm ball, 7.62mm ball) internally and externally (occasionally up to 40mm TP will be fired at the external walls). This type of structure is designed to train fire team and squad-sized elements in patrolling, threat discrimination, target acquisition & engagement, structure entry and clearing techniques under live-fire conditions, and coordination of unit fires of company-sized elements under live-fire conditions. The structures resemble typical buildings found in a Middle Eastern rural village. The following characteristics apply to the Type 1 Breachable/Sizeable Enclosed Structures (1 and 2 story styles).

A. 4 sided; 1 story structure capable of modification to become a 2 story structure
B. Breachable doors
C. Multiple windows

Live Fire Modular Non-permanent Empty Structures (Type 2).
The Type 2 structures support live fire in structures that are capable of being entered. The structures are constructed of bullet absorbing material (SACON) capable of absorbing live fire (SRTA, 5.56mm ball, 7.62mm ball) internally and externally (occasionally up to 40mm TP will be fired at the external walls). This type of structure is designed to allow participants to enter clear and use the structure for support and defensive positions. The structures resemble typical structures found in a Middle Eastern rural village. The following characteristics apply to the Type 2 Empty Enclosed Structures (1 and 2 story styles).

A. 3 sided; 1 story structures capable of modification to become 2 story structures
B. Breachable doors
C. Multiple windows

Live Fire Non-permanent Façade Structures (Type 3).
The Type 3 structures are live fire facade structures. The structures are constructed of bullet absorbing material (SACON) capable of absorbing live fire (SRTA, 5.56mm ball, 7.62mm ball) externally (occasionally up to 40mm TP will be fired at the external walls). The structures resemble typical structures found in a Middle Eastern village. This type of structure is

designed to fill out the town. The following characteristics apply to the Type 3 façade structures (1 and 2 story styles).

A. 3 sided; 1 story structures capable of modification to become 2 story structures
B. Breachable doors
C. Multiple windows

M.1.2 Multi-Vehicle Convoy Live Fire and Maneuver MOUT Complex. (Range 205)
The Multi-Vehicle Convoy Live Fire MOUT complex is located in the Prospect Training Area at the vicinity of grid 89509720-90309760-89809635-90409645. The MOUT Facility is laid out in a geotypical representation of a Middle Eastern rural village in a manner similar to that depicted in Appendix B. External walls forming courtyards are constructed adjacent to and around some structures. In addition, these external walls run parallel to streets and forward of structure entrances, which is similar to Middle Eastern rural villages. The external walls are designed and constructed with a minimum of two access openings for personnel entrance and exit to the courtyards. The training complex allows for reaction to Near and Far Ambushes and actions in a built up area. The complex layout facilitates training in crossing danger areas. Construction includes the following types of structures:

Live Fire Modular Non-permanent Structure (Type 1).
The Type 1 structures support live fire in structures capable of being entered with interconnecting rooms and hallways. The structures are constructed of bullet absorbing material (SACON) capable of absorbing live fire (SRTA, 5.56mm ball, 7.62mm ball) internally and externally (occasionally up to 40mm TP will be fired at the external walls). This type of structure is designed to train fire team and squad-sized elements in structure entry and room clearing techniques under live-fire conditions, and to coordinate unit fires of company-sized elements under live-fire conditions. The structures resemble typical buildings that are found in a Middle Eastern village. The following characteristics apply to the Type 1 Breachable/Sizeable Enclosed Structures (1 and 2 story styles):

A. 4 sided; 1 story structure capable of modification to become a 2 story structure
B. Breachable door
C. Multiple windows

Live Fire Modular Non-permanent Empty Structure (Type 2).
The Type 2 structures support live fire in buildings that are capable of being entered. The structures are constructed of

bullet absorbing material(SACON) capable of absorbing live fire (SRTA, 5.56mm ball, 7.62mm ball) internally and externally (occasionally up to 40mm TP will be fired at the external walls). This type of building is designed to allow participants to enter, clear, and use the structure for support and defensive positions.
The structures resemble typical buildings found in a Middle Eastern village. The following characteristics apply to the Type 2 Empty Enclosed Structures (1 and 2 story styles):

A. 4 sided; 1 story structures shall be capable of modification to become 2 story structures
B. Breachable door
C. Multiple windows

Live Fire Non-permanent Façade Structure (Type 3).
The Type 3 structures are live fire facade structures. The structures are constructed of bullet absorbing material (SACON) capable of absorbing live fire (SRTA, 5.56mm ball, 7.62mm ball) externally (occasionally up to 40mm TP will be fired at the walls). This type of structure is designed to fill out the town. The following characteristics apply to the Type 3 façade structures (1 and 2 story styles):

A. 3 sided; 1 story structures shall be capable of modification to become 2 story structures
B. Breachable doors
C. Multiple Windows

M.1.3 Live Fire MOUT Targetry

M.1.3.1 Portable Infantry Target System (PITS). A lightweight, stand alone, radio controlled, 12 VDC battery powered, portable infantry target lifter. The PITS can raise and lower silhouette targets. The PITS are normally controlled by a Hand Held Controller (HHC) that allows remote programming/control of the PITS devices.

M.1.3.2 Infantry Mobile Target Mechanism (Running Man Target). A typical device is radio controlled, low profile, two- man portable, self-propelled battery powered moving infantry target mounted on a rail-type guidance system. This device is normally controlled by a Hand Held Controller (HHC). Typical units have multiple speeds and automatic braking systems.

M.1.3.3 Portable Armor Target (PAT). The Portable Armor Target (PAT) is a stationary armor lifter that is controlled by the HHC. It holds a two dimensional silhouette that is normally configured to look like a hostile armor vehicle. Control signals for the

target and pyrotechnic operations are received at the target and it transmits hit counts and target status back to the HHC. These devices are actually maintained and are part of the inventory of equipment under the Live Fire Targetry System SOW (Appendix J). However, since they are portable and may be utilized throughout the base, they may be employed at the either or both of the Live Fire MOUTs to work in conjunction with the dedicated MOUT targetry in the support of training.

M.1.3.6 Vehicle Moving Target The Vehicle Moving Target simulates a vehicle (usually a hostile armor vehicle) moving from one concealed position to another. It runs on a rail behind a protective berm. It receives its power from on-board batteries. It receives its commands via a radio link with the HHC. The VMT realistically simulates a vehicle moving on the range

M.1.3.7 Battle Effects Simulator (BES) The Battle Effects Simulator (BES) (also known as an Omega-36 or Omega-60) ignites pyrotechnic charges on command. The device uses a variety of Pyrotechnic charges to simulate battlefield effects. It is normally used in conjunction with an infantry or armor target lifter, but may be configured as a stand alone device. The BES is portable, battery operated, and wireless. These devices are actually maintained and are part of the inventory of equipment under the Live Fire Targetry System SOW (Appendix J). However, since they are portable and may be utilized throughout the base, they may be employed at the either or both of the Live Fire MOUTs to work in conjunction with the dedicated MOUT targetry in the support of training.

M.1.3.8 Small Arms Sound Simulator (Infantry Hostile Fire Simulator) (SASS). The SASS provides realistic sound simulation of a single shot and automatic rifle fire. The SASS consists of a tubular, gun-like barrel with a combustion chamber. A mixture of oxygen and propane gas is ignited in the combustion chamber by a spark plug producing the sound. It normally receives its commands through an infantry target mechanism but may be configured as a stand alone device.

M.1.9 Dust Generators (DG). The dust generator kit is a radio-controlled device consisting of a dust generator, electronic control unit (ECU), and interface cable and antenna assembly. The kit is a radio-controlled, stand-alone device that produces/simulates a dust effect generated by moving vehicles moving in a desert environment by airborne dispersion of chalk or native material. Signatures of 1-10 minutes in duration of billowing dust are selectable via manual or remote control. These devices are actually maintained and are part of the inventory of equipment under the Live Fire Targetry System SOW (Appendix J). However, since they are portable and may be utilized throughout the base, they may be employed at the either or both of the Live

Fire MOUTs to work in conjunction with the dedicated MOUT targetry in the support of training.

M.1.10 Black Smoke Generators (BSG). The black smoke generator is a non-pyrotechnic kill effects simulator. The BSG consists of the adjustable/head assembly, fuel cell vault/control assembly, and main control box. The assembly uses acetylene gas for fuel. Remote control of the BSG is via a hand held controller device (HHCD) or range control system. Normally the BSG is interfaced with a target lifter but may be configured as a stand alone device. These devices are actually maintained and are part of the inventory of equipment under the Live Fire Targetry System SOW (Appendix J). However, since they are portable and may be utilized throughout the base, they may be employed at the either or both of the Live Fire MOUTs to work in conjunction with the dedicated MOUT targetry in the support of training.

M.1.11 Smoky Sam Simulator (SSS). The SSS is a visual cueing system that provides a safe, cost-effective missile simulation. This system was developed to provide aircrews an indication that they were being attacked by surface-to-air missiles (SAMS). It provides a realistic representation of the SA-7, SA-8, SA-9, SA-13, SA-N-4 and SA-N-6 for aircrew training. The major components of the SSS are the GTR-18A Rocket, the PVU- 3A/E Igniter, and the LMU-24B/E four-bay launch platform. The SSS receives its commands from the CIU via a SSS/CIU Interface Device. The SSS may be connected to a target mechanism or may be used as a stand-alone device with only a CIU and power supply. The COMS Contractor will be responsible for the maintenance of the LMU- 24B/E, Interface Devices, all of the associated electronic circuitry, and for loading, unloading, and disposing of pyrotechnic devices as local regulations or by Standard Operating Procedures. These devices are actually maintained and are part of the inventory of equipment under the Live Fire Targetry System SOW (Appendix J). However, since they are portable and may be utilized throughout the base, they may be employed at the either or both of the Live Fire MOUTs to work in conjunction with the dedicated MOUT targetry in the support of training.

M.2 Operation and Maintenance Requirements.
The live fire facilities shall contain a variety of targets with appropriate controllers. The following descriptions relate to the type of live fire facility target arrays, controllers and other related components that may be used throughout the facilities:

1. Friend and Foe type target silhouettes to train in target identification procedures.
2. Controllers are portable, battery operated, and wireless
3. Target lifters are portable, battery operated, and wireless

4. In window targets (crew served weapons, individual weapons, non-combatant)
5. In doorway targets (crew served weapons, RPG, individual weapons, non-combatant)
6. Internal structure targets (individual weapons, non-combatant)
7. Rooftop personnel targets (crew served, RPG, and individual weapons)
8. External vehicles targets
9. External personnel targets
10. External targets for approach/external fires (CFF/CAS)
11. Target placement that stimulates fire and maneuver along and between streets
12. Reconfigurable target placement to provide scenario creation of mutual overlapping urban fires
13. Targets with and without bullet traps
14. Protective berms/bunkers for external target mechanisms
15. Battle Effects Simulators located at various locations
16. Sound Effects Simulators located at various locations
17. Black Smoke Generators located at various locations

The COMS Contractor shall be responsible for operation of the training devices during scheduled training events. The Contractor shall ensure that the equipment is operationally ready at the commencement of each scheduled training session. The Contractor shall be responsible for the installation and removal of targets in the MOUT to include the installation of target silhouettes and attachment of hit sensors. The Contractor shall respond to specific direction from the Government representative for desired initial condition of the devices. The Contractor shall work closely with the using units in employing the training devices to their maximum capabilities. The Contractor shall be fully capable of operating each system in order to troubleshoot the system and fault-isolate malfunctions. The Contractor shall be available to provide operational demonstrations of the range and training systems during periods other then normal operational use by the Marine Corps. Operational demonstrations will be considered part of the Planned Scheduling Requirements as delineated in paragraph M.12.1.

M.2.1 Maintenance. The maintenance concept consists of on-site (organizational) and off-site (depot) maintenance. The on-site maintenance consists of preventive maintenance and corrective maintenance for all equipment listed in this appendix, which includes but is not limited to: target mechanisms, controllers, battery chargers, batteries, battery eliminators, three dimensional targets, smoke generators, small arms sound simulators(SES,BES)if installed, and communication systems. The on-site corrective maintenance shall include any fault detection, fault isolation, and removal and replacement to the lowest

replaceable unit (LRU) in order to restore the MOUT facility to operational status in minimal time. Off-site (depot) level maintenance consists of repairs that exceed the capability of the on-site maintenance level.

In addition, the COMS Contractor is responsible for acquisition, at Contractor's expense, for all supplies to repair/replace the training device and to replenish any repair parts used from inventory furnished by the Government.

Special Safety Consideration

At any time the Contractor's personnel suspect that there is live ordnance (other than pyrotechnics) in the vicinity of any device they are working on, they shall immediately notify Range Control, and the COMS COR.

Battery Maintenance. The Contractor shall be responsible for all maintenance on the batteries used within the facilities. This shall include a weekly inspection of all batteries deployed in the MOUT, cleaning of all batteries and connecting cables, adding distilled water as necessary, removal of discharged batteries to the battery charging building, recharging as necessary, and replacement in the target mechanisms. The Contractor shall maintain the spare batteries in a charged condition so that whenever a battery is removed from the target mechanisms for servicing, a spare battery is inserted to replace it. The Contractor shall not leave target mechanisms without fully functional batteries when the facilities are scheduled for use. The Contractor shall also be responsible for the operation and maintenance of all battery charging equipment.

M.2.1.1 Target Maintenance. The Contractor shall be responsible for installing the 3-D infantry targets and/or life-size mannequins on the mechanisms and ensuring that if required, the laser hit detectors and/or ballistic hit sensors are attached to each target and are fully operational. The COMS Contractor shall replace the 3-D infantry targets and/or life-size mannequins when they are no longer serviceable. Paper or plastic "Friend or Foe" Target Silhouettes mounted on plywood or attached to stakes as free standing (interior or exterior) or attached directly to the wall (usually interior) may be used in place of target lifters. The Contractor shall be responsible for patching, installing, and/or mounting these silhouettes. The Contractor shall be responsible for fabricating (or procuring through commercial sources) these "Friend or Foe" target silhouettes.

The Contractor shall be responsible for fabricating (or procuring through commercial sources) the target silhouettes used on armor targets as required. Generally these targets resemble the outline of threat armor vehicles but may be other patterns such as friendly armor vehicles, friendly-wheeled vehicles,

threat wheeled vehicles, etc. The silhouette targets are usually constructed of plywood, lumber, glue, screws and nails; they may be constructed of other materials if approved by the COR. The silhouettes will require painting after fabrication. The targets shall be constructed to the specifications provided to the Contractor by the COR. The pattern, size, and color of the targets used in the range may vary from scenario to scenario and/or from target location to target location depending on the training requirements. In no case will a target exceed the maximum size or weight capacity of the target lifting mechanism upon which it is mounted. If no specifications in regards to these limits exist, the COR will make the final determination on the adequacy of the mechanism to lift the targets.

The Contractor shall be responsible for installing the targets in the mechanisms and ensuring that the laser hit detectors (if required) and/or ballistic hit sensors are attached to each target and are fully operational. The Contractor shall also be responsible for maintaining the targets once mounted on the target mechanisms. This shall include repainting and patching as required to maintain the integrity of the target such that the ballistic hit sensors can properly sense impacts anywhere on the target surface and/or laser rangefinders will range properly. When targets have been repaired to such a state that further repairs will not provide for the satisfactory transmission of vibrations from rounds impacting on the target to the ballistic hit sensors (in order to cause that impact to be detected) that target shall be replaced. The COR will have the final authority on whether a target is repairable or needs to be replaced. Unless specifically requested otherwise by the scenario, a target mechanism that has a target installed which is in such a state of repair that it cannot properly detect hits, shall be considered 100% down.

M.2.1.2 Laser Hit Detectors. As required for training, laser hit detectors, laser hit detector harnesses, laser target interface devices, MILES target interface devices, interconnecting cabling, laser retroreflectors, and batteries for the laser detector equipment will be provided to the Contractor as GFE. If required, the COMS Contractor shall install this equipment on the targets in accordance with the training scenario's requirements. The COMS Contractor shall ensure that this equipment is fully functional and capable of detecting hits by the infantry targets. The COMS Contractor shall replace any of this equipment which fails with other GFE provided by the COR. The COMS Contractor shall repair/replace any equipment damaged as a result of negligence on the part of the COMS Contractor, corrective maintenance of this equipment will be provided by other contractors. As required by the training scenario, the COMS Contractor shall remove any previously installed MILES/Laser Equipment, returning targets to live-fire capability.

M.2.1.3 Thermalized Targets. The Contractor shall respond to the requirements of the training scenarios by providing thermalized targets when and where requested. The pattern of the thermalization to be installed on the targets will be provided to the Contractor by the COR. If the weapons systems being used are compatible and the atmospheric, wind or weather conditions permit the proper thermal signature from no-power thermal material, such material shall be adequate. If any of the aforementioned conditions preclude the use of no-power thermal material, heated thermal targets will be required. The Contractor, at Contractor's expense, shall procure (or fabricate) the necessary heated panels or blankets to meet the training requirements. These panels or blankets shall work on batteries. The contractor shall also be responsible for the procurement, maintenance, and replacement of the batteries. Thermalization material using other than batteries may be used if such material provides an adequate thermal signature and is approved by the COR. The Contractor shall be responsible for the repair, patching, and/or replacement of thermal material, panels, blankets, or interconnecting cabling that fail, including if such failure was caused by damage from live fire. Targets that are to be thermalized in accordance with the training scenario are considered 100% down when such thermalization fails. If such failures are caused by live fire, chargeable downtime will not commence until the Contractor is provided adequate time to make repairs to the target. The COR will make the final decision when chargeable downtime commences.

M.2.2 Range Communication System. The range communication system used on the live fire MOUTs will be provided and installed by the COMS Contractor at Contractor expense. This system at a minimum shall consist of one (1) 2-way radio in each Contractor vehicle. These radios will be used to keep in constant communication with the USMC Range Control Facility at BEARMAT (as required by base regulations) and for Contractor communications between vehicles and other facilities. These radios shall conform to the specifications provided by the Government. These radios shall be considered GFE and will be programmed and maintained by the Government and shall remain as Government property at the end of the contract.

M.2.3 Real Property Maintenance.

M.2.3.1 MOUT Structure Maintenance. The COMS Contractor is responsible for the maintenance of the live-fire facility structures. Maintenance includes all areas of upkeep, repair and/or replacement. As applicable to the structure type, this includes but is not limited to: boards, sandbags, support timbers, roof repair, stairs and ladder wells, doors, window and door frames, SACON panels, exterior walls, gates, structural integrity, lighting, generators, tunnels, and trap doors Contractor repair/replacement of non-structural support items (such as board siding) shall be initiated when 40% of the surface

area has been damaged/destroyed. Contractor repair/replacement of structural support items such as timbers, trusses, roofs, etc. or any item providing physical support for Marine personnel such as steps, stairs, railings, landings, etc. will be at the direction of the MAGTF Training Command, 29 Palms representative tasked to certify the safety of the house. On a recurring basis, the contractor shall inspect these structures and replace/repair or sand smooth any protruding material that may constitute a puncture hazard to personnel/equipment. The COMS Contractor shall be responsible for the upkeep of the bullet traps, ballistic hit shields, and SACON panels located in the various structures. Upkeep shall include emptying the traps as needed and replacing the bullet-trapping material and SACON panels as needed. SACON panels require replacement when determined to be a safety hazard by MAGTF Training Command or when bullets begin to penetrate more than 2/3 (66%)of the way through a panel (as measured from the front of the panel to the back of the bullet) anywhere on the panel's surface. Approved patching techniques of the SACON panels are permissible as long as the ballistic integrity of the panel is maintained.

The intent of this effort is for the COMS Contractor to be fully responsible for the integrity of the structures and for the protection of the target mechanisms from direct fire. Damage to a target mechanism due to direct fire is presumed to be from inadequate target protection and the COMS Contractor is responsible for replacing these damaged mechanisms at his expense. Loss of target use/availability due to lack of/degraded structure maintenance by the COMS Contractor will result in the target/targets being considered down for degraded operation calculations (chargeable downtime).

Occasionally buildings, walls, or other range facilities may be accidentally damaged by tactical vehicles or inadvertent hits by larger caliber weapons. While the Government has policies and procedures in place to prevent such occurrences, during the stressful live fire exercises, mishaps do sometimes happen. As such, an occasional mishap is unavoidable and shall be considered as part of the normal use of the range. The Contractor shall be responsible for repairing this damage when it occurs as part of the normal range maintenance effort under this SOW.

M.2.3.1.1 Facilities Modifications. At the direction of the COR the COMS Contractor shall be responsible for making minor modifications to facilities and structures in order to enhance training, increase flexibility or improve safety. Such modifications shall be limited to building and/or moving interior wall partitions, moving and/or re-arranging SACON blocks, building and/or moving rubble piles, wooden facades, adding safety rails, adding fixed ladders, adding safety cages, closing off doorways, closing off windows, cutting new windows, cutting new doorways, moving and/or re-arranging scrap vehicles, moving

and/or re-arranging jersey barriers, moving and/or re-arranging furniture, etc.

M.2.3.2 Roads Maintenance. The COMS Contractor is not responsible for the base Main Service Roads (MSR) leading up to the training area. The COMS contractor shall be responsible for the maintenance of all roads leading into the facilities from the MSR as well as all complex-integrated roads,(approximately 5 kilometers of roads), in accordance with the following:

(1) Regular grading – performed on an on-going basis as required to keep the roads passable. Grading is performed on the length and width the roads and performed to repair surface defects and irregularities (holes, ruts, corrugation, and washouts). The road will be capable of accommodating transit by two-wheel drive vehicles when the maintenance has been successfully completed,

(2) Normal cyclic maintenance will be done four times each year at the direction of the COR. The contractor will be given 5 days notice for cyclic maintenance requests. At each cyclic maintenance period, the roads will be graded, crowned, compacted, and ditched. Grading is performed on the full length and width of the roads and performed to repair surface defects and irregularities (holes, ruts, corrugation, and washouts). Soils may be taken from parallel ditches and used to fill holes and restore uniformity of grade and crown. Graded roads shall have a three (3) inch slope from the crown at the centerline to each side to ensure proper drainage. Ditches shall be pulled to a 3 to 1 slope. When the cyclic maintenance has been successfully completed, the road will be capable of accommodating comfortable transiting by two wheel drive vehicles. The COR will determine what is comfortable transiting. In addition to roads, there is a requirement for berm repair to maintain the building pads by replacing fill removed/damaged due to heavy vehicle traffic; and for the repair of flood control berms, ditches and channels which shall be restored to their as-built condition.

(3)Additionally, the COR may require corrective maintenance to be done up to four additional times per year, where storm damage, deterioration, or other factors require repair or restoration of the roads, pads, ditches, channels, and berms. Corrective maintenance will be called for when in the judgment of the COR, damage or deterioration is sufficient to require immediate correction. The portions of road, pads, ditches, channels, and berms needing corrective maintenance will be completed to the same standard required for normal cyclic maintenance. Note: Culverts are sometimes ineffective in this type of terrain. The COMS contractor is not responsible for the replacement of culverts; however, he may be tasked to repair a segment of road from which a culvert has washed away as a normal part of any cyclic or corrective maintenance effort.

M.2.3.3 Fill/Dirt Materials Requirements. In conjunction with COMS Contractor maintenance of berms, firing positions, tank trails and roads, the Contractor shall obtain natural fill/dirt materials from the immediate areas surrounding the berms, firing positions, tank trails and tracking roads. When these materials are not available, the COR will coordinate use of base resources to provide material to the COMS Contractor.

M.2.3.4 Pyrotechnics (as required). During daily and weekly preventative maintenance checks the Contractor shall determine which pyrotechnic devices require reloading. The COMS Contractor shall be responsible for ordering and obtaining, from the MAGTF Training Command representative, the types and quantities of pyrotechnics required, picking them up from the MAGTFTC Magazine Area, and transporting them to the device locations. The COMS Contractor is required to handle pyrotechnic charges, load and unload pyrotechnic devices, repackage and return pyrotechnics to the MAGTF Training Command Magazine Area as required, and is responsible for the maintenance of the components of the pyrotechnic charge firing mechanisms. All COMS Contractor activities involving pyrotechnics shall be in accordance with all Federal, State, local and MAGTF Training Command SOP regulations.

M.2.3.5 Target Berm Maintenance. The COMS Contractor shall maintain the earthen berms, timbers, and other forms of protection surrounding target mechanisms. This includes all supporting efforts as required to accomplish this task, such as: removing dirt to replace a timber/support and replacing dirt. The intent of this effort is for the COMS Contractor to be fully responsible for the protection of the target mechanisms from direct fire. Damage to a target mechanism due to direct fire is presumed to be from inadequate target protection and the COMS Contractor is responsible for replacing these damaged mechanisms at his expense. The COMS Contractor must demonstrate to the COR that the damage was caused by something other than inadequate protection, such as in the case of a hit by a ricocheted projectile. Such contested target damage must be brought immediately to the attention of the COR for determination. Loss of target use/capability due to lack of/degraded berm maintenance by the COMS Contractor will result in the target/targets being considered “down” for degraded operation calculations (chargeable downtime). In addition, the Contractor is responsible for re-burying any of the down range wiring which becomes exposed due to wind, water, or live fire erosion.

M.2.4 Repair Parts Salvage. During the period of this contract, equipment may be damaged beyond repair by direct/indirect live-fire rounds, troop movements or other means beyond the control of the COMS Contractor. Whenever equipment is damaged beyond repair, the Contractor shall report this to the COR, recommend replacement of the damaged unit, and salvage whatever parts

possible once replacement has been authorized by the COR. These parts shall be used for repair of other pieces of equipment as appropriate, and shall be added to the current inventory and shall remain the property of the Government. Equipment damaged beyond economical repair will be replaced by the Contractor. The Contractor shall maintain, at a minimum, the same number of target devices originally fielded with the MOUT facilities.

M.2.5 Disposal of Used Materials. The Contractor shall arrange for the removal of used target materials, scrap materials from damaged components of the MOUT facilities, and broken replacement parts from the MOUT system emplacement area. This material shall be disposed of as directed by the COR, and in accordance with all base and local Government regulations.

M.3 Major Hardware Items

EQUIPMENT LISTING (Company MOUT Complex):	QUANTITY
Pop-up Infantry Targets	85
Infantry Moving Target System (Running Man)	2
Vehicle Moving Target	2
Portable Armor Target	10
Hand Held Controllers	3

EQUIPMENT LISTING (Convoy MOUT Complex):	QUANTITY
Pop-up Infantry Targets	25
Infantry Moving Target System (Running Man)	1
Vehicle Moving Target	1
Hand Held Controllers	3

M.4 MOUT Degraded Operation Matrices.

PERCENT OF DEGRADATION

SYSTEM/SUBSYSTEM	NUMBER OF SYSTEMS FAILED										
COMPANY MOUT COMPLEX	1	2	3	4	5	10	20	30	50	65	85
Infantry Target Mech.	2	4	6	8	10	20	30	40	50	75	100
Running Man Target	5	15									
Vehicle Moving Target	5	15									
Hand Held Controllers	25	50	100								
SYSTEM/SUBSYSTEM	NUMBER OF SYSTEMS FAILED										
CONVOY MOUT COMPLEX	1	2	3	4	5	10	14	16	18	20	25
Infantry Target Mech.	3	6	9	12	15	30	35	45	60	75	100
Running Man Target	15										
Vehicle Moving Target	15										
Hand Held Controllers	25	50	100								

Total System Degradation

The degradation for each of the MOUT Complexes is found by adding the percentage of target degradation to the percentage of controller degradation. For example, if the targets are 20% degraded and the controllers are 25% degraded the total degradation of the system is 45%. If both live-fire complexes were utilized for the same scheduled use, the total degradation would be the sum of the two individual degradations.

M.5 Office, Storage and Maintenance Space. In addition to any office, storage, and maintenance spaces at the Main Camp Area, at a location near R210 (Grid 08301190) the Contractor will be provided a storage container and fenced in lot. No additional spaces will be provided to support R205.

M.6 Office Furniture and Equipment. The Government will not provide any additional office furniture and/or equipment.

M.7 Consumables. All consumables including batteries (except as noted in Par .2.2.1.1 (MILES equip.) will be provided by the Contractor. Some examples of consumables to be provided by the Contractor are as follows: Paint, Petroleum/Oils and Lubricants (POL), Fuses, Bulbs, Filters, Belts, Fiberglass/Plywood, wooden boards, doors, nails, Thermal Material, SACON panels, ballistic shields, SACON Patching material, Armor Targets (Thermal and Non-Thermal), 3-D Plastic Infantry Targets, "Friend or Foe" Silhouettes, Supplies required to fabricate Targets, Oxygen Gas, Propane Gas, Nitrogen Gas. Etc.

M.8 Tools and Test Equipment. The Government will not provide any additional tools and/or test equipment.

M.9 Spares **and Repair Parts**. See paragraph 3.6 of the basic SOW for this contract.

M.10 Inspections. The Government will perform periodic contract compliance inspections, operational readiness, and maintenance checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections by ensuring that the system is available, and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of the training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph M.12.1

M.11 Technical Data Support Package (TDSP). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training facility/device.

M.12 Operating Hours and Planned Scheduling Requirements. It is anticipated The MOUT facilities will be scheduled for a maximum of 300 days per year for each facility. The number of days and hours per day that the facilities will be used will vary from mission to mission. Some exercises may last as long as 15-20 consecutive days and include continuous training of up to 24 hours per day. Training may be scheduled at various times within a regular seven (7) day week. Weekend and holiday training hours will be the same as weekday training. The only holidays observed at the MOUT Facility are Christmas Day (Dec 25) and New Years Day (Jan 1).

M.12.1 Scheduled MOUT Facility Usage.

a. The Contractor will be provided a minimum of 24 hours notice for all changes to the training schedule for the MOUT Facility.

b. The facilities may be scheduled up to 24 hours for any scheduled use.

c. Normal scheduling day is a period of 24 hours, not necessarily 0001 hours to 2400 hours. Scheduled usage could start at any time during the 24 hours of the day.

d. In the event a training unit fails to arrive within one hour of their scheduled start time or fails to notify the COMS Contractor of anticipated late arrival within one hour of the scheduled start time or leaves prior to scheduled end of training, the COMS Contractor shall contact the COR for further instructions.

e. The Contractor will be provided maintenance time (TBD) between each scheduled use of the MOUT Facility. Some or all of this maintenance period may be during periods of darkness. In the event that scheduled uses run consecutively, the Contractor may be required to perform maintenance tasks during training evolutions as directed by the COR.

f. Use of the MOUT Facility for MILES and/or scenario development will be considered the same as regular scheduled training.

g. Scheduled usage for demonstrations will be credited as actual usage.

M.13 Janitorial Requirements. COMS Contractor shall maintain the MOUT storage area as directed by the COR. The COMS Contractor shall provide all cleaning supplies and equipment. Examples of janitorial services are:

(1) Daily (when in use):
  (a) Empty trash cans.
  (b) Sweep floor.

(2) Weekly:
  (a) Dust furniture and equipment

In addition, four times per year the Contractor shall perform a complete sweep down & cleanup of Range 205 and Range 210. This will consist of the removal of all trash, MRE debris, brass, links, empty ammo boxes, ammo crates, banding material, etc. throughout the entire range area including all of the structures.

M.14 Location of Training Device/System. The Company Live Fire MOUT complex will be located within the Bullion Training Area. This facility will be located in the vicinity of grids 04590701-04820631-05350722-05580653.

The Multi-Vehicle Convoy Live Fire MOUT complex will be located in the Prospect Training Area at the vicinity of grids 89509720-90309760-89809635-90409645

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N.1 Description and Quantity. The Training Area East (TA East) Complex currently includes Ranges 51,200,215, **U.N Compound, UWTC**

Compound, Forward Operating Bases (FOB) and associated training areas. Additional areas may be added in the future.

LOCATION: MAGTF TRAINING COMMAND, TWENTYNINE PALMS, CA

COMS Contractor Mobilization Date – 1 December 2007
COMS Contractor Support Date – 1 January 2008

N.1.1 Description.

The facilities consist of multiple, reconfigurable, container-type structures used for non-live fire force-on-force training operations, primarily using simmunitions and/or MILES type equipment. Initially the complex will be powered by generators and will eventually contain instrumentation and training target devices.

All locations will require varying degrees of real property maintenance. Roads will be of variable width allowing and limiting vehicle movement. Primary roads shall be capable of supporting armored vehicle movement.

N.2.0 Operation and Maintenance Requirements.

N.2.1 Operation.
Support requires the COMS Contractor to ensure that the facilities are ready for training at the commencement of each scheduled training session. The Contractor shall respond to specific direction from the Government representative for desired initial condition of the facilities. The Contractor may be required to operate targetry, battle effects simulators, smoke generators, and/or other training devices during the conduct of training. The Contractor shall work closely with the using units in employing the training facilities to their maximum capabilities.

N.2.2 Maintenance. The COMS Contractor is responsible for the maintenance of the structures including requirements listed in the Real Property Maintenance paragraphs below. Maintenance includes all areas of upkeep, repair and/or replacement. As applicable to the structure, this includes but is not limited to: board siding, sandbags, support timbers, roof repair, stairs and ladder wells, doors, window and door frames, tunnels, trap doors, exterior walls, gates and structural integrity of the containers located in the complex. The intent of this effort is for the COMS Contractor to be fully responsible for the integrity of the structures. The Contractor shall be responsible for the following if installed: HVAC units, bunkers, PA Systems, **Audio/Visual Systems**, breacher kits, CPR Mannequins, dust generators, generators, generator-powered light towers (Gov't. provides fuel), target mechanisms, controllers, battery chargers,

batteries, battery eliminators, three dimensional targets, smoke generators, small arms sound simulators (SES,BES), Guard Towers and communication systems.

Special Safety Consideration
At any time the Contractor's personnel suspect that there is live ordnance (other than pyrotechnics) in the vicinity of any device they are working on, they shall immediately notify Range Control, and the COMS COR.

N.2.3 Range Communication System. The range communication system used at the training area will be provided and installed by the COMS Contractor at Contractor expense. This system at a minimum shall consist of one (1) 2-way radio in each Contractor vehicle. These radios will be used to keep in constant communication with the USMC Range Control Facility at BEARMAT (as required by base regulations) and for Contractor communications between vehicles and other facilities. These radios shall conform to the specifications provided by the Government. These radios shall be considered GFE and will be programmed and maintained by the Government and shall remain as Government property at the end of the contract.

N.2.4 Real Property Maintenance

N.2.4.1 Facility Maintenance. The COMS Contractor is responsible for the **on-going** maintenance of the facility structures and associated equipment including any generators installed at the facility. Maintenance includes all areas of upkeep, repair and/or replacement. This includes but is not limited to: container painting, structural integrity, internal board siding, roof hatches, wooden window panels, shade structures, lighting fixtures, building & overhead wiring, telephone poles, street lights, electrical panels, electrical distribution equipment, walled compounds, wooden facades, **bunkers**, **guard rails, curbs**, **jersey barriers**, bleachers, palm trees, door locks, street signs, HVAC units, gates, stairs/ladder wells, doors, door frames, lighting, tunnels, and trap doors located in the complex. Contractor repair/replacement of non-structural support items (such as board siding) shall be initiated when 40% of the surface area has been damaged/destroyed; repair/replacement of any item providing physical support for Marine personnel such as steps, stairs, railings, landings, etc. will be at the direction of the MAGTF Training Command, 29 Palms representative tasked to certify the safety of the structure. On a recurring basis, the contractor shall inspect these structures and replace/repair or smooth any protruding material that may constitute a puncture hazard to personnel/equipment. The Government will be responsible for providing fuel for the generators. As part of the range facilities maintenance effort the Contractor shall have the

capability and shall assist in the off-loading of deliveries of range infrastructure GFE from trucks and/or trailers arriving at the range. Occasionally buildings, walls, or other range facilities may be accidentally damaged by tactical vehicles or equipment. While the Government has policies and procedures in place to prevent such occurrences, during the stressful MOUT exercises, mishaps do sometimes happen. As such, an occasional mishap is unavoidable and shall be considered as part of the normal use of the range. The Contractor shall be responsible for repairing this damage when it occurs as part of the normal range maintenance effort under this SOW.

N.2.4.1.1 Facilities Modifications. At the direction of the COR the COMS Contractor shall be responsible for making minor modifications to facilities and structures in order to enhance training, increase flexibility or improve safety. Such modifications shall be limited to building and/or moving interior wall partitions, moving and/or re-arranging containers, building and/or moving rubble piles, wooden facades, adding safety rails, adding fixed ladders, adding safety cages, closing off doorways, closing off windows, cutting new windows, cutting new doorways, moving and/or re-arranging scrap vehicles, moving and/or re-arranging jersey barriers, moving and/or re-arranging furniture, etc. Additionally, the contractor shall be responsible for the replacement and fabrication of street signs, building signs and billboards within the TA East Facility.

N.2.4.2 Roads Maintenance. The COMS Contractor is not responsible for the base Main Service Roads (MSR) leading up to the facilities. The COMS contractor shall be responsible for the maintenance of all roads leading into the complex from the MSR as well as all complex-integrated roads, including roads utilized for Improvised Explosive Device (IED) training and Forward Operating Base (FOB) access (approximately 20 kilometers of roads), in accordance with the following:

(1) Regular grading – performed on an on-going basis as required to keep the roads passable. Grading is performed on the length and width the roads and performed to repair surface defects and irregularities (holes, ruts, corrugation, and washouts). The road will be capable of accommodating transit by two-wheel drive vehicles when the maintenance has been successfully completed,

(2)Normal cyclic maintenance of roads will be done four times each year at the direction of the COR. The contractor will be given at least 5 days notice when cyclic maintenance is required. At each cyclic maintenance period, the roads will be graded, crowned, compacted, and ditched. Grading is performed on the full length and width of the roads and performed to repair surface defects and irregularities (holes, ruts, corrugation, and washouts). Soils may be taken from parallel ditches and used to

fill holes and restore uniformity of grade and crown. Graded roads shall have a three (3) inch slope from the crown at the centerline to each side to ensure proper drainage. Ditches shall be pulled to a 3 to 1 slope. When the cyclic maintenance has been successfully completed, the road will be capable of accommodating comfortable transiting by two wheel drive vehicles. The COR will determine what is comfortable transiting. In addition to roads, there is a requirement for shoulder berm repair for the following locations: maintain a three (3) foot berm along the river road between Texas Bridge and Oliver Bridge (approx. 600m), maintain the building pads by replacing fill removed/damaged due to heavy vehicle traffic; and for the repair of flood control berms, ditches and channels which shall be restored to their as-built condition. **In addition to the above requirements, the Contractor shall remove sand and debris from the culverts along and/or in the dry riverbed. Cyclic maintenance (grading) shall be performed on the riverbed to ensure its capability to divert runoff and prevent flooding.**

(3) Additionally, the COR may require corrective maintenance to be done up to four additional times, where storm damage, deterioration, or other factors require repair or restoration of the roads, pads, ditches, channels, **culverts** and shoulder berms. Corrective maintenance will be called for when, in the judgment of the COR, damage or deterioration is sufficient to require immediate correction. The portions of road, pads, ditches, channels, **culverts** and shoulder berms needing corrective maintenance will be completed to the same standard required for normal cyclic maintenance.

(4) Soil Cement resurfacing. The Soil Cement (or similar road-sealing material) coating on Range 51 may need periodic maintenance, patching, etc. on a recurring basis to maintain the integrity of the road. It may need to be replaced on an annual basis depending upon usage and weather conditions. The COR will make the final determination as to the need to replenish/resurface the area originally coated with this treatment.

N.2.5 ATV (Mule) Vehicle Maintenance and Repair. During the period of this contract, the COMS contractor shall be responsible for scheduled and corrective (unscheduled) maintenance of six (6) Kawasaki ATV (Mule) Vehicles.

For scheduled maintenance the COMS contractor shall be responsible for the pick-up and delivery of the Mules to the local authorized Kawasaki dealer for maintenance and the return to the complex. The costs for the scheduled maintenance shall be the responsibility of the COMS contractor.

For corrective/unscheduled maintenance the COMS contractor shall be responsible for the pick-up and delivery of the Mules to the local authorized Kawasaki dealer for maintenance/repair and the return to the complex. The costs for the corrective/unscheduled maintenance shall be the responsibility of the COMS contractor.

The Contractor is not responsible for providing fuel and lubricants except as a part of the above maintenance requirements. The Contractor is not responsible for damage caused by unauthorized/abusive use of the vehicles by Government personnel.

N.2.6 Pyrotechnics. As required for training and directed by the Government, the Contractor shall determine which pyrotechnic devices require reloading. The COMS Contractor shall be responsible for ordering from the MAGTF Training Command representative the types and quantities of pyrotechnics required and obtaining and transporting them from the base Magazine Area to the device locations. The COMS Contractor is required to handle pyrotechnic charges, load and unload pyrotechnic devices, repackage and return pyrotechnics to the MAGTF Training Command Magazine Area as required, and is responsible for the maintenance of the components of the pyrotechnic charge firing mechanisms. All COMS Contractor activities involving pyrotechnics shall be in accordance with all Federal, State, local and MAGTF Training Command SOP regulations.

N.2.7 Repair Parts Salvage. During the period of this contract, equipment may be damaged beyond repair by simmunitions rounds, troop movements or other means beyond the control of the COMS Contractor. Whenever equipment is damaged beyond repair, the Contractor shall report this to the COR, recommend replacement of the damaged unit, and salvage whatever parts possible once replacement has been authorized by the COR. These parts shall be used for repair of other pieces of equipment as appropriate, and shall be added to the current inventory and shall remain the property of the Government. The Contractor will replace equipment damaged beyond economical repair.

N.2.8 Disposal of Used Materials. The Contractor shall arrange for the removal of scrap materials from damaged components of the complex facilities and broken replacement parts from the container emplacement area. This material shall be disposed of as directed by the COR, and in accordance with all base and local Government regulations.

N.3 Major Hardware Items

EQUIPMENT LISTING QUANTITY

Containers (Range 215 Complex)	**1044**
Containers (Range 200 Complex)	254
Containers (Range 51 EOD Complex)	**13**
Containers (UN Compound)	**25+(1)Triple wide trailer**
UWTC Admin Compound	**8**
FOB's (4), 2 containers each	**8**
Generators	**8**
HVAC Units	**21**
Tunnel Fans	**3**

N.4 Degraded Operation Matrix.

PERCENT OF DEGRADATION

	Number of Systems Failed											
SYSTEM / SUBSYSTEM	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**20**	**30**
1. Generators (8)	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**				
2.HVAC Units (21)	**3**	**6**	**9**	**12**	**15**	**18**	**21**	**24**	**25**	**30**	**60**	
3. Tunnel fans (3)	**2**	**4**	**6**									

N.5 Office, Storage and Maintenance Space. In addition to any office, storage, and maintenance spaces at the Main Camp Area, at the RTAM Facilities, the Contractor will be provided office and storage areas.

N.6 Office Furniture and Equipment. The Government will not provide any additional office furniture and/or equipment.

N.7 Consumables. The COMS Contractor shall supply all consumables required for support of the training complex unless otherwise noted. Some examples of consumables to be provided by the Contractor are as follows: Paint, Petroleum/Oils and Lubricants (POL), Fuses, Bulbs, Janitorial Supplies, Filters, Belts, Fiberglass/Plywood, wooden boards, doors, nails, cement, screws, hinges, latches, door locks, metal stock, rebar, welding gases, Etc.

N.8 Tools and Test Equipment. The Government will not provide any additional tools and/or test equipment.

N.9 Spare and Repairable Parts. See SOW paragraph 3.6 of the Basic SOW.

N.10 Inspections. The Government will perform periodic contract compliance inspections, operational readiness, and maintenance checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections by ensuring that the system is

available, and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of the training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system.

N.11 Technical Data Support Package (TDSP). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training facility/device.

N.12 Operating Hours and Planned Scheduling Requirements. It is anticipated the training Area East complex will be scheduled for a maximum of 300 days per year. The number of days and hours per day that the facilities will be used will vary from mission to mission. Some exercises may last as long as 11 consecutive days and include continuous training of up to 24 hours per day. Training may be scheduled at various times within a regular seven (7) day week. Weekend and holiday training hours will be the same as weekday training. The only holidays observed at TA East complex are Christmas Day (Dec 25) and New Years Day (Jan 1).

N.12.1 Scheduled Training Area East Usage.

a. The Government will be provided a minimum of 24 hours notice for all changes to the training schedule for the TA East Complex.
b. The facilities may be scheduled up to 24 hours for any scheduled use.
c. Normal scheduling day is a period of 24 hours, not necessarily 0001 hours to 2400 hours. Scheduled usage could start at any time during the 24 hours of the day.
d. The Contractor will be provided maintenance time between each scheduled use of the complex, some or all of this maintenance time may be during periods of darkness. In the event that scheduled uses run consecutively, the Contractor may be required to perform maintenance tasks during training evolutions as directed by the COR.
e. Use of the complex for MILES and/or scenario development will be considered the same as regular scheduled training.
f. Scheduled usage for demonstrations will be credited as actual usage.

N.13 Janitorial Requirements. COMS Contractor shall maintain assigned areas as directed by the COR. The COMS Contractor shall provide all cleaning supplies. At the completion of every exercise the Contractor shall hose down (and scrape if necessary) the “blood houses” at R200 and/or R215. In addition, four times per year the Contractor shall perform a complete sweep down &

cleanup of Range 200, Range 215, the FOBS and the entire TA East Training Complex. This will consist of the removal of all trash, MRE debris, brass, links, empty ammo boxes, ammo crates, banding material, etc. throughout the entire range area including all of the structures.

N.14 Location. The TA East Training Complex is located in the East Training Area. The area is somewhat "L" shaped and generally falls within the boundaries drawn out by the following **seven grids, 88009130-88509200-92009300-92008900-89508900-89508800-88008800, at the MAGTF Training Command 29 Palms, Ca.**

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P.1 Description and Quantity. MOUT AIR & INDIRECT LIVE FIRE RANGES. Currently includes the following ranges: R630 and R620. additional requirements may be added at a later date.

LOCATION: MAGTF TRAINING COMMAND, TWENTYNINE PALMS, CA

COMS Contractor Mobilization Date – 1 December 2007
COMS Contractor Support Date – 1 January 2008

P.1.1 Description.
At R630 the facilities consist of multiple, reconfigurable, container-type structures used for air delivered and in-direct live fire training operations in an urban environment. All **ordnance used at the range is dud producing.**

The range will require real property maintenance. Roads will be graded and clearly defined.

At R620 the facilities consist of multiple, container-type structures used for in-direct live fire training operations in an urban environment. The range and/or the containers are **not** targets. They serve as a reference/training aid only. In-direct live fire is directed at the outskirts and edges of the range. However, occasionally collateral damage will occur. Ordnance used at the range is dud producing. The following requirements shall apply to the structures:

A. Multi-story structures
B. Single-story structures

P.2.0 Operation and Maintenance Requirements.

P.2.1 Operation.
At R630 support requires the COMS Contractor to ensure that the facility is ready for training at the commencement of each scheduled training session. The Contractor shall respond to specific direction from the Government representative for desired initial condition of the facility. The Contractor may be required to operate targetry, battle effects simulators, smoke generators, and/or other training devices during the conduct of training. The Contractor shall work closely with the using units in employing the training facilities to their maximum capabilities. **When JDAMs are scheduled for use on Range 630, the Contractor shall be responsible for placing warning signs and/or barriers at roads and intersections designated by Range Control/Range Safety as required to block off the required SDZ for that weapon.**

At R620 there are no Contractor operation requirements.

P.2.2 Maintenance. At R630 the COMS Contractor is responsible for the maintenance of the structures including requirements listed in the Real Property Maintenance paragraphs below.

Maintenance includes all areas of upkeep, repair and/or replacement. As applicable to the structure, this includes but is not limited to: board siding, sandbags, support timbers, roof repair, stairs and ladder wells, doors, windows and door frames, structural integrity of the containers located in the complex. The intent of this effort is for the COMS Contractor to be fully responsible for the integrity of the structures. The Contractor shall be responsible for the following if installed: bunkers, dust generators, target mechanisms, target silhouettes, mannequins, controllers, battery chargers, batteries, battery eliminators, three dimensional targets, smoke generators, small arms sound simulators (SES,BES), etc.

At R620 the maintenance is limited to quarterly removing and replacing any containers which have become unserviceable.

Special Safety Consideration

At any time the Contractor's personnel suspect that there is live ordnance (other than pyrotechnics) in the vicinity of any device they are working on, they shall immediately notify Range Control, and the COMS COR.

P.2.3 Range Communication System. The range communication system used at the training area will be provided and installed by the COMS Contractor at Contractor expense. This system at a minimum shall consist of one (1) 2-way radio in each Contractor vehicle. These radios will be used to keep in constant communication with the USMC Range Control Facility at BEARMAT (as required by base regulations) and for Contractor communications between vehicles and other facilities. These radios shall conform to the specifications provided by the Government. These radios shall be considered GFE and will be programmed and maintained by the Government and shall remain as Government property at the end of the contract.

P.2.4 Real Property Maintenance

P.2.4.1 Facility Maintenance. At R630 the COMS Contractor is responsible for the maintenance of the facility structures and associated equipment installed at the facility. Maintenance includes all areas of upkeep, repair and/or replacement **including the removal and replacement of unserviceable containers.** This includes but is not limited to: container painting, structural integrity, internal board siding, roof hatches, walled compounds, wooden facades, gates, stairs/ladder wells, doors, door frames, Contractor repair/replacement of non-structural support items (such as board siding) shall be initiated when 40% of the surface area has been damaged/destroyed; repair/replacement of any item providing physical support for Marine personnel such as steps, stairs, railings, landings, etc. will be at the direction of the

MAGTF Training Command, 29 Palms representative tasked to certify the safety of the structure. On a recurring basis, the contractor shall inspect these structures and replace/repair or smooth any protruding material that may constitute a puncture hazard to personnel/equipment. At R620 facilities repairs shall be limited to removing and replacing unserviceable containers. Occasionally buildings, walls, or other range facilities may be accidentally damaged by tactical vehicles or equipment. While the Government has policies and procedures in place to prevent such occurrences, during the stressful MOUT exercises, mishaps do sometimes happen. As such, an occasional mishap is unavoidable and shall be considered as part of the normal use of the range. The Contractor shall be responsible for repairing this damage when it occurs as part of the normal range maintenance effort under this SOW. In addition, the contractor shall be responsible for the removal and replacement of buildings destroyed during live fire air and artillery operations.

P.2.4.1.1 Facilities Modifications. At the direction of the COR the COMS Contractor shall be responsible for making minor modifications to facilities and structures in order to enhance training, increase flexibility or improve safety. Such modifications shall be limited to moving and/or re-arranging containers, building and/or moving rubble piles, wooden facades, adding safety rails, adding fixed ladders, adding safety cages, closing off doorways, closing off windows, cutting new windows, cutting new doorways, moving and/or re-arranging scrap vehicles, moving and/or re-arranging jersey barriers, etc.

P.2.4.2 Roads Maintenance. The COMS Contractor is not responsible for the base Main Service Roads (MSR) leading up to the facilities. There are no roads to maintain at R620. At R630 the COMS contractor shall be responsible for the maintenance of all roads leading into the complex from the MSR in accordance with the following:

(1)Normal cyclic maintenance of roads will be done four times each year at the direction of the COR. The contractor will be given at least 5 days notice when cyclic maintenance is required. At each cyclic maintenance period, the roads will be graded, crowned, compacted, and ditched. Grading is performed on the full length and width of the roads and performed to repair surface defects and irregularities (holes, ruts, corrugation, and washouts). Soils may be taken from parallel ditches and used to fill holes and restore uniformity of grade and crown. Graded roads shall have a three (3) inch slope from the crown at the centerline to each side to ensure proper drainage. Ditches shall be pulled to a 3 to 1 slope. When the cyclic maintenance has been successfully completed, the road will be well defined and readily identifiable from the air. In addition to roads, there is a

requirement for the repair of flood control berms, ditches and channels which shall be restored to their as-built condition.

(2) Additionally, the COR may require corrective maintenance to be done up to four additional times, where storm damage, deterioration, or other factors require repair or restoration of the roads, ditches, channels, and shoulder berms. Corrective maintenance will be called for when, in the judgment of the COR, damage or deterioration is sufficient to require immediate correction. The portions of road, ditches, channels, and shoulder berms needing corrective maintenance will be completed to the same standard required for normal cyclic maintenance.

P.2.6 Pyrotechnics. As required for training and directed by the Government, the Contractor shall determine which pyrotechnic devices require reloading. The COMS Contractor shall be responsible for ordering from the MAGTF Training Command representative the types and quantities of pyrotechnics required and obtaining and transporting them from the base Magazine Area to the device locations. The COMS Contractor is required to handle pyrotechnic charges, load and unload pyrotechnic devices, repackage and return pyrotechnics to the MAGTF Training Command Magazine Area as required, and is responsible for the maintenance of the components of the pyrotechnic charge firing mechanisms. All COMS Contractor activities involving pyrotechnics shall be in accordance with all Federal, State, local and MAGTF Training Command SOP regulations.

P.2.7 Repair Parts Salvage. During the period of this contract, equipment may be damaged beyond repair by simmunitions rounds, troop movements or other means beyond the control of the COMS Contractor. Whenever equipment is damaged beyond repair, the Contractor shall report this to the COR, recommend replacement of the damaged unit, and salvage whatever parts possible once replacement has been authorized by the COR. These parts shall be used for repair of other pieces of equipment as appropriate, and shall be added to the current inventory and shall remain the property of the Government. The Contractor will replace equipment damaged beyond economical repair.

P.2.8 Disposal of Used Materials. The Contractor shall arrange for the removal of scrap materials from damaged components of the complex facilities and broken replacement parts from the container emplacement area. This material shall be disposed of as directed by the COR, and in accordance with all base and local Government regulations.

P.3 Major Hardware Items

EQUIPMENT LISTING	QUANTITY
Containers (Range 620 Complex)	26
Containers (Range 630 Complex)	550

P.4 Office, Storage and Maintenance Space. The Government will not provide any additional office, storage, or maintenance spaces.

P.5 Office Furniture and Equipment. The Government will not provide any additional office furniture and/or equipment.

P.6 Consumables. The COMS Contractor shall supply all consumables required for support of the training complex unless otherwise noted. Some examples of consumables to be provided by the Contractor are as follows: Paint, Petroleum/Oils and Lubricants (POL), Fuses, Bulbs, Janitorial Supplies, Filters, Belts, Fiberglass/Plywood, wooden boards, doors, nails, cement, screws, hinges, latches, door locks, metal stock, rebar, welding gases, Etc.

P.7 Tools and Test Equipment. The Government will not provide any additional tools and/or test equipment.

P.8 Spare and Repairable Parts. See SOW paragraph 3.6 of the Basic SOW.

P.9 Inspections. The Government will perform periodic contract compliance inspections, operational readiness, and maintenance checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections by ensuring that the system is available, and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of the training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system.

P.10 Technical Data Support Package (TDSP). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training facility/device.

P.11 Operating Hours and Planned Scheduling Requirements. It is anticipated the training Area East complex will be scheduled for a maximum of 100 days per year. The number of days and hours per day that the facilities will be used will vary from mission to mission. Some exercises may last as long as 11 consecutive days and include continuous training of up to 24 hours per day. Training may be scheduled at various times within a regular seven

(7) day week. Weekend and holiday training hours will be the same as weekday training. The only holidays observed at TA East complex are Christmas Day (Dec 25) and New Years Day (Jan 1).

P.11.1 Scheduled Training Area East Usage.

a. The Government will be provided a minimum of 24 hours notice for all changes to the training schedule for Range 630 and Range 620.
b. The facilities may be scheduled up to 24 hours for any scheduled use.
c. Normal scheduling day is a period of 24 hours, not necessarily 0001 hours to 2400 hours. Scheduled usage could start at any time during the 24 hours of the day.
d. The Contractor will be provided maintenance time between each scheduled use of the complex, some or all of this maintenance time may be during periods of darkness. In the event that scheduled uses run consecutively, the Contractor may be required to perform maintenance tasks during training evolutions as directed by the COR.
e. Use of the complex for scenario development will be considered the same as regular scheduled training.
f. Scheduled usage for demonstrations will be credited as actual usage.

P.12 Janitorial Requirements. COMS Contractor shall maintain assigned areas as directed by the COR. The COMS Contractor shall provide all cleaning supplies.

In addition, four times per year the Contractor shall perform a complete sweep down & cleanup of Range 630. This will consist of the removal of all trash, MRE debris, brass, links, empty ammo boxes, ammo crates, banding material, etc. throughout the entire range area including all of the structures. At R620 the Contractor's requirements shall be limited to removing and replacing unserviceable containers.

P.13 Location. Range 620 and 630 are located in the Quackenbush Range Training Area at the MAGTF Training Command, 29 Palms, CA.

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Q.1 Description and Quantity. Live Fire Targetry System

COMS Contractor Mobilization Date – 1 December 2007
COMS Contractor Support Date – 1 January 2008

The Live Fire Targetry System consists of: a range control system with both fixed and portable capability; stationary targets; smoke generators; dust generators , battle effects simulators, and MILES compatible shoot back devices placed in protective dug-in emplacements throughout the Live Fire Training area. This system is used for live-fire combined arms training of Marine Air Ground Task Forces (MAGTF) and for various other live fire training missions. This area covers a majority of the base although the entire area may or may not be used in any given exercise. All in all, it covers an area of nearly 900 square miles. The exercise scenarios vary each time. Targets may utilize a launching device that fires various types of pyrotechnics on command or automatically depending on what effect the operator wishes to create. This system provides a realistic threat environment for the exercise force to work against, thereby significantly improving training. The ITM, THM/TG, TTM and other devices are constructed on a modular basis so that the majority of field maintenance tasks involve simple module replacement, allowing component level repair back at the maintenance shop.

Major hardware items for this system are listed in paragraph Q.3

Range Controller (RC). The Range Controller (RC) is completely portable and uses a two-way radio link for command of all TTMs and their pyrotechnic devices. Although portable, it may be used in a control tower environment. It has the capability to change target sensitivity remotely and stores all hit count information for later review. It can be programmed with scenarios in advance so that exercises can be run exactly as requested by the customer. These automatic scenarios can be stopped should a safety concern require it.

Hand Held Controller Device (HHCD). The Hand Held Controller Device (HHCD) is completely portable and uses a two-way radio link for command of all THM/TGs, SATs, SITs, BSGs, DGs, LSBDs, and associated pyrotechnic devices. Although portable, it may be used in a control tower environment. It has the capability to change target sensitivity remotely and stores all hit count information for later review. It can be programmed with scenarios in advance so that exercises can be run exactly as requested by the customer. These automatic scenarios can be stopped should a safety concern require it.

Range Control Station (RCS). The Range Control Station (RCS) is completely portable and uses a two-way radio link for command of all THM/TGs, SATs, SITs, BSGs, DGs, LSBDs, and associated pyrotechnic devices. Although portable, it may be used in a control tower environment. It is based on a ruggedized laptop PC with an external radio module. It has all the same capabilities as the HHCD along with enhanced memory, enhanced scenario writing capabilities, and an interactive map display of the range and targetry. The RCS has also has an external 12VDC to 110VAC inverter so that the PC and radio can be run on 12V vehicle power to increase battery life/run time.

Target Holding Mechanism/Tank Gunnery (THM/TG). The THM/TG is installed as a stationary target lifter. The THM/TG lifts a 2D, 2+D, or 3D target silhouette that is configured to look like a vehicle, usually a hostile armor vehicle. Control signals, including raise target, lower target, and activate Battle Effects Simulator are received through the Control Interface Unit. The THM/TG receives its 12VDC power from an external battery.

Tank Target Mechanism (TTM). The Tank Target Mechanism is a stationary armor lifter that is radio controlled. It lifts a 2D, 2+D, or 3D target silhouette that is normally configured to look like a hostile armor vehicle. Control signals for the target and pyrotechnic operations are received at the target and it transmits hit counts and target status back to the Range Controller.

Stationary Armor Target (SAT). The device is a radio-controlled armor target lifter designed to display frontal target boards. The SAT consists of the frame, hydraulic actuator powered by a 12-volt dc motor, and the electronics control unit (ECU). The hand-held controller device (HHCD) or a range control station (RCS) with radio interface is used to control the SAT.

Stationary Infantry Target (SIT). The radio controlled stationary infantry target is a device designed to display and retract three-dimensional or flat panel target silhouettes. The SIT can be controlled by either a range control station (RCS) with a radio interface or by a hand held controller device (HHCD)

Dust Generators (DG). The dust generator kit is a radio-controlled device consisting of a dust generator, electronic control unit (ECU), and interface cable and antenna assembly. The kit is a radio-controlled, stand-alone device that produces/simulates a dust effect generated by moving vehicles moving in a desert environment by airborne dispersion of chalk or native material. Signatures of 1-10 minutes in duration of billowing dust are selectable via manual or remote control. The kit operates in the 150–174 MHz frequency range.

Black Smoke Generators (BSG). The black smoke generator is a non-pyrotechnic kill effects simulator. The BSG consists of the adjustable/head assembly, fuel cell vault/control assembly, and main control box. The assembly uses acetylene gas for fuel. Remote control of the BSG is via a hand held controller device (HHCD) or range control system. For remote operations, the BSG must be interfaced with one of the following target lifters:

SIT – Stationary Infantry Target
SAT – Stationary Armor Target
THM/TG – Target Holding Mechanism/Tank Gunnery with interface Kit installed.

2D Target with Laser Hit Detectors and/or Ballistic Hit Sensors. The target is a silhouette of a vehicle, usually a threat armor vehicle, but may be other shapes. It is constructed of painted expanded metal or painted plywood, and holds the Laser Hit Detectors and/or the Ballistic Hit Sensors. These sensors are wired to the CIU circuitry. The expanded metal and plywood targets are repairable using patches, until the target has been hit frequently enough to warrant replacement. The non-thermal targets are fabricated on site by the COMS Contractor using commercially procured expanded metal or plywood. Both materials require painting prior to being used as targets. Thermal targets are obtained through commercial sources or may be manufactured by attaching thermal panels (blankets) to a non-thermal armor targets made of plywood or metal.

2+D Target with Laser Hit Detectors and/or Ballistic Hit Sensors. The target is a realistic high definition silhouette of a vehicle, usually a threat armor vehicle, but may be other shapes. It is a frontal silhouette with about 18" of depth on both sides, top, and bottom; giving it a somewhat 3D appearance. It is constructed of molded plastic. The 2+ D silhouettes must be mounted to wooden legs and cross members for strength. The Laser Hit Detectors and/or the Ballistic Hit Sensors are mounted directly to the 2+ D silhouettes. These sensors are wired to the CIU circuitry. The 2+D targets are repairable using patches, until the target has been hit frequently enough to warrant replacement. Thermal 2+D targets are manufactured by attaching thermal panels (blankets) to the silhouette.

3D Target with Laser Hit Detectors and/or Ballistic Hit Sensors. The 3D targets replicate the physical dimensions of the T-72 Tank and the BMP armored personnel carrier. The targets also provide a thermal (IR) signature similar to the actual armored vehicle and provide a return for laser ranging devices. In addition, the targets can be enhanced to provide further detail for radar

signatures. Each target weighs less than 250 pounds and can be installed and ready for use in less than 1 hour. Design of the target permits transport by pick-up or humvee. The target is raised and lowered using the standard THM/TG or SAT. The target is constructed using a galvanized steel frame made up of ¾″ electrical metallic tubing conduit connected using EMT pulling elbows and compression couplings. The frame is covered with a fire retardant mesh fabric cover. The cover is constructed of a premium knitted shade cloth made of 100% highly ultraviolet stabilized polyethylene fibers. IR signature control low emissivity fabric is sewn onto mesh fabric cover in select locations to simulate engine and track compartments thermal signatures. The Laser Hit Detectors and/or the Ballistic Hit Sensors are mounted directly to the 3D silhouette. These sensors are wired to the CIU circuitry. The 3D targets are repairable using patches, until the target has been hit frequently enough to warrant replacement.

Battle Effects Simulator (BES) There are three different BESs used on the Live Fire Target System. The ATKS (also known as a Joanell Device, the Omega-36, and the Omega-60 all perform similar functions; although the ATKS and the Omegas do use different ammunition. These devices ignite pyrotechnic charges on command. When used with the Hostile Fire pyrotechnic cartridge, they simulate the flash and sound of tank main gunfire. When used with a steel-on-steel pyrotechnic cartridge, they simulate the sparks and flash occurring when a round impacts on an armor vehicle. In addition the Omegas can also be used with a Missile Launch or an Air Burst cartridge. The ATKS has twenty firing tubes. The Omega-36 has 36 firing tubes. The Omega-60 has 60 firing tubes. The BES is normally used in conjunction with an armor target lifter but may be used with an infantry target lifter or even as a stand-alone device (with the proper interface).

Target Assembly Power Supply (TAPS). The Target Assembly Power Supply consists of a 12 Volt DC lead-acid battery and a trickle charger solar panel.

Smoky Sam Simulator (SSS). The SSS is a visual cueing system that provides a safe, cost-effective missile simulation. This system was developed to provide aircrews an indication that they were being attacked by surface-to-air missiles (SAMS). It provides a realistic representation of the SA-7, SA-8, SA-9, SA-13, SA-N-4 and SA-N-6 for aircrew training. The major components of the SSS are the GTR-18A Rocket, the PVU- 3A/E Igniter, and the LMU-24B/E four-bay launch platform. The SSS receives its commands from the CIU via a SSS/CIU Interface Device. The SSS may be connected to a THM/TG (with CIU), a TTM, or may be used as a stand-alone device with only a CIU and power

supply. The COMS Contractor will be responsible for the maintenance of the LMU- 24B/E's Interface Devices, all of the associated electronic circuitry, and for loading, unloading, and disposing of pyrotechnic devices as local regulations or by Standard Operating Procedures.

MILES Shoot back Devices (MSD). The MILES shootback device (MSD) is a target simulator consisting of a shootback laser transmitter (SBLT), a pan/tilt traversing mechanism mounted on a tripod. A pan tilt interface unit assembly (electronics box) interfaces the SBLT and pan tilt device with a target mechanism. The MSD can be used with Stationary Infantry Targets (SIT), Stationary Armor Targets (SAT), or Target Holding Mechanisms/Tank Gunnery (THM/TG).

Q.1.1 Installation. The Contractor shall be responsible for the initial installation of all targets, target mechanisms, and all related equipment at approved new target bunker locations, which have been built by the Contractor. The COMS Contractor shall be responsible for emplacing the target mechanism, fastening it to ground, providing mechanism stabilization, installing the armor target (2D, 2+D or 3D), installing BESs, connecting hit sensor cables, BESs cables and lifting cable (if required). Lifting arms of 3-D target mechanisms must be no less than +0 degrees and no more than +14 degrees above the target itself. The Contractor is responsible for providing a means of attaching the cable from the 3-D target to the lifting arms in a manner that will allow the lifter to easily raise the 3-D target. It is estimated that initial installation of each target with mechanism into a prepared emplacement should take no more than one (1) day.

Q.2 Operation and Maintenance Requirements.

Q.2.1 Operations. The Contractor shall be responsible for operation of the Live Fire Training System during scheduled training exercises. The Contractor shall be fully capable of operating the system in order to troubleshoot the system and fault-isolate malfunctions. The Contractor shall provide for the initial operational readiness check of the training system, and establish initial conditions and parameters, including type and quantity of installed targets, in response to published schedules (including revisions thereto). The Contractor shall assure that the Live Fire Training System is operationally ready at the commencement of each scheduled training session. The Contractor shall respond to specific direction from the COR for desired initial conditions of controls and targets including type and quantity.

The Contractor shall be responsible to ensure all target materials are available in adequate quantities, in serviceable condition, and installed on the Target Mechanisms for all

scheduled training requirements. The Contractor shall respond to direction from the COR as to the type and quantity of targets required for each scheduled training exercise. The Contractor shall ensure that the proper type and quantity of targets: two dimensional, 2.5 dimensional (2.5-D) and three dimensional (3-D), with or without thermal imaging capability and with or without Laser reflective capability are installed at each of the required target locations prior to all scheduled training exercise. All work performed by contractor personnel shall be accomplished in accordance with the approved Maintenance and Support Plan and applicable instructions, standards, and procedures contained in the technical data support package. All maintenance not covered by the aforementioned data will be governed by vendor/commercial data. The Contractor may have access to the Live Fire Training System emplacement area to perform maintenance anytime the target system and the training area are not required for scheduled training and he has received approval from Range Control. The contractor shall be given sufficient access time to the training device to perform all required maintenance functions. If the contractor is not allowed access to the training system to perform required maintenance and down time occurs because of this, such down time shall be considered non-chargeable. This period of non-chargeable downtime shall continue until the Contractor has been given sufficient access time to the training device to perform all required maintenance. Ultimately, chargeable/non-chargeable downtime will be determined by the COR.

Q.2.1.1 Check-In/Check-Out. Targetry Equipment listed under this SOW that is not being used for scheduled training events shall be available for check out to individual units. Check-in and Check-out times will be scheduled in advance and the Contractor shall be given at least 24 hours notice of these times. Issues or retrievals of equipment will only be scheduled to occur during normal business hours. Prior to issues the Contractor shall ensure that the requested equipment is functioning properly, that all batteries are fully charged, all gas cylinders are re-filled, etc. The Contractor shall provide instructions on initial start-up, operation, transportation, and securing of the targetry devices prior to every check-out of the system, if such instruction is requested by the using unit. Such instruction shall not exceed one half hour per session. Upon retrieval the Contractor along with the unit representative shall inventory, op-check, and make note of any damage or missing equipment. This information shall be passed on to the COR for action if appropriate. The Contractor shall issue at least one target with each target lifter.

Q.2.2 Maintenance. A regular schedule of preventive maintenance shall be performed by the Contractor in accordance with the approved Planned Maintenance System (PMS) and the approved Maintenance and Support Plan

associated with the individual devices. Because of the location of the training devices and the intensive use of the training areas by the Government, some of the preventive maintenance checks (especially Daily PM's) may not be able to be strictly adhered to. The Contractor shall request any deviations from the PMS or approved maintenance and support plan from the COR. The Contractor shall recommend PMS changes that, in his opinion, would result in either improved availability and/or reduced costs. Such recommendations shall be provided in writing to the COR.

The Contractor shall perform all corrective maintenance on system components and the material support package. On-site maintenance as a minimum shall consist of trouble-shooting and fault isolation, on-line replacement of malfunctioned components and modules, and the use of test capabilities of the HHCD to minimize target equipment downtime prior to the operational training periods. Off-line corrective maintenance as a minimum shall consist of required analysis, troubleshooting, disassembly, repair/replacement, reassembly, adjustment, calibration, and testing to correct each malfunction, reinstallation at the target emplacement area, removal of foreign material(s) including water, and functional test to verify proper operation.

Q.2.3 Battery Maintenance. The Contractor shall be responsible for all maintenance on the batteries used with the Live Fire Training System. This shall include a weekly inspection of all batteries deployed in the system, cleaning of all batteries and connecting cables, adding distilled water as necessary, removal of discharged batteries to the battery charging building, recharging as necessary, and replacement in the target mechanisms. The Contractor shall maintain the spare batteries in a charged condition so that whenever a battery is removed from the target mechanisms for servicing, a spare battery is inserted to replace it. The Contractor shall not leave target mechanisms without batteries when the system is scheduled for use. The Contractor shall also be responsible for the maintenance of all GFE battery charging equipment.

Q.2.4 Pyrotechnics. During daily and weekly preventative maintenance checks the Contractor shall determine which pyrotechnic devices (Battle Effects Simulators) require reloading. The COMS Contractor shall be responsible for ordering and obtaining, from the MAGTF Training Command representative, the types and quantities of pyrotechnics required, picking them up from the MAGTFTC Magazine Area, and transporting them to the device locations. The COMS Contractor is required to handle pyrotechnic charges, load and unload

pyrotechnic devices, repackage and return pyrotechnics to the MAGTF Training Command Magazine Area as required, and is responsible for the maintenance of the components of the pyrotechnic charge firing mechanisms. COMS Contractor personnel involved with handling pyrotechnics shall hold current certification as approved by MAGTF training command. All COMS Contractor activities involving pyrotechnics shall be in accordance with all Federal, State, local and MAGTF Training Command SOP regulations.

Q.2.5 Explosive Ordnance Disposal. The Contractor is not required to perform maintenance on any device if he suspects there is live ordnance (with exception of pyrotechnics) in the vicinity (see Special Safety Considerations). In the event of a misfire, follow procedures set forth in pyrotechnic S.O.P and local training.

Special Safety Consideration

At any time the Contractor's personnel suspect that there is live ordnance (other than pyrotechnics) in the vicinity of any device they are working on, they shall immediately notify Range Control, and the COMS COR.

Q.2.6 Range Communication System. The range communication system used at the training area will be provided and installed by the COMS Contractor at Contractor expense. This system at a minimum shall consist of one (1) 2-way radio in each Contractor vehicle. These radios will be used to keep in constant communication with the USMC Range Control Facility at BEARMAT (as required by base regulations) and for Contractor communications between vehicles and other facilities. These radios shall conform to the specifications provided by the Government. These radios shall be considered GFE and will be programmed and maintained by the Government and shall remain as Government property at the end of the contract.

Q.2.7 Target Fabrication and Maintenance. The Contractor shall be responsible for fabricating vehicle silhouette pop-up targets and infantry targets from suitable materials in accordance with Marine Corps (or Army) specifications and standards for target fabrication, which include size, durability, and markings. Target construction will include: design, fabrication, coloring, and applying required thermal and/or laser reflective properties and mounting them on target mechanisms located in the Live Fire Training System emplacement area as required. The Contractor may choose to procure targets from commercial sources. Any targets procured from commercial sources shall meet the same specifications. There will be a minimum of 300 3-D infantry targets, 100 3-D *armor* targets and 75 2.5-D *armor targets* provided by the Government, these minimum

quantities shall be maintained by the Contractor at all times.

The Contractor shall be responsible for maintaining the targets once mounted on or attached to the target mechanisms. This shall include patching, repairing and repainting as required, and ensuring that the laser hit detectors and/or ballistic hit sensors are properly attached to each target and are fully operational. Thermal imaging targets will be required for night training, and in some cases, for daylight training. Thermal targets may be obtained through commercial sources or may be manufactured by attaching 12V thermal panels (blankets) or no-power thermal material to non-thermal targets (if 12V thermal panels are utilized, the Contractor is responsible for supplying the 12V batteries). In the event that a target requires replacement, the Government will specify where the new target is to be placed.

Q.2.8 Disposal of Used Target Materials. The Contractor shall arrange for the removal of used target materials, scrap materials from damaged components of the target system, and broken replacement parts from the Live Fire Training System emplacement area. This material shall be disposed of as directed by the COR, and in accordance with all base and local Government regulations.

Q.2.9 Repair Parts Salvage. During the period of this contract target devices, Control Interface Units (CIU's), and other ancillary equipment may be damaged beyond repair by direct hits by live fire rounds, tactical vehicles, or other means beyond the Contractor's control. Whenever a device, CIU, or other piece of ancillary equipment is damaged beyond repair, the Contractor shall report this to the COR, recommend replacement of the damaged unit, and salvage whatever parts possible once replacement has been authorized by the COR. These parts shall be used for repair of other system devices, CIU's, or other ancillary devices as appropriate, and shall be added to the current inventory and shall remain the property of the Government. At the Government's discretion, equipment damaged beyond economical repair will either be replaced by the Government or dropped from the current inventory, when the COR determines such damage was not the result of Contractor negligence, abuse, and/or Contractor failure to accomplish required preventive, planned or corrective maintenance including all range maintenance responsibilities.

Q.2.10 Modifications. When notified by the COR, the Contractor shall install government approved training system modifications as a matter of normal maintenance effort which shall be considered within the scope of this contract. Such modifications shall be limited to the

electro-mechanical components of the system devices, re-arrangement of types of installed targets, minor modifications to the target bunkers, building new target emplacements, and when required the movement of existing targets and target mechanisms to other locations on the range.

Q.3 Major Hardware Items.

NAME	ABBREVIATION	QTY
CONTROL INTERFACE UNITS	CIU	237
RANGE CONTROLLERS	RC	15
HAND HELD CONTROLLERS	HHC	15
TARGET HOLDING MECHANISMS/TANK GUNNERY	THM/TG	159
TANK TARGET MECHANISM	TTM	239
BATTLE EFFECTS SIMULATOR (JOANELL DEVICES)	BES	647
BATTLE EFFECTS SIMULATOR (Omega-36)	BES	55
BATTLE EFFECTS SIMULATOR (Omega-60)	BES	85
TARGET SUPPORT PACKAGES (THM/TG)	TSP	160
TARGET SUPPORT PACKAGES (TTM)	TSP	249
SOLAR PANELS	SP	409
SMOKY SAM SIMULATOR	SSS	23
BLACK SMOKE GENERATORS	BSG	12
DUST GENERATORS	DG	5
STATIONARY INFANTRY TARGET	SIT	216
LASER SHOOT BACK DEVICES	LSBD	162
HANDHELD CONTROLLER	HHC	15
RANGE CONTROL STATION	RCS	4
3-D TARGETS (T-72)		20
3-D TARGETS (BMP)		80
2.5-D TARGETS (BMP)		75
STATIONARY ARMOR LIFTERS	SAT	100
3-D INFANTRY TARGETS		300

Q.4 Degraded Operation Matrix

At each Individual Target Location:

Subsystem	**Number Inoperable**	**% of Degradation**
Target	1	100%
Target Lifter	1	100%
BES	2	50%

HHCD/RC Controllers (see system degradation below)

Note: A malfunction of one pyrotechnic device at four different individual target locations would be the equivalent of a 100% failure of one target location (4 x 25% = 100%).

System Degradation

Target Locations

The number of individual target locations used during an exercise will vary from use to use based on the individual scenario being used. Therefore, the target location degraded operation schedule is based on the percentage of individual target locations used for any given scenario. The percentage of system degradation equals the percentage of the given scenario's individual target locations that are 100% inoperable. For example, if a scenario calls for 100 targets and 25 target locations are 100% inoperable, the system is 25% degraded.

Controllers

The number of HHC/RC Controllers used during an exercise will vary from use to use. An individual scenario may require the use of only one HHC/RC or a more complicated scenario may require as many as five or six HHC/RC's. Therefore, the Controller degraded operation schedule is based on the percentage of HHC/RC's required for any given scenario. The percentage of system degradation equals the percentage of required HHC/RC's that are inoperable. For example, if a scenario requires five HHC/RC's and one malfunctions, the system is 20% degraded. This degradation only applies to HHC/RC's that are actually required for system operation and not to any "spare" or "backups" which, if inoperable, will not affect the systems operation.

Total System Degradation

The total degradation for the Live Fire Training System is found by adding the percentage of target location degradation to the percentage of controller degradation. For example, if the target locations are 25% degraded and the controllers are 20% degraded the total degradation of the system is 45% for any scheduled use.

Q.5 Office, Storage and Maintenance Space. In addition to any office, storage, and maintenance spaces at the Main Camp Area the Contractor will be provided a battery charging/storage facility Bldg. 2152 which is located out near the entrance to the training areas.

Q.6 Office Furniture and Equipment. No additional office furniture and/or equipment will be provided to the COMS Contractor.

Q.7 Consumables. The COMS Contractor will supply all consumables necessary for the operation and maintenance of the Live Fire Training System. Some examples of consumables needed for operation and maintenance of the system are as follows:

Armor Targets (Thermal; Laser reflective, hit sensitive, capable of activating pyrotechnics), Paint, Petroleum, Oils and Lubricants (POL), Computer Paper, Printer Cartridges, Fuses/Bulbs, Facilities Maintenance Supplies, Hydraulic Fluid Cleaning Supplies, Supplies required to replace, fabricate and/or patch targets (2.5-D & 3-D), nitrogen and acetylene gases, 12v Lead/Acid Batteries, 3-D infantry targets, chalk.

Q.8 Tools and Test Equipment. No additional tools or test equipment will be provided to the Contractor.

Q.9 Spare and Repairable Parts. See paragraph 3.6 of the Basic SOW.

Q.10 Inspections. The Government will perform periodic contract compliance inspections, operational readiness, and maintenance checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections in providing the availability of the system, and providing whatever assistance is required by the Government in the performance of these inspections. Inspections of the training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph Q.12.

Q.11 Technical Data Support Package (TDSP). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training device.

Q.12 Operating Hours and Planned Scheduling Requirements. It is anticipated that the Live Fire Targetry System will be used a maximum of 175 days a year. The number of hours per day that the system will be used will vary from mission to mission. Some units will require the system 24 hours per day and others as little as 3 to 4 hours. For planning purposes, the average usage will be 8 hours per day.

Q.12.1 Scheduled Usage.

a. Normal scheduling day is a period of 24 hours, not necessarily 0000 hours to 2400 hours. For example, a scheduled usage could start at any time during the 24 hours of the day.

b. There may be simultaneous uses of the system in different training areas on the same day; these simultaneous uses shall be considered one single day of use for reporting purposes.

Q.13 Janitorial Requirements. The COMS Contractor shall maintain all assigned areas as directed by the COR. For the Live Fire Target System these areas shall include the battery charging/storage facility Bldg 2152. All cleaning supplies shall be provided by the COMS Contractor. Examples of janitorial services are:"

(1) Daily:
  (a) Empty trashcans and ashtrays
  (b) Sweep floor

(2) Weekly:
  (a) Dust furniture and equipment
  (b) Clean windows
  (c) Damp mop
  (d) Clean sink and toilet

(3) Monthly:
  (a) Clean air conditioner filter.

Q.14 Location of Training Device/System. The Live Fire Training System incorporates various locations throughout MAGTF Training Command's Range and Training Areas, this area is approximately 900 square miles.

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It is anticipated that a new system will be installed in the near future. This system will consist of cameras mounted indoors and outdoors, an After Action review (AAR) facility and associated equipment.

R.1 Description and Quantity. Tactical Video Capture System

COMS Contractor Mobilization Date – 1 December 2007
COMS Contractor Support Date – 1 January 2008

R.1.1 General Description and Function. The basic concept of the system requires physically detached video cameras mounted at various locations. Utilizing the cameras, this system has the capability to capture, store, display and provide After Action Review (AAR) reports of Urban Warfare Training (UWT) in Military Operations in Urban Terrain (MOUT) environments and other training areas. An operator in the AAR shelter uses video switching and telemetry equipment to operate the cameras and select the most appropriate video signal for recording. The system may be used to support training conducted at the small unit, squad, platoon and company level.

R.1.2 Equipment Components. The equipment necessary for the instrumentation system to operate includes:

a. video camera units to acquire the video information.

b. Links to send video to the shelter and telemetry commands back to the cameras.

c. One shelter containing video switching equipment, monitors, video recorders, camera telemetry, AAR equipment and other ancillary equipment.

d. Tactical Audio Capture System. Used to capture audio for inclusion in AAR reports.

R.2 Operation and Maintenance Requirements

R.2.1 Operation. The COMS Contractor shall provide a MOUT Combat Analyst (see par R.2.1.1 for requirements) in support of the Instrumentation System Operation and Maintenance. This individual's duties include but are not limited to operation of video cameras, audio equipment, projectors and pc based computers/servers in the capture, recording, storage, playback and AAR development of video and audio during a training exercise. This may include the development and recording of a CD/DVD AAR take home package and/or the capability to display video and audio from the training exercise in an AAR facility. The analyst shall be an active participant in the AAR process and provide playback and display of operations at the direction of Government and Military personnel. This analyst will be stationed in an 8' X 10' office area with an 8' X 30' classroom for AAR display and post-brief. The analyst shall insure that the system is powered and operational 30 minutes prior to each scheduled exercise and may include operations for demonstrations and distinguished visitors. The Government shall provide basic training unique to the video system.

AS 2.2.1 COMBAT ANALYST QUALIFICATIONS. Normally this position would be filled by a former Marine Corps Field Grade Officer or SNCO (Combat Arms); experience in MAGTF/MEF operations and tactics; experience in gaming and simulation. The MOUT Combat Analyst should: 1) be proficient in occupational specialty; 2) possess experience commensurate with MOUT operation, 3) have attended the professional schools appropriate for their rank or grade and occupational specialty; 4) have specific familiarity and understanding of Marine Corps operational doctrine, and the content of doctrinal and tactical publications specific to their occupational specialty; 5) maintain familiarity and understanding of current Marine Corps operational doctrine, and the content of doctrinal and tactical publications specific to their occupational specialty; 6) have a thorough understanding of Command, Control and Communications.

The Combat Analyst must understand the mission, procedures, weapons systems, tactics, threat systems/tactics and coordinated tactics, syllabi associated with MOUT Operations. During an After Action Review, the Combat Analyst shall be able to engage in professional discussions of an event, focused on performance standards, which enables Marines to discover for themselves what happened, why it happened, and how to sustain strengths and improve on weaknesses. The Combat Analyst shall have a thorough knowledge of a job (duties and tasks). This knowledge qualifies the individual to assist in the training development process (i.e., consultation, review, analysis, etc.).

Responsibilities of the analyst for support of MOUT Instrumentation operations include but are not limited to:

1. Assist the Exercise Unit in meeting its training goals.
2. Using professional judgment, experience, and knowledge of the training situation, operate the equipment to meet requirements of the training unit.
3. Enter and extract required exercise data from the computer system.
4. Develop and document mission scenarios to support specified training.
5. Update/develop feedback information methodology of use to the using units undergoing training.
6. Conduct all identified/scheduled exercise coordination during trainer operating hours, make-up and additional training periods.
7. Upon request, the Contractor will provide a brief to the using units on the capabilities of the system to meet using units training objectives.

R.2.2 Maintenance. COMS Contractor maintenance responsibilities include organizational, intermediate, and depot level maintenance (preventative and corrective), including supply support, for all systems and equipment listed in this Appendix. Maintenance consists of the scheduled and unscheduled maintenance, including

organizational and depot maintenance of video, audio and pc based computers/servers, audio equipment, fiber optic networks, power distribution system **and HVAC system as installed** within the operating area. This effort also includes cameras, microphones, power and fiber optics placed throughout the operating area and or installed in the server room/office. The Government will provide basic operator/maintenance training unique to the video system.

R.3 Major Hardware Items

NOMENCLATURE	P/N	MFR	QTY
REMOTE EQUIPMENT:			
Camera		PTZ	12
Microphones			12
120v Transformer			12
Video/control cables			12
OPERATION CENTER EQUIPMENT:			
Video Server			2
Flashlight Video Renderer PC			1
Flashlight Alarm Renderer PC			1
Fixec Cam VBA PCs			
PTZ VBA PCs			
TFT LCD Monitor (21”)			2
3COM Superstack 3 Switch 24(port)			1
16COM to USB Attachment for video server			1
UPS			1
32xBNC patch panel			2
8x6 Distribution amplifier			2
45U rack			1
Rack cabling			12
VGA,mouse,keyboard,joystick patch panel			1
AAR LCD Projector			1
Tactical Audio Capture System			1

R.4 Degraded Operation Matrix.

PERCENT OF DEGRADATION

	NUMBER OF SYSTEMS FAILED						
SYSTEM/SUBSYSTEM	1	2	3	5	7	9	12
1.OPERATOR	100						
2. HVAC System	**50**						

R.5 Office, Storage and Maintenance Space. Maintenance space will be provided to the contractor.

R.6 Office Furniture and Equipment. No additional office furniture and/or equipment will be provided to the contractor.

R.7 Consumables. The COMS Contractor will supply all consumables necessary for the operation and maintenance of the MOUT Instrumentation System

R.8 Tools and Test Equipment. The COMS Contractor shall supply all tools and test equipment necessary for the operation and maintenance of the MOUT Instrumentation System

R.9 Spare and Repairable Parts. See paragraph 3.6. of the Basic SOW.

R.10 Inspections. The Government will perform periodic contract compliance inspections, operational readiness, and maintenance checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections in providing the availability of the system, and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph R.12.

R.11 Technical Data Support Package (TDSP). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training device. The TDSP includes vendor supplied COTS technical manuals for all major hardware items and government generated wiring diagrams.

R.12 Operating Hours and Planned Scheduling Requirements. The MOUT Instrumentation System will normally be utilized for a maximum of 233 days per year. The number of days and hours per day that the facilities will be used will vary from mission to mission. Some exercises may last as long as 11 consecutive days and include continuous training of up to 24 hours per day. Training may be scheduled at various times within a regular seven (7) day week. Weekend and holiday training hours will be the same as weekday training. The only holidays observed at the MOUT Facility are Christmas Day (Dec 25) and New Years Day (Jan 1).

R.12.1 Planned Scheduled Usage.

a. The facilities may be scheduled up to 24 hours for any scheduled use.

b. Normal scheduling day is a period of 24 hours, not necessarily 0000 hours to 2400 hours. For example, a scheduled usage could start at any time during the 24 hours of the day.

c. Contractor will be provided 24 hours notice for all schedule changes for the TVN.

d. Scheduled usage for demonstrations will be credited as actual usage.

e. The Contractor will be provided maintenance time (TBD) between each scheduled use of the Instrumentation System. Some or all of this maintenance period may be during periods of darkness.

f. Use of the Instrumentation System for scenario development will be considered the same as regular scheduled training.

R.13 Janitorial Requirements. COMS Contractor shall maintain the AAR areas as directed by the COR. The COMS Contractor shall provide all cleaning supplies and equipment. Examples of janitorial services are:

(1) Daily (when in use):
  (a) Empty trash cans.
  (b) Sweep floor.

(2) Weekly:
  (a) Dust furniture and equipment
  (b) Check air conditioner filter, replace as required.

R.14 Location of Training Device/System. The Instrumentation System is installed at MAGTF Training Command, 29 Palms, CA.

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S.1 Description and Quantity

COMS Contractor Mobilization Date – 1 December 2007
COMS Contractor Support Date – 1 January 2008

At MAGTF TRAINING COMMAND 29 Palms:

DEVICE	ABBREVIATION	DEVICE	QTY
AT-10 Target System	AT-10TS	AT-10	1
Subcaliber Mortar Trainer		M32A1	7
Hooligan Tool Kit (Breacher Kit)	HTK		6
Sound Effects Simulator	SES		12
Machine Gun Sim. (Badger)			**1**
Rescue Randy	RR		8
Javelin Field Tactical Trainer	**FTT**		**6**
Trauma Moulage Kit			10
Advanced Life Saving Trainer:(consists of one ea. of the following)			10
ALS Full Body			
Arm and Hand			
ECG Simulator			
CPR Head			

These systems and associated peripheral equipment make up the Minor Devices inventory at the MAGTF 29 Palms. These systems are used for a variety of small arms and armor vehicles training exercises. A general description of each system and its peripheral equipment is provided in the following sub-paragraphs.

S.1.1 AT-10 Target System. The AT-10 Target System is designed as a training target unit which can be used in an indoor or outdoor environment. The target unit consists of a series of target turning stands, target holders, stand-to-stand linkage, and a drive unit. The AT-10 Target System is operated by the master console (AT-10 CC). The system has the capability of turning up to 20 targets simultaneously. The drive system consists of a steel base plate, gearbox, electric clutch brake drive motor, crank arm, limit switches, cams, electrical box and covers. The AT-10 Targets are capable of turning 90 degrees. Targets can be commanded to EDGE and FACE. When commands are sent from operating system to targets, all targets will respond simultaneously. The

EDGE/FACE function is performed by use of single input control lines.

S.1.2 Subcaliber Mortar Trainer. The subcaliber mortar trainer is a pneumatically operated attachment designed to adapt a 60-mm or 81-mm mortar to fire the 25-mm training projectile on a 500-inch, 1,000-inch, or 2,000-inch range. The trainer is a unit packed in a case complete with: a projectile rack with twenty 25-mm training projectiles; a barrel and valve assembly, to adapt the operational mortar to receive the 25-mm projectiles and to release compressed air charges for simulating operational mortar fire; a bottle and valve assembly, to provide compressed air supply; a regulator assembly to control the pressure released for each charge; and a quick disconnect hose assembly, for attaching the air supply to the barrel and valve assembly.

S.1.3 Machine Gun Simulator (Badger). The system includes a machine gun simulator, oxygen and propane bottles, gas regulators, powered by a battery and triggered by a remote control, The training device is used to produce flash and sound for realistic simulation of small arms gunfire. The device may be fired remotely by an operator who is able to observe results. The gun assembly resembles an actual machine gun. It is tripod mounted and houses all the components required to mix the oxygen and propane in the correct proportions which, when automatically ignited by means of a spark, produces the flash and sound which approximates actual combat firing conditions. The Contractor shall ensure that adequate supplies of oxygen and propane gas are available for the machine Gun Simulator to meet all scheduled training requirements.

S.1.4 Hooligan's Tool Kit (HTK) The HTK (also known as an urban breacher kit) is a set of tools and equipment that Marines use to help breach doors, windows, gates, etc. to gain entry into buildings in an urban environment. These kits are available for check-out (in whole or in part) to units undergoing training in any of MAGTFTC's MOUT facilities. Each kit contains the following:

ITEM	QTY
HOOLIGAN TOOLS	1
BOLT CUTTERS	1
SLEDGE HAMMER	5
AXES	5
TELESTEP LADDERS	2
BATTERING RAM	2
EXTENDED MIRRORS	8
SPIKE STRIPS	2

DEWALT CIRCULAR SAW	1
DEWALT DRILL COMBO	1
THORS HAMMERS	3
HAND HELD METAL DETECTR	4
JUMPER CABLES	1
DEWALT CHARGER	1
BATTERIES	2
D-RINGS	1
SETS OF GLOVES	1
FLAT HEAD SCREW DRIVERS	5
PHILIPS SCREWDRIVERS	5
HAMMERS	5
KEVLAR GLOVE SETS	1
TOOL BACKPACKS	1
EMERGENCY LADDERS	1

S.1.5 Sound Effect Simulator (SES). The Sound Effects Simulator (SES) is a light weight, low profile, portable device which electronically reproduces the sounds of gunfire, but can be used to produce other sounds as well. The SES can be used in conjunction with target lifters or can be used as a stand alone unit. The SES provides for the simulated sounds of small arms fire through 50 Cal. weapons. It can fire burst or single shot. With the MPS player additional sounds may be recorded allowing for endless combinations such as; urban noise, calls to prayer, barking dogs, explosions, etc. In addition to maintaining the SES, the Contractor shall keep a library of sounds and shall develop and load onto the SES new scenarios in response to training requirements. The library of sounds shall be considered GFE. The SESs are available for check-out to units needing to use the device for whatever training they are doing.

S.1.6 Rescue Randy. Rescue Randy is used for lifelike adult victim handling, transportation, and extrication training. These manikins can be safely used in situations too hazardous or uncomfortable for human volunteers. Made of durable vinyl with 4,100 lb. test plastic-coated cables. Features include: articulated joints, weight distribution according to human weight distribution chart. Used for rescue and extrication from confined spaces, vehicles, collapsed buildings, smoke rooms, and ladder carry-down protocols. The mannequins are available for check-out to units needing to use the device for whatever life saving/rescue training they are doing.

S.1.7 ALS Trainer. The Advance Life Saving (ALS) trainer is a sophisticated medical mannequin used to train advanced life saving skills. The trainer contains teeth, uvula, vocal cords, glottis, epiglottis, larynx, arytenoids cartilage, trachea,

esophagus and inflatable lungs and stomach. Anatomical landmarks include the sternum, ribcage, and substernal notch. Additional features include oral and nasal airways for intubation, bag valve mask ventilation, delivery of supplemental oxygen, palpation of carotid pulse, ABC assessment, separate right and left lungs, auscultation of air movement, chest compressions and precordial thump, jaw thrust, IV sites in hand and arm for venipuncture, intramuscular injection site, blood pressure cuff placement, and rhythm recognition featuring 17 rhythms, both adult and pediatric. The trainer can be used with manual, semi-automatic and automatic defibrillators (A.E.D.). Each ALS package includes ECG rhythm generator, CPR head, intubation head, IV arm & hand, and soft carry bag. The mannequins are available for check-out, either whole or in part, to units needing to use the device for whatever life saving/rescue training they are doing.

S.1.8 Javelin FTT Trainer. Javelin is the premier man-portable, fire-and-forget anti-tank missile system. The Javelin FTT is a MILES-compatible, shoulder launched, anti-tank guided weapon trainer designed for both range and force-on-force training. It incorporates a directed MILES laser system with a tactical Command Launch Unit to provide cost- effective training for Marine Corps Javelin gunners. Use of these training devices is key to the tactical missile program, allowing first time gunners to achieve a 90 percent successful hit ratio when firing the tactical missile.

S.2 Operation and Maintenance Requirements

S.2.1 Operation. The COMS Contractor shall not be responsible for operation of the training systems during normal training periods. The Contractor shall be fully capable of operating each system in order to troubleshoot the system and fault-isolate malfunctions. The Contractor shall also be available to provide operational demonstrations of the training systems during periods other then normal operational use by the Marine Corps. Operational demonstrations will be considered part of the Planned Scheduling Requirements as delineated in paragraph S.12. The Contractor shall provide for the initial operational readiness check of each training system prior to use.

S.2.1.1 Operational Instruction. While the Contractor is not required to operate the training systems covered under this Appendix during training periods, the Contractor shall instruct Marine Corps operators in the proper handling (loading, unloading, traveling), hook-up, installation, and operation of the training systems when requested by the COR. This instruction

requirement shall not exceed 25 times a year with classes lasting 2 hours or less.

S.2.2 Maintenance. The Contractor shall be responsible for all levels of maintenance, (organizational, intermediate, and depot; preventative and corrective including supply support) for all training devices and equipment listed in this appendix **(except as noted below)**. If failures of any of these devices (except as noted below) occur during scheduled training, the using unit will change out the device for another and bring the failed device to the COMS Contractors maintenance shop for repair. COMS Contractor "on-call" maintenance is not required for these devices (except as noted below).

S.2.3 Check-out/Check-in. Except as noted below, during normal operating hours the Contractor shall be available at the training equipment/device storage location to check out training equipment/devices to authorized Marine Corps users. The Contractor shall also be available during normal operating hours to check in training equipment that has been checked out. The Contractor shall be responsible for the storage and maintenance of all devices that have not been checked-out for scheduled training. The COMS Contractor is responsible for providing storage space for devices that are either awaiting required repair or have been repaired and are awaiting Contractor delivery.

S.2.4 Battery Maintenance. The COMS Contractor shall be responsible for all maintenance on the batteries used with the training devices under this Appendix. This shall include a weekly inspection of all batteries used on the systems, cleaning of all batteries, connecting cables, adding of distilled water, and charging/recharging as necessary to meet all scheduled training requirements. All batteries not in use shall be maintained in a charged condition. The Contractor shall also be responsible for the maintenance of all the Government Furnished Property (GFP) battery charging equipment.

S.2.5 Gases. The Contractor shall ensure that adequate supplies of oxygen, propane and/or compressed air are available for the Noise Simulators and Pneumatic Mortars to meet all scheduled training requirements. The Contractor shall be responsible for filling/refilling, from commercial sources, all gas cylinders used with the devices.

S.2.6 Javelin FTT Trainer. The Contractor shall provide the following support for the Javelin Field Tactical Trainer

(FTT) located at MAGTF-TC 29 Palms. The Contractor is not required to operate this device. The Contractor is responsible for the check-in/check-out and warehousing of six (6) Javelin FTT training devices. Maintenance requirements are limited to organizational level only including battery charging.

S.2.7 Repair Parts Salvage. During the period of this contract some of the Minor Devices listed under this appendix may be damaged beyond repair by direct hits by live fire rounds, tactical vehicles, or other means beyond the Contractor's control. Whenever one of the Minor Devices is damaged beyond repair, the COMS Contractor shall report this to the COR, recommend replacement of the damaged unit, and salvage whatever parts possible once replacement has been authorized by the COR. These parts shall be used for the repair of other Minor Devices as appropriate, and shall be added to the current inventory and shall remain the property of the Government. At the Government's discretion, equipment damaged beyond economical repair will either be replaced by the Government or dropped from the current inventory, when the COR determines such damage was not the result of Contractor negligence, abuse, and/or Contractor failure to accomplish required preventive, planned or corrective maintenance including all requirements to provide operational instructions to the users.

S.3 Major Hardware Items

At MAGTF TRAINING COMMAND 29 Palms:

NAME	QUANTITY
AT-10 TARGET SYSTEM:	
AT-10 DRIVE UNIT	5
AT-10 CONTROL CONSOLE	1
AT-10 TERMINAL BOX	1
PNEUMATIC SUBCALIBER MORTAR TRAINER	7
HOOLIGAN's TOOL KIT	6
SOUND EFFECTS SIMULATOR	12
RESCUE RANDY	8
ALS TRAINER	10
TRAUMA MOULAGE KIT	10
JAVELIN FTT TRAINER	**6**
Badger Machine Gun Simulator	**1**

S.4 Degraded Operation Matrix

PERCENT OF DEGRADATION

SYSTEM	NUMBER OF DEVICES FAILED												
	1	2	3	4	5	6	7	8	9	10	15	20	25
AT-10 DRV(5ea)	20	40	60	80	100								
AT-10 CC (1ea)	100												
AT-10 TB (1ea)	100												
Pneumatic Mortar (7ea)	10	20	30	40	50	60	70						
HTK (4 ea)	20	35	50	65	80	100							
SES (12 ea)	10	20	30	40	50	60	70	80	90				
Rescue Randy	15	30	45	60	75	90							
ALS	10	20	30	40	50	60	70	80	90				
Badger MG Simulator	**15**												

LEGEND: AT-10 DRV = AT-10 Target Drive Unit
AT-10 CC = AT-10 Target System Control Console
AT-10 TB = AT-10 Target System Terminal Box
HTK = Hooligan's Tool Kit
SES = Sound Effects Simulator
ALS = Advanced Live Saving Trainer

S.5 Office, Storage and Maintenance Space. No additional space will be provided by the Government

S.6 Office Furniture and Equipment. No additional office furniture and/or equipment will be provided by the Government.

S.7 Consumables. The COMS Contractor shall supply all consumables, including batteries, necessary for the operation and maintenance of the Minor Devices listed in this SOW. Some examples are:

Paint,Petroleum,Oils and Lubricants (POL), Computer Diskettes,Computer Paper,Printer Cartridges, Fuses/Bulbs, Facilities Maintenance Supplies, Hydraulic Fluid, Cleaning Supplies, Filters/Belts, Oxygen Gas, Propane Gas, Nitrogen Gas, Compressed Air, 12v Lead/Acid Batteries

S.8 Tools and Test Equipment. The COMS Contractor shall provide all tools and/or test equipment required for the operation and maintenance of these devices.

S.9 Spare and Repairable Parts. See paragraph 3.6 of the Basic SOW.

S.10 Inspections. The Government will perform periodic contract compliance inspections and operational readiness and maintenance checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections in providing the availability of the system and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph S.12.

S.11 Technical Data Support Package (TDSP). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training devices.

S.12 Operating Hours and Planned Scheduling Requirements. There are no set operating hours or training schedules for Minor Training Devices. Devices are issued to using units as requested. Using units may request to keep the devices for extended periods of time according to their particular training requirements.

S.13 Janitorial Requirements. COMS CONTRACTOR shall maintain all assigned areas in Bldg 1707 as directed by the COR. All cleaning supplies shall be provided by the COMS Contractor. Examples of janitorial services are:

(1) Daily:
- (a) Empty trash cans and ash trays
- (b) sweep floor

(2) Weekly:
- (a) Dust furniture and equipment
- (b) clean windows
- (c) damp mop

S.14 Location of Training Device/System. At MAGTF TRAINING COMMAND 29 Palms, the AT-10 Target System is permanently located at the Marksmanship Training Unit; all other Minor Training Devices are stored and issued from Bldg. 1707, which is in the Main Camp Area at MAGTF TRAINING COMMAND 29 Palms, Ca. When

issued to the Marine Corps users, the Minor Training Devices are used in various locations throughout the Range and Training areas at MAGTF Training Command.

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T.1 Identification/Description of Device(s)

COMS Contractor Mobilization Date - 1 December 2007
COMS Contractor Support Date - 1 January 2008

MAGTF TRAINING COMMAND 29 PALMS.CA

Device Number	Trainer Name	Quantity
03TS03/1	Gunnery, Student Station, TOW, Indoor	4
03TS07	Field Tactical, TOW, Outdoor	6
03TS08	LAV-AT Gunnery Trainer	9

These devices will be used to train TOW (10399A and 17C11/3) missile gunners and LAV-AT (17C11/7) gunners in novice skills, gunnery skill progression, and skill sustainment. The devices are based on video technology. Employment of a laser transceiver and retroreflectors allow gunners to engage actual targets and simulate tracking/firing. The indoor gunnery trainer (10399A) includes an instructor station.

T.2 Operation and Maintenance Requirements

T.2.1 Operation. The COMS Contractor shall not be responsible for operation of the devices during scheduled training sessions. The COMS Contractor shall be fully capable of operating the system in order to troubleshoot the system and isolate malfunctions. The COMS Contractor shall also be available to provide operational demonstrations of the devices during periods other than scheduled training sessions. Operational demonstrations shall be considered as part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph T.12. The COMS Contractor shall assure that the devices are operationally ready at the commencement of each scheduled training session.

T.2.1.1 Training. The COMS Contractor will perform the following duties to support the operational requirements of the PGTS as directed by the COR:

1. Training of instructors and controllers for initial start up, use and shut down of the 10399A and 17C11/7. This instruction shall be one hour or less per session and not exceed 24 sessions per year per site.

2. Provide setup and operating instructions for units who will be using the 17C11/3 and 17C11/7 trainers. This instruction shall be one hour or less per session and not exceed 24 sessions per year per site.

T.2.2 Maintenance. The COMS Contractor shall be responsible for all levels of maintenance, (organizational, intermediate, and depot; preventative and corrective including supply support) for all training devices and equipment listed in this Appendix. Corrective maintenance shall be on an "on-call" basis. The COMS Contractor shall be prepared to respond within one (1) hour of receiving a call between the hours of 0700 and 1600 during the normal working day. Equipment casualties occurring outside the normal working day will be reported the next regular working day (See paragraph T.12 for training schedule). The names and phone numbers of the "on-call" COMS Contractor personnel will be available at all times to the COR in case of a service requirement. If the COMS Contractor is not able to correct the problem within thirty minutes of reaching the training system location, he shall notify the COR immediately.

T.3 Major Hardware Items, per device:

03TS03/1-TOW STUDENT GUNNERY TRAINER
Nomenclature
Day Sight Monitor
Night Sight Monitor
Optics
Student headset
Pwr & interface cable
TOW tripod*
TOW traversing unit*
TOW launcher tube*
PGTS Instructor Station:
  Computer Assembly
  Keyboard
  Headset/microphone
  Video monitor

* To be provided by using units.

03TS07-TOW TACTICAL FIELD TRAINER
Nomenclature
Computer module
TBOS day sight interface
TBOS night sight interface
Sim. missile tube assy
Power converter module
Battery Cable

03TS08-LAV-AT PGTS
Nomenclature
Computer module
TBOS day sight interface
TBOS night sight interface

Sim. missile tube assy
Power converter module
Battery
Cable
NOTE: TBOS= Trajectory, Burst, Obscuration Simulation

T.4 Degraded Operation Matrix

PERCENT OF DEGRADATION

SYSTEM/SUBSYSTEM	NUMBER OF SYSTEMS FAILED				
03TS03/1-TOW	1	2	3	4	5
GUNNERY TRAINER					
1. Simulated Sight Unit	100				
2. Power and Interface Cable	100				
3. Student Headset	30				
4. Instructor Station	100				

PERCENT OF DEGRADATION

SYSTEM/SUBSYSTEM	NUMBER OF SYSTEMS FAILED				
03TS07 TOW FIELD	1	2	3	4	5
TACTICAL TRAINER					
1. TBOS Day Sight Interface	100				
2. TBOS Night Sight Interface	100				
3. Sim.Missile Tube Assembly	100				
4. Computer Module	30				
5. Power Converter Module	100				
6. Battery	100				
7. TBOS Driver	100				
8. Tacho. Interface Unit	100				
9. Retroreflector	60				

SYSTEM/SUBSYSTEM	NUMBER OF SYSTEMS FAILED				
03TS08 LAV-AT	1	2	3	4	5
GUNNERY TRAINER					
1. Simulated Sight Unit	100				
2. Coil Cable Extension	100				
3. Power and Interface Cable	100				
4. Student Headset	30				
5. Instructor Station	100				

T.5 Office, Storage and Maintenance Space. The Contractor shall be provided office, storage, and maintenance space in the main camp area at Bldg 1707.

T.6 Office Furniture and Equipment. No additional office furniture and/or equipment shall be provided to the COMS Contractor.

T.7 Consumables. The COMS Contractor shall supply all consumables necessary for the operation and maintenance of the devices. If utilized, the GOVERNMENT will provide M80 blast capsules.

T.8 Tools and Test Equipment. The Government will provide a test suite. The COMS Contractor shall supply all additional tools and test equipment necessary for the operation and maintenance of the devices.

T.9 Spare and Repairable Parts. See paragraph 3.6.5.1.

T.10 Inspections. The Government will perform periodic contract compliance inspections, operational readiness, and maintenance checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections in providing the availability of the system, and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph T.12.

T.11 Technical Data Support Package (TDSP) The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training device.

T.12 Operating Hours and Planned Scheduling Requirements. There is no established training window for these devices. Marine Corps units routinely check-out these devices on a temporary basis.

T.13 Janitorial Requirements. COMS Contractor shall maintain all assigned areas in Bldg 1707 as directed by the COR. All cleaning supplies shall be provided by the COMS Contractor. Examples of janitorial services are:

(1) Daily:
  (a) Empty trashcans and ashtrays
  (b) Sweep floor.

(2) Weekly:
  (a) Dust furniture and equipment
  (b) Clean windows
  (c) Damp mop

T.14 Location of Trainers. The PGTS are located in Bldg. 1707 which is in the main camp area at the MAGTF Training Command 29 Palms, CA.

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U.1 Description and Quantity. The Training Area West (TA West) Complex currently includes: Combat vehicle Operators Course

(CVOT);Combat Tracking Team (CTT)/Military Working Dog (MWD) area; ATG Forward Operating Base (FOB and associated training area; **R800, R810 IED Lane areas**. Additional areas may be added in the future.

LOCATION: MAGTF TRAINING COMMAND, TWENTYNINE PALMS, CA

COMS Contractor Mobilization Date – 1 December 2007
COMS Contractor Support Date – 1 January 2008

U.1.1 Description.

R225:
The facilities at R225 consist of multiple, reconfigurable, container-type structures used for non-live fire force-on-force training operations, primarily using simmunitions and/or MILES type equipment. Initially the complex will be powered by generators and will eventually contain instrumentation and training target devices.

ATG FOB:
The facilities at the ATG FOB consist of portable classrooms **(with A/V equipment and HVAC systems), bleachers,** portable armories, sunshades, windscreens, berms, fencing **(w/slats),** storage containers, and a parking area.

CVOT:
The facilities at the CVOT course consist of a 20 Km driving course over various terrain. This includes asphalt (maintained by others); graded & packed soil; graded, packed, & stabilized soil **(soil SEMENT or similar)**; and passable but unimproved. Along the course are various containers which have been placed to represent urban clutter. The containers are primarily for visual effect and will require minimal maintenance.

R800, R810:
These ranges support IED training and include: roadway guard rails; soil-sement road; jersey barriers; solar-powered street lights; galvanized culverts with headwalls; concrete curbs w/replaceable sections and a concrete vault w/ steel man-hole.

ALL LOCATIONS:
All locations will require varying degrees of real property maintenance. Roads will be of variable width allowing and limiting vehicle movement. Primary roads at R225 shall be capable of supporting commercial (Porta John/Trash) vehicle movement.

U.2.0 Operation and Maintenance Requirements.

U.2.1 Operation.
Support requires the COMS Contractor to ensure that the facility is ready for training at the commencement of each scheduled training session. The Contractor shall respond to specific direction from the Government representative for desired initial condition of the facility. The Contractor may be required to operate targetry, battle effects simulators, smoke generators, and/or other training devices during the conduct of training. The Contractor shall work closely with the using units in employing the training facilities to their maximum capabilities.

U.2.2 Maintenance. The COMS Contractor is responsible for the maintenance of the structures including requirements listed in the Real Property Maintenance paragraphs below. Maintenance includes all areas of upkeep, repair and/or replacement. As applicable to the structure, this includes but is not limited to: board siding, sandbags, support timbers, roof repair, stairs and ladder wells, doors, window and door frames, tunnels, trap doors, exterior walls, gates and structural integrity of the containers located in the complex. The intent of this effort is for the COMS Contractor to be fully responsible for the integrity of the structures. The Contractor shall be responsible for the following if installed: A/V Equipment, Ice Machines, Office Furniture, HVAC units, bunkers, PA Systems, breacher kits, CPR Mannequins, dust generators, generators, generator-powered light towers (Gov't. provides fuel), target mechanisms, controllers, battery chargers, batteries, battery eliminators, three dimensional targets, smoke generators, small arms sound simulators (SES,BES), Guard Towers and communication systems.

Special Safety Consideration
At any time the Contractor's personnel suspect that there is live ordnance (other than pyrotechnics) in the vicinity of any device they are working on, they shall immediately notify Range Control, and the COMS COR.

U.2.3 Range Communication System. The range communication system used at the training area will be provided and installed by the COMS Contractor at Contractor expense. This system at a minimum shall consist of one (1) 2-way radio in each Contractor vehicle. These radios will be used to keep in constant communication with the USMC Range Control Facility at BEARMAT (as required by base regulations) and for Contractor communications between vehicles and other facilities. These radios shall conform to the specifications provided by the Government. These radios shall be considered GFE and will be programmed and maintained by the Government and shall remain as Government property at the end of the contract.

U.2.4 Real Property Maintenance

U.2.4.1 Facility Maintenance. The COMS Contractor is responsible for the maintenance of the facility structures and associated equipment including any generators installed at the facility. Maintenance includes all areas of upkeep, repair and/or replacement. This includes but is not limited to: container painting, structural integrity, earthquake straps, structure leveling, internal board siding, roof hatches, wooden window panels, shade structures, lighting fixtures, building & overhead wiring, telephone poles, street lights, electrical panels, electrical distribution equipment, walled compounds, wooden facades, bleachers, palm trees, door locks, street signs, HVAC units, gates, stairs/ladder wells, doors, door frames, lighting, tunnels, and trap doors located in the complex. Contractor repair/replacement of non-structural support items (such as board siding) shall be initiated when 40% of the surface area has been damaged/destroyed; repair/replacement of any item providing physical support for Marine personnel such as steps, stairs, railings, landings, etc. will be at the direction of the MAGTF Training Command, 29 Palms representative tasked to certify the safety of the structure. On a recurring basis, the contractor shall inspect these structures and replace/repair or smooth any protruding material that may constitute a puncture hazard to personnel/equipment. The Government will be responsible for providing fuel for the generators. As part of the range facilities maintenance effort the Contractor shall have the capability and shall assist in the off-loading of deliveries of range infrastructure GFE from trucks and/or trailers arriving at the range. Occasionally buildings, walls, or other range facilities may be accidentally damaged by tactical vehicles or equipment. While the Government has policies and procedures in place to prevent such occurrences, during the stressful MOUT exercises, mishaps do sometimes happen. As such, an occasional mishap is unavoidable and shall be considered as part of the normal use of the range. The Contractor shall be responsible for repairing this damage when it occurs as part of the normal range maintenance effort under this SOW.

U.2.4.1.1 Facilities Modifications. At the direction of the COR the COMS Contractor shall be responsible for making minor modifications to facilities and structures in order to enhance training, increase flexibility or improve safety. Such modifications shall be limited to building and/or moving interior wall partitions, moving and/or re-arranging containers, building and/or moving rubble piles, wooden facades, adding safety rails, adding fixed ladders, adding safety cages, closing off doorways, closing off windows, cutting new windows, cutting new doorways, moving and/or re-arranging scrap vehicles, moving and/or re-

arranging jersey barriers, moving and/or re-arranging furniture, etc.

U.2.4.2 Roads Maintenance. The COMS Contractor is not responsible for the base Main Service Roads (MSR) leading up to the facilities. The COMS contractor shall be responsible for the maintenance of all roads leading into the complexes from the MSR as well as all complex-integrated roads **including IED ranges** and parking areas. The CVOT (approximately 20 Km)is divided into four distinct types of road surface. The first section is approximately 1 Km of asphalt (maintained by others). The second section of is approximately 5.5 Km of graded and packed earthen road. The third section is approximately 1 Km of graded, packed, and stabilized soil (soil-sement or similar). The remaining section is rough but passable. The roads shall be maintained in accordance with the following:

(1) Regular grading – performed on an on-going basis as required to keep the roads passable. Grading is performed on the length and width the roads and performed to repair surface defects and irregularities (holes, ruts, corrugation, and washouts). The road will be capable of accommodating transit by two-wheel drive vehicles when the maintenance has been successfully completed,

(2)Normal cyclic maintenance of roads will be done four times each year at the direction of the COR. The contractor will be given at least 5 days notice when cyclic maintenance is required. At each cyclic maintenance period, the roads will be graded, crowned, compacted, and ditched. Grading is performed on the full length and width of the roads and performed to repair surface defects and irregularities (holes, ruts, corrugation, and washouts). Soils may be taken from parallel ditches and used to fill holes and restore uniformity of grade and crown. Graded roads shall have a three (3) inch slope from the crown at the centerline to each side to ensure proper drainage. Ditches shall be pulled to a 3 to 1 slope. When the cyclic maintenance has been successfully completed, the road will be capable of accommodating comfortable transiting by two wheel drive vehicles. The COR will determine what is comfortable transiting. In addition to roads, there is a requirement to maintain the building pads by replacing fill removed/damaged due to heavy vehicle traffic; and for the repair of flood control berms, ditches and channels which shall be restored to their as-built condition.

(3) Additionally, the COR may require corrective maintenance to be done up to four additional times, where storm damage, deterioration, or other factors require repair or restoration of the roads, pads, ditches, channels, and shoulder berms. Corrective maintenance will be called for when, in the judgment of the COR, damage or deterioration is sufficient to require immediate correction. The portions of road, pads, ditches, channels, and shoulder berms needing corrective maintenance will

be completed to the same standard required for normal cyclic maintenance. Note: Culverts are sometimes ineffective in this type of terrain. The COMS contractor is not responsible for the replacement of culverts **(except for those located on IED Ranges)**; however, he may be tasked to repair a segment of road from which a culvert has washed away as a normal part of any cyclic or corrective maintenance effort.

(4) Liquid Road resurfacing. The Liquid Road (soil SEMENT or similar material) coating on the CVOT Course and IED Ranges may need periodic maintenance, patching, etc. on a recurring basis to maintain the integrity of the road and may need to be replaced on an annual basis depending upon usage and weather conditions. The COR will make the final determination as to the need to replenish/resurface the area originally coated with this treatment.

U.2.6 Pyrotechnics. As required for training and directed by the Government, the Contractor shall determine which pyrotechnic devices require reloading. The COMS Contractor shall be responsible for ordering from the MAGTF Training Command representative the types and quantities of pyrotechnics required and obtaining and transporting them from the base Magazine Area to the device locations. The COMS Contractor is required to handle pyrotechnic charges, load and unload pyrotechnic devices, repackage and return pyrotechnics to the MAGTF Training Command Magazine Area as required, and is responsible for the maintenance of the components of the pyrotechnic charge firing mechanisms. All COMS Contractor activities involving pyrotechnics shall be in accordance with all Federal, State, local and MAGTF Training Command SOP regulations.

U.2.7 Repair Parts Salvage. During the period of this contract, equipment may be damaged beyond repair by simmunitions rounds, troop movements or other means beyond the control of the COMS Contractor. Whenever equipment is damaged beyond repair, the Contractor shall report this to the COR, recommend replacement of the damaged unit, and salvage whatever parts possible once replacement has been authorized by the COR. These parts shall be used for repair of other pieces of equipment as appropriate, and shall be added to the current inventory and shall remain the property of the Government. The Contractor will replace equipment damaged beyond economical repair.

U.2.8 Disposal of Used Materials. The Contractor shall arrange for the removal of scrap materials from damaged components of the complex facilities and broken replacement parts from the container emplacement area. This material shall be disposed of as directed by the COR, and in accordance with all base and local Government regulations.

U.3 Major Hardware Items

EQUIPMENT LISTING	QUANTITY
CVOT Course	40 Bldgs
Containers (Range 225 CTT Complex)	26 Bldgs
ATG FOB	**4 Modular Bldgs**
FOB A/V equipment:	
50” monitor	**1**
Proxima-type projectors	**4**
Surround-sound audio system	**1**

U.4 Degraded Operation Matrix.

PERCENT OF DEGRADATION

	Number of Systems Failed											
SYSTEM / SUBSYSTEM	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**20**	**30**
1. 50” monitor	**25**											
2. Projectors	**10**	**20**	**30**	**40**								
3. Sound system	**15**											

U.5 Office, Storage and Maintenance Space. The Contractor shall not be provided with any additional office, storage, or maintenance spaces.

U.6 Office Furniture and Equipment. The Government will not provide any additional office furniture and/or equipment.

U.7 Consumables. The COMS Contractor shall supply all consumables required for support of the training complex unless otherwise noted. Some examples of consumables to be provided by the Contractor are as follows: Paint, Petroleum/Oils and Lubricants (POL), Fuses, Bulbs, Janitorial Supplies, Filters, Belts, Fiberglass/Plywood, wooden boards, doors, nails, cement, screws, hinges, latches, door locks, metal stock, rebar, welding gases, Etc.

U.8 Tools and Test Equipment. The Government will not provide any additional tools and/or test equipment.

U.9 Spare and Repairable Parts. See SOW paragraph 3.6 of the Basic SOW.

U.10 Inspections. The Government will perform periodic contract compliance inspections, operational readiness, and maintenance

checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections by ensuring that the system is available, and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of the training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system.

U.11 Technical Data Support Package (TDSP). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training facility/device.

U.12 Operating Hours and Planned Scheduling Requirements. It is anticipated the training Area West complex will be scheduled for a maximum of 300 days per year. The number of days and hours per day that the facilities will be used will vary from mission to mission. Some exercises may last as long as 11 consecutive days and include continuous training of up to 24 hours per day. Training may be scheduled at various times within a regular seven (7) day week. Weekend and holiday training hours will be the same as weekday training. The only holidays observed at TA West complex are Christmas Day (Dec 25) and New Years Day (Jan 1).

U.12.1 Scheduled Training Area West Usage.

a. The Government will be provided a minimum of 24 hours notice for all changes to the training schedule for the TA West Complex.
b. The facilities may be scheduled up to 24 hours for any scheduled use.
c. Normal scheduling day is a period of 24 hours, not necessarily 0001 hours to 2400 hours. Scheduled usage could start at any time during the 24 hours of the day.
d. The Contractor will be provided maintenance time between each scheduled use of the complex, some or all of this maintenance time may be during periods of darkness. In the event that scheduled uses run consecutively, the Contractor may be required to perform maintenance tasks during training evolutions as directed by the COR.
e. Use of the complex for MILES and/or scenario development will be considered the same as regular scheduled training.
f. Scheduled usage for demonstrations will be credited as actual usage.

U.13 Janitorial Requirements. COMS Contractor shall maintain assigned areas as directed by the COR. In addition, at R225, four times per year the Contractor shall perform a complete sweep down

& cleanup of the entire range. This will consist of the removal of all trash, MRE debris, brass, links, empty ammo boxes, ammo crates, banding material, etc. throughout the entire range area including all of the structures.

U.14 Location. The TA West Training Complex is located in the West Training Area near Camp Wilson at the MAGTF Training Command 29 Palms, Ca.

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It is anticipated that the system will be updated/revised in the near future.

V.1 Description and Quantity. TACTICAL VIDEO NETWORK (TVN)

COMS Contractor Mobilization Start Date - 1 December 2007
COMS Contractor Support - 1 January 2008

V.1.1 General Description and Function. The TVN is a suite of cameras, microwave relays, and related equipment that is installed at the MAGTAF Training Command's Range 400 and the Bullion/Lead Mountain Range Training Area (RTA) with a microwave communication link back to mainside. The TVN allows real time video of exercises conducted at Range 400 or the Bullion/Lead Mountain RTA to be displayed at the CAST Trainer, Battle Simulation Center, CG's conference room, and other areas throughout the MAGTF Training Command. In addition to the live video, the use of video recording equipment allows for after action briefs of the exercises.

The basic concept of the TVN requires four physically detached video cameras mounted at various locations on Range 400 and five locations in the Bullion/Lead Mountain RTA. Low powered microwave links between these cameras and a permanent shelter located at the entrance to Range 400 and a central location in the Bullion/Lead Mountain RTA, feed raw video signals into the shelter. An operator in the shelter uses video switching and telemetry equipment to operate the cameras and select the most appropriate video signal for distribution or recording. A microwave link between the shelter and MAGTF Training Command's Range Control Station (BEARMAT) feeds the signal into MAGTF Training Command's LAN system. The final portion of the TVN is the audio/video CODECS that retrieve the video signals back off the LAN and convert the signals to a NTSC format suitable for viewing on any NTSC capable monitor.

V.1.2 Equipment Components. The equipment necessary for the TVN to operate includes:

a. Eight color video cameras with pan/tilt units (eight assemblies) to acquire the video information. Each camera assembly includes a solar panel and battery array to provide power.

b. Sixteen low power microwave dishes to send video to the shelter and telemetry commands back to the cameras.

c. Two shelters containing video switching equipment, monitors, video recorders, camera telemetry, and other ancillary equipment.

d. One Honda 5.5KW generator used to power the equipment in the shelter at Range 400, and one 8.5KW generator used to power the shelter at the Bullion TA location.

e. Two microwave links between the shelters and Range Control (BEARMAT), including audio/video CODECS to inject the signal onto MAGTF Training Center's LAN.

f. Four audio video CODECs, one each at CCTV, CG's Conference Room, Battle Simulation Center and CAST to remove the video signal from the LAN and convert into NTSC format.

g. There are 9 TVN camera systems located in other training areas, Noble Pass TA(3) Blacktop(1) Lavic Lake(1) Gays Pass(1) with one relay site to OP Argos, OP Round (1) with one relay site, and OP Creole(2) These cameras send the video signal, via microwave dishes, to selected Communications and Data Directorate microwave entry points for transport to Bearmat Hill and into the MAGTF Training Command’s LAN system, and ultimately to building 1653, where the video signals are recorded and processed for further distribution.

V.2 Operation and Maintenance Requirements

V.2.1 Operation. There is no requirement for the Contractor to operate the TVN during the course of the training mission. The Contractor shall be fully capable of operating the device in order to troubleshoot the system and fault-isolate malfunctions.

V.2.2 Maintenance. COMS Contractor maintenance responsibilities include organizational, intermediate, and depot level maintenance (preventative and corrective), including supply support, for all systems and equipment listed in this Appendix. All corrective maintenance will be on an "On-Call" basis. The Contractor shall be prepared to respond within 12 hours of receiving a call between the hours of 0700 and 1600. When training is taking place between the hours of hours of 1600 and 2400 and a failure occurs, the Contractor will be notified of the failure the following workday.

V.2.3 Explosive Ordnance Disposal. Major components of the TVN are located in a live-fire area; the Contractor is not required to perform maintenance on any device if he suspects there is live ordnance (with exception of pyrotechnics) in the vicinity (see Special Safety Considerations).

Special Safety Consideration

At any time Contractor personnel suspect that there is live ordnance (other than pyrotechnics) in the vicinity of any device they are working on, they shall immediately notify Range Control, EOD and the COMS COR.

V.3 Major Hardware Items

NOMENCLATURE	P/N	MFR	QTY	COMMENTS

REMOTE SITE EQUIPMENT:

VIDEO:

Color Camera	WV-CP464	Panasonic	17ea
25-350mm zoom lens	14X25B-SNDS21	Fujinon	17ea
Pan/Tilt Receiver	6125D	ITS	17ea
Local Joy Stick Controller	6125J	ITS	17ea
Pan/Tilt Unit QPT-90	7-59005-2	Quickset	17ea

COMMUNICATIONS:

Microwave Link (Transmitter Side)	5005E	Telenetics	20**ea**

REPEATERS:

Microwave Link (Transmitter)	5005E	Telenetics	2ea
Mirowave Link (Receiver)	5005E	Telenetics	2ea

POWER:

Solar Array	US-64	Unisolar	110ea
Batteries	PVX-1040T	Concorde	120ea
12 VDC Inverter (600 Watts)	XP-600	Exeltech	17ea
48 VDC Charge Controller (30A)	Prostar 30CLCD	Morningstar	20ea
Camera Power Supply	RWS-15A-12/A	Lambda	17ea

SHELTERS EQUIPMENT:

VIDEO:

Quad Video Combiner	WSJ-488	Panasonic	2ea
Pan/Tilt Controller	1300VR	Vicon	2ea
Color Monitors	PVM14N1U	Sony	4ea
Video Distribution	C6	Nova	2ea
Video Switcher		TBD	2ea
Time/Date Generator	KTS-53-16	Kalatel	2ea
Power Controller		MOTRON	1ea
Power Remote Receiver		MOTRON	1ea
DTMF Repeater		MOTRON	1ea

COMMUNICATIONS:

POWER:

Gas Powered Generator Range 400	EG-5500	Honda	1ea
Gas Powered Generator Bullion	XP8500E	Powerlift	1ea
Power Conditioner	Line-R	APC	2ea

FIXED SHELTERS SITE EQUIPMENT:

COMMUNICATIONS:

Microwave Link Receivers To/From remote sites	5005E	Telenetics	8ea
Microwave Link Transmitter To/From Bearmat	5005E	Telenetics	2ea

RANGE CONTROL (BEARMAT) EQUIPMENT:

COMMUNICATIONS:

Microwave Link (Receiver) To/From fixed shelter site	5005E	Telenetics	2ea
Video/Audio CODEC	VBrick 3200	VBrick	2ea

Audio Transformers 600-Ohm to 10K	WMT-1	Bogen	2ea

Combat Camera BLDG 1653

COMMUNICATIONS:

System Control PC	Latitude 4100	Dell	1ea
CODEC Control Software Installed on PC	VBAdmin	VBrick	1ea
Video/Audio Playback Software Installed on PC	StreamPlayer II	VBrick	1ea

1x5 Video Distribution Amplifier	105VB	Kramer	16 ea
Video Matrix Controller	VS 4216	Sierra Video	1 ea
32X16 Video Matrix	RS-422	Sierra Video	1 ea
Video Multiplexer (Quad)	Genex MX4009CD	Pelco	1 ea
DVD w/ Hard Drive	963365	Panasonic	2 ea
42 inch Plasma Monitor	PDP433CMX	Pioneer	1 ea
Audio Mixer	SCM 262	Shure	1 ea
T-1 Video CODEC	CDX 150-1R	Cornet Technology Inc	ea
16 Ch Time-Date Generator	KTS-253	Kalatel	1 ea
6x10 RS422 Matrix	VS4216	Kramer	2 ea
1x8 RS422 Switcher	SW1X8	DNF Controls	1 ea
RS232 Controller	RS232TX	Motron	3 ea
ECT1000 Digital Mux	ECT1000BU	ElCommTech	1 ea
- Optical Tx Module	ECT1000TXO-220	ElCommTech	1 ea
- Optical RX module	ECT1000RXO	ElCommTech	1 ea
- Video Receive Cards	ECT1000RXV	ElCommTech	4 ea
- Video Transmit Cards	ECT1000TXV	ElCommTech	6 ea
- 4xT1 Cards	ECT1000T1	ElCommTech	4 ea
- 4 Ch Audio Card	ECT1000TRXI	ElCommTech	1 ea
- 4 Ch RS422 Card	ECT1000TRXD-004	ElCommTech	1 ea
- 4 CH RS232 Card	ECT1000TRXD-003	ElCommTech	1 ea
Video Hard Disk Recorder	QCA80AN	nNovia	2 ea
Camera P/T Controller	6125M	ITS	1 ea
Master Intercom Station	MS232	Clearcom	1 ea
4 Wire Intercom Interface	IF4B	Clearcom	1 ea
Video Mixer	Model 110	Grass Valley	1 ea
27" Video Monitor	2583	Panasonic	1 ea
Computer	Dimension 4100	Dell	1 ea
JVC Digital VHS Video Recorder			2 ea

V.4 Degraded Operation Matrix

PERCENT OF DEGRADATION

SYSTEM/SUBSYSTEM	NUMBER OF SYSTEMS FAILED				
1.R400	1	2	3	4	5

Video Camera Assembly (4 ea)	20	40	60	80	
Camera, Solar/battery Array (4 ea)	20	40	60	80	
Low Power Microwave Link - Camera to Shelter (4 ea)	20	40	60	80	
Low Power Microwave Link- Bearmat to Shelter (1ea)	90				
2. SHELTERS					
DVD recorder (1 ea)	5	10	20	40	
Time Code Generator (1 ea)	5				
Color Monitor (2 ea)	35	70			
Pan/Tilt Controller (3 ea)	20	40	60		
Quad Video Combiner (1 ea)	25				
Video Switcher (1 ea)	20				
Video Distribution (2 ea)	20				
3. BEARMAT					
Audio/Video CODEC (1 ea)	90				
4. CCTV					
Audio/Video CODEC	75				
Control Computer (1 ea)	75				
5. BATTLE SIMULATION CENTER					
Audio/Video CODEC	40				
6. CAST					
Audio/ Video CODEC	40				
7. CG's CONFERENCE ROOM					
Audio/Video CODEC	40				

PERCENT OF DEGRADATION

SYSTEM/SUBSYSTEM	NUMBER OF SYSTEMS FAILED				
1.Bullion TVN	1	2	3	4	5
Video Camera Assembly (4 ea)	20	40	60	80	90
Camera, Solar/battery Array (4 ea)	20	40	60	80	90
Low Power Microwave Link - Camera to Shelter (4 ea)	20	40	60	80	90
Low Power Microwave Link- Bearmat to Shelter (1 ea)	90				
2. SHELTER					
DVD recorder (1 ea)	5	10	20	40	60
Time Code Generator (1 ea)	5				

Color Monitor (2 ea)	35	70			
Pan/Tilt Controller (5 ea)	20	40	60	80	90
Quad Video Combiner (1 ea)	25				
Video Switcher (1 ea)	20				
Video Distribution (1 ea)	20				
3. BEARMAT					
Audio/Video CODEC (1 ea)	90				
4. CCTV					
Audio/Video CODEC	75				
Control Computer (1 ea)	75				
5. BATTLE SIMULATION CENTER					
Audio/Video CODEC	40				
6. CAST					
Audio/ Video CODEC	40				
7. CG's CONFERENCE ROOM					
Audio/Video CODEC	40				

V.5 Office, Storage and Maintenance Space. No additional office, storage or maintenance space will be provided to the contractor.

V.6 Office Furniture and Equipment. No additional office furniture and/or equipment will be provided to the contractor.

V.7 Consumables. The COMS Contractor will supply all consumables, including batteries, necessary for the operation and maintenance of the TVN.

V.8 Tools and Test Equipment. The COMS Contractor shall supply all tools and test equipment necessary for the operation and maintenance of the TVN.

V.9 Spare and Repairable Parts. See paragraph 3.6 of the basic SOW.

V.10 Inspections. The Government will perform periodic contract compliance inspections, operational readiness, and maintenance checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections in providing the availability of the system, and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph V.12.

V.11 Technical Data Support Package (TDSP). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training device. The TDSP includes vendor supplied COTS technical manuals for all major hardware items and government generated wiring diagrams.

V.12 Operating Hours and Planned Scheduling Requirements. The TVN will be scheduled for a maximum of 1200 hours per year. Weekend and holiday training hours will be the same as weekday training. The only holidays observed will be Christmas Day (Dec 25) and New Years Day (Jan 1).

V.12.1 Planned Scheduled Usage.

a. Training will normally be a maximum of 12 hours for any scheduled use.

b. Normal scheduling day is a period of 24 hours, not necessarily 0000 hours to 2400 hours. For example, a scheduled usage could start at any time during the 24 hours of the day.

c. Contractor will be provided 24 hours notice for all schedule changes for the TVN.

d. Scheduled usage for demonstrations will be credited as actual usage.

V.13 Janitorial Requirements. There are no COMS Contractor janitorial requirements associated with this device.

V.14 Location of Training Device/System. The TVN is located at MAGTF Training Command, 29 Palms, CA. Four video cameras and four low power microwave links are permanently installed at Range 400 in the Cleghorn RTA. Four video cameras and eight low power microwave links are permanently installed in the Lead Mountain/Bullion RTA. A shelter is located at the entrance to Range 400 and in a central location in the Lead Mountain/Bullion RTA. There are 9 TVN camera systems located in other training areas, Noble Pass TA(3) Blacktop(1) Lavic Lake(1) Gays Pass(1) with one relay site to OP Argos, OP Round (1) with one relay site, and OP Creole(2). The other components of the TVN are located at Range Control (Bearmat) on top of Bearmat Mountain, COMCAM(Bldg.1653), Battle Simulation Center (Bldg. 1655), CG's Conference Room (Bldg. 1559), and the CAST (Bldg. 1587).

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W.1.0 Description and Quantity. Combined Arms MOUT Operations

and Support. Currently includes Range 220, ATG MOUT, **MOUT Field Office** and associated training areas. Additional training areas/capabilities may be added in the future.

COMS Contractor Mobilization Date – 1 December 2007
COMS Contractor Support Date – 1 January 2008

W.1.1 Description. This Statement of Work (SOW) defines a broad scope of support requirements for the Combined Arms MOUT Training Complex. The intent of the Combined Arms MOUT program is to provide dynamic, modular and scaleable solutions to fulfill various aspects of urban and extra-urban operations training. These operations encompass more than traditional going-to-war training; they also address other-than-war operations such as peacekeeping missions and anti-terrorism scenarios. The Combined Arms MOUT program will be evolutionary, existing training facilities/capabilities will be combined with new construction/training as requirements are developed and refined.

A successful operations training environment will completely immerse the training participants into the realism of the event, and will become indistinguishable from “real life” environments. The training environment must allow and support flexibility and changing of scenarios to prevent learned responses vice learning benefit. Finally, the training environment must allow for the inclusion of the unexpected, unplanned, and uncontrolled events; as learning is equally about being prepared and being able to override instincts when things do not go as planned as much as having the basic skills for mission completion.

The intent of this SOW is to satisfy a myriad of training requirements, including: initial operator and crew training, mission rehearsal training, and maintenance training, etc. Detailed requirements are site specific, and will be provided in subsequent SOW modifications.

W.2.0 Operation and Maintenance Requirements.

W.2.1 Operation. Support requires the COMS Contractor to ensure that the facilities are ready for training at the commencement of each scheduled training session. The Contractor shall respond to specific direction from the Government representative for desired initial condition of the facility. The Contractor may be required to operate targetry, battle effects simulators, smoke generators, and/or other training devices during the conduct of training. The Contractor shall work closely with the using units in employing the training facilities to their maximum capabilities. The Contractor shall also track key cost, schedule

performance and supportability measures, and notify the government of any issues and concerns that arise.

W.2.1.1 Additional Operational Support. In support of ATG weapons training, the Contractor shall provide 140 fixed "E"-Type target silhouette (plastic or hardboard) mounted on wooden stands. The Contractor is responsible for building/repairing the wooden stands and installing the targets. In addition, the Contractor shall provide nine (9) PITS and three (3) PATS devices with HHC's as required by the using units. The Contractor shall emplace targets, make daily readiness checks and perform corrective maintenance as needed to maintain operation. The Contractor shall maintain/repair target berms/protection and may be required to retrieve the devices at the end of the exercises.

W.2.2 Maintenance. The COMS Contractor is responsible for the maintenance of assigned equipment/devices and facilities including requirements listed in the Real Property Maintenance paragraph below. Maintenance includes all areas of upkeep, repair and/or replacement. As applicable to structures, this includes but is not limited to: painting, board siding, sandbags, support timbers, roof repair, stairs and ladder wells, doors, window and door frames, tunnels, trap doors, exterior walls, fences, gates roof hatches, wooden window panels, shade structures, lighting fixtures, building & overhead wiring, telephone poles, street lights, electrical panels, electrical distribution equipment, walled compounds, wooden facades, bleachers, palm trees, door locks, street signs and structural integrity of the containers/buildings that are currently installed or may be added in the future. The intent of this effort is for the COMS Contractor to be fully responsible for the availability of the equipment/device or facility. In addition, the Contractor shall be responsible for the following if installed: HVAC units, bunkers, PA Systems, breacher kits, CPR Mannequins, dust generators, electrical generators **(Contractor provides fuel for the MOUT Field Office generator),** generator-powered light towers (Gov't. provides fuel), target mechanisms, controllers, battery chargers, batteries, battery eliminators, three dimensional targets, smoke generators, small arms sound simulators (SES,BES), guard towers and communication systems. As part of the range facilities maintenance effort the Contractor shall have the capability and shall assist in the off-loading of deliveries of range infrastructure GFE from trucks and/or trailers arriving at the range. Occasionally buildings, walls, or other range facilities may be accidentally damaged by tactical vehicles or equipment. While the Government has policies and procedures in place to prevent such occurrences, during the stressful MOUT exercises, mishaps do sometimes happen.

As such, an occasional mishap is unavoidable and shall be considered as part of the normal use of the range. The Contractor shall be responsible for repairing this damage when it occurs as part of the normal range maintenance effort under this SOW.

Special Safety Consideration

At any time the Contractor's personnel suspect that there is live ordnance (other than pyrotechnics) in the vicinity of any device they are working on, they shall immediately notify Range Control, and the COMS COR.

W.2.2.1 Range Communication System. The range communication system used at the training area will be provided and installed by the COMS Contractor at Contractor expense. This system at a minimum shall consist of one (1) 2-way radio in each Contractor vehicle. These radios will be used to keep in constant communication with the USMC Range Control Facility at BEARMAT (as required by base regulations) and for Contractor communications between vehicles and other facilities. These radios shall conform to the specifications provided by the Government. These radios shall be considered GFE and will be programmed and maintained by the Government and shall remain as Government property at the end of the contract".

W.2.3 Real Property Maintenance. Requirements for Contractor support of real property maintenance shall be provided in subsequent SOW modifications. Future requirements may include but are not limited to: preventive and corrective maintenance of roads and trails; construction and maintenance of target berms and emplacements; range vehicle repair and maintenance and façade construction and maintenance. **The Contractor shall be responsible for the mechanical/structural areas (HVAC, lighting, etc.) of the portable toilets associated with the MOUT Field Office. The Contractor is not required to service the toilets.**

W.2.3.1 Roads Maintenance. The COMS Contractor is not responsible for the base (MSR) roads leading up to the various facilities. The COMS contractor shall be responsible for the maintenance of all facility-integrated roads, including roads utilized for Improvised Explosive Device (IED) training and Forward Operating Base (FOB) access, in accordance with the following:

(1) Regular grading – performed on an on-going basis as required to keep the roads passable. Grading is performed on the length and width the roads and performed to repair surface defects and irregularities (holes, ruts, corrugation, and washouts).When the maintenance has been successfully completed, the road will be capable of accommodating transit by two-wheel drive vehicles.

(2) Normal cyclic maintenance of roads will be done four times each year at the direction of the COR. The contractor will be given at least 5 days notice when cyclic maintenance is required. At each cyclic maintenance period, the roads will be graded, crowned, compacted, and ditched. Grading is performed on the full length and width of the roads and performed to repair surface defects and irregularities (holes, ruts, corrugation, and washouts). Soils may be taken from parallel ditches and used to fill holes and restore uniformity of grade and crown. Graded roads shall have a three (3) inch slope from the crown at the centerline to each side to ensure proper drainage. Ditches shall be pulled to a 3 to 1 slope. Abutments between earthen roads and concrete road segments will be smooth and compacted. When the cyclic maintenance has been successfully completed, the road will be capable of accommodating comfortable transiting by two wheel drive vehicles. The COR will determine what is comfortable transiting.

(3) Additionally, the COR may require corrective maintenance to be done up to four additional times, where storm damage, deterioration, or other factors require repair or restoration of the roads, shoulder berms ,flood control berms, ditches and channels.

The contractor will be given 5 days notice for normal cyclic maintenance. Corrective maintenance will be called for when, in the judgment of the COR, damage or deterioration is sufficient to require immediate correction. The portions of road, shoulder berms ,flood control berms, ditches and channels needing corrective maintenance will be completed to the same standard required for normal cyclic maintenance. Note: Culverts are sometimes ineffective in this type of terrain. The COMS contractor is not responsible for the replacement of culverts; however, he may be tasked to repair a segment of road from which a culvert has washed away as a normal part of any cyclic or corrective maintenance effort.

W.2.3.2 Facilities Modifications. At the direction of the COR the COMS Contractor shall be responsible for making minor modifications to facilities and structures in order to enhance training, increase flexibility or improve safety. Such modifications shall be limited to building and/or moving interior wall partitions, moving and/or re-arranging containers, building and/or moving rubble piles, wooden facades, adding safety rails, adding fixed ladders, adding safety cages, closing off doorways, closing off windows, cutting new windows, cutting new doorways, moving and/or re-arranging scrap vehicles, moving and/or re-arranging jersey barriers, moving and/or re-arranging furniture, etc. In addition, the contractor shall be responsible for the replacement and fabrication of street signs,

building signs and billboards within the Combined Arms MOUT Facility.

W.2.4 Pyrotechnics. As required for training and directed by the Government, the Contractor shall determine which pyrotechnic devices require reloading. The COMS Contractor shall be responsible for ordering from the MAGTF Training Command representative the types and quantities of pyrotechnics required and obtaining and transporting them from the base Magazine Area The COMS Contractor is required to handle pyrotechnic charges, load and unload pyrotechnic devices, repackage and return pyrotechnics to the MAGTF Training Command Magazine Area as required, and is responsible for the maintenance of the components of the pyrotechnic charge firing mechanisms. All COMS Contractor activities involving pyrotechnics shall be in accordance with all Federal, State, local and MAGTF Training Command SOP regulations.

W.2.5 Repair Parts Salvage. During the period of this contract, equipment may be damaged beyond repair by means beyond the control of the COMS Contractor. Whenever equipment is damaged beyond repair, the Contractor shall report this to the COR, recommend replacement of the damaged unit, and salvage whatever parts possible once replacement has been authorized by the COR. These parts shall be used for repair of other pieces of equipment as appropriate, and shall be added to the current inventory and shall remain the property of the Government. The Contractor will replace equipment damaged beyond economical repair.

W.2.6 Disposal of Used Materials. The Contractor shall arrange for the removal of scrap materials from damaged components in his designated areas of responsibility. This material shall be disposed of as directed by the COR and in accordance with all base and local Government regulations. HAZMAT material will be disposed of in accordance with all federal, state and Marine Corps regulations. As required, the Contractor shall be responsible for providing protective clothing/equipment to employees supporting this effort.

W.3 Major Hardware Items.

EQUIPMENT LISTING	QUANTITY

ATG MOUT	49 Bldgs.
MOUT Field Office (triple-wide trailer)	**1**
Generator	**2**
HVAC Systems	**5**
Tunnel fans	**3**

N.4 Degraded Operation Matrix.

PERCENT OF DEGRADATION

	Number of Systems Failed											
SYSTEM / SUBSYSTEM	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**20**	**30**
1. Generator (2)	**5**	**10**										
2. HVAC Systems (5)	**3**	**6**	**9**	**12**	**15**							
3. Tunnel fans (3)	**2**	**4**	**6**									

W.5 Office, Storage and Maintenance Space. Additional office, storage or maintenance space may be provided to the COMS Contractor on a case by case basis.

W.6 Office Furniture and Equipment. No additional office furniture and/or equipment will be provided to the COMS Contractor.

W.7 Consumables. The COMS Contractor shall supply all consumables required for support unless otherwise noted.

W.8 Tools and Test Equipment. The Government will not provide any additional tools and/or test equipment.

W.9 Spare and Repairable Parts. See paragraph 3.6 of the Basic SOW.

W.10 Inspections. The Government will perform periodic contract compliance inspections, operational readiness, and maintenance checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections by ensuring that the system is available, and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of the training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system.

W.11 Technical Documentation. The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with this effort.

W.12 Operating Hours and Planned Scheduling Requirements. Operating hours and requirements will be determined on a case by case basis depending on the type of equipment/operation to be supported and will be provided in subsequent SOW modifications.

W.13 Janitorial Requirements. If required, requirements will be provided in subsequent SOW modifications.

W.14 Location. The CA MOUT is located in the Quackenbush Range Training Area at the MAGTF Training Command, 29 Palms, CA.

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X.1 DESCRIPTION AND QUANTITY.

COMS Contractor Mobilization Start Date – 1 December 2007
COMS Contractor Support Date – 1 January 2008

This appendix details requirements for Contractor support of Portable Infantry Targets (PITS); Stationary Infantry Targets (SITS); Stationary Armor Targets (SATS)at Marine Corps Air Station (MCAS) Yuma, AZ.
PITS,SITS/SATS devices are handheld radio-controlled target systems capable of accommodating military standard infantry and armor type silhouettes powered via 12 VDC rechargeable batteries. See paragraph X.3 (Major Hardware Items) for a complete list of devices.

X.2 OPERATION AND MAINTENANCE REQUIREMENTS

X.2.1 OPERATION. The COMS Contractor shall not be responsible for operation of the devices during scheduled training sessions. The COMS Contractor shall be fully capable of operating the system in order to troubleshoot the system and fault-isolate malfunctions.
X.2.2 MAINTENANCE. The Contractor shall be responsible for the intermediate and depot levels of maintenance, preventative and corrective (including supply support) for all devices listed in this appendix as follows:

The COMS Contractor is responsible for performing the following actions at MCAS Yuma, four (4) times annually:

1. Conduct an on-site inventory and functional test of all equipment; inventory and update, as required, all associated Device documentation.
2. Repair malfunctioning units utilizing COMS Contractor supplied consumables/repair parts.
3. Perform any required modifications and scheduled preventive maintenance.
4. Perform any required cleaning, painting and/or restenciling.
5. Ensure all Devices are in a fully operational condition prior to departing the base.

The Government will provide the COMS Contractor thirty(30)days notice prior to required travel to MCAS Yuma. Maintenance support shall not exceed 5 working days (not including travel) without prior coordination and approval from the COR.

X.2.2.1 ALTERNATIVE MAINTENANCE SUPPORT. In addition, as required to maintain training device availability, the Government reserves the right to ship inoperable units from MCAS Yuma to MAGTF-TC 29 Palms, CA for repair by the COMS Contractor. The COMS Contractor

shall pick up the malfunctioning device(s) from the responsible Shipping Officer after being notified by the Government that the defective device(s) have arrived from the MCAS Yuma. The COMS Contractor shall be responsible for receiving the malfunctioned device(s), repairing them and ensuring that they are delivered to the responsible Shipping Officer at MAGTF-TC for return to MCAS Yuma. Chargeable downtime for devices commences two working days after the COMS Contractor receives the failed device(s) from MAGTF-TC and ends when the repaired device(s) are returned to Shipping Officer for shipment back to MCAS Yuma.

X.2.2.2 BATTERY MAINTENANCE. The Government shall be responsible for on-site maintenance of the batteries used with the devices listed under this Appendix.

X.2.3 TRAINING. The Contractor shall provide training of instructors and operators for the installation, start-up, operation and securing of the PITS devices. This instruction shall not exceed 4 hours per session with a maximum of 2 sessions per visit. Class size shall not exceed 10 trainees. Training shall include but is not limited to the following:

(a) Set-up (Device Installation)
(b) Operation (initial start-up, use, shutdown)
(c) Storage and battery maintenance
(d) Preventive and corrective maintenance
(e) Basic fault isolation and troubleshooting (Org. Level)

X.3 MAJOR HARDWARE ITEMS.

Nomenclature	Quantity
Target Lifting Devices:	
Caswell PITS	30
L/M SITS	40
L/M SATS	11
Hand Held Controllers	04
Battery Recharging System	56

X.4 DEGRADED OPERATIOIN MATRIX.
See par. 5.2.2.3 of the Basic SOW for requirements.

X.5 OFFICE, STORAGE AND MAINTENANCE SPACE. The Marine Corps shall provide adequate space for the COMS Contractor to perform maintenance actions.

X.6 OFFICE FURNITURE AND EQUIPMENT. No office furniture or equipment shall be provided to the COMS Contractor.

X.7 CONSUMABLES. The Contractor shall provide all necessary consumables including batteries, needed for the operation and maintenance of this device(s). The Government shall provide three-dimensional targets for installation on to the target lifters.

X.8 TOOLS AND TEST EQUIPMENT. The COMS Contractor shall provide all tools and test equipment needed for operation and or maintenance of the PITS/SATS Devices.

X.9 SPARE AND REPAIRABLE PARTS. See paragraph 3.6. of the Basic SOW.

X.10 INSPECTIONS. The Government shall perform periodic contract compliance inspections verifying operational readiness, and maintenance checks have been accomplished on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections. Inspection of training devices or systems by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph 10.

X.11 TECHNICAL DATA SUPPORT PACKAGE (TDSP). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training device.

X.12 Operating Hours and Planned Scheduling Requirements. The Portable Target Systems are scheduled for operation during normal installation operating hours. The PITS/SATS Systems may be operated outside of normal operating hours due to mission oriented training requirements. The published training schedule shall be provided to the COMS Contractor by the Government.

X.13 JANITORIAL REQUIREMENTS. There are no Contractor janitorial requirements associated with this SOW.

X.14 LOCATION. These devices are located at Marine Corps Air Station (MCAS) Yuma, AZ.

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Y.1.0 Description and Quantity.

LOCATION: MARINE CORPS AIR STATION, YUMA, AY.
TYPE RANGE: KNOWN DISTANCE RIFLE RANGE

COMS Contractor Mobilization Start Date – 1 December 2007
COMS Contractor Support Date – 1 January 2008

EQUIPMENT LISTING – see par. Y.3 for hardware listing.

The Rifle Range Complex consists of the following:

Blackwater USA Target Carriage System. This target system is a permanently installed, hand controlled 30-lane marksmanship training range. It is designed to provide targets that move up and down exposing the target face to the firing lines in response to the course of fire.

Known Distance 500 yard Firing Range. This is the area that contains the target system and has firing lines located at the 200, 300, and 500-yard lines. A paved road located on the left of the range is used for access to the range, each yard line and the pits. Sand and small pebble rock are between the defined firing lines.

Range Flag Poles. Used by range personnel to indicate when the range is operational (hot) and which firing line is in use. These poles are located on every firing line, in the pits, and the entrance to the rifle range.

Range Control Equipment:

Public Address System. Used by the range personnel to provide commands to the Shooters on the firing line. Speakers are located on the end of each firing line and in the pits.

Range Control Tower. Used by range personnel to control movement of shooters and communicate commands throughout the course of fire. This tower is a portable cart that can be moved from yard line to yard line.

Target Line Equipment:

Target Carriages. The components lift and lower the targets to expose them to the firing lines. There are

thirty (30) target holders which were manufactured by Blackwater USA.

Number Boards: These are wooden boards (6’ x 6’), which are located on top of the impact berm to orient the shooters on their assigned targets.

Firing Line Equipment:

Number Blocks. There are blocks located on every yard line used by the shooters on the firing lines to locate their firing position.

Benches. Benches are located at every yard line spanning the entire firing line for shooters to sit and evaluate that stage of fire.

Ready Boxes. These are metal boxes located on each firing line for the shooters to prepare equipment prior to firing.

Y.2.0 Operation and Maintenance Requirements.

Y.2.1 Operation. The Contractor is not responsible for operating the Range System during normal training exercises. The Contractor shall be fully capable of operating the Range System in order to troubleshoot and fault-isolate malfunctions. The Contractor shall have the ability to create/program new courses of fire for the range. The COMS Contractor shall assist Range personnel in the creation of new courses of fire as requested. (Note: All Courses of Fire created by the Contractor shall be considered Government property.)

Y.2.2 Maintenance. The Contractor shall provide the trained personnel, equipment, supplies and services to maintain the Range System in a fully operational state. The COMS Contractor shall be responsible for performing preventive and corrective maintenance for all Range Equipment listed in this SOW during quarterly visits, to include:

Target actuators, sensors, all connecting cables up to the power source, cabling inside the control tower, control systems, all down-range wiring, and the hardware (nuts, bolts, clamps) specifically used on the ranges. The COMS Contractor will ensure that the system is maintained in accordance with Blackwater recommended standards.

During these quarterly visits, the Contractor is also responsible for maintenance and cleanliness of the areas around the components. This includes removal of foreign material (e.g. sand, dirt, rocks, grass etc.) that might inhibit the operation of the target systems and cause damage to the components.

Y.2.3 Repair Parts Salvage. During the period of this contract Infantry Target Mechanisms (ITM's), Target Control Units (TCU's), and other ancillary equipment may be damaged beyond repair by direct hits by live fire rounds or other means beyond the Contractor's control. Whenever an ITM, TCU, or other piece of ancillary equipment is damaged beyond repair, the Contractor shall report this to the COR, recommend replacement of the damaged unit, and salvage whatever parts possible once replacement has been authorized by the COR. These parts shall be used for repair of other CPC ITM's, TCU's, or other ancillary devices as appropriate, and shall be added to the current inventory and shall remain the property of the Government. Equipment damaged beyond economical repair will be replaced by the Government, when the COR determines such damage is not the result of Contractor negligence, abuse, and/or Contractor failure to accomplish required preventive, planned or corrective maintenance.

Y.3.0 Major Hardware Items.

Nomenclature	Quantity
Public Address System	01
Blackwater Target Carriage System	30
Wooden Bench	30
Range Flag Poles	06
Number Blocks	30 (per firing line)
Number Boards	30
Ready Boxes	30 (per firing line)

Y.4.0 DEGRADED OPERATION MATRIX.
SEE PAR 5.2.2.3 OF THE BASIC SOW FOR REQUIREMENTS.

Y.5.0 Office, Storage and Maintenance Space. The Marine Corps shall provide adequate space for the COMS Contractor to perform maintenance actions.

Y.6.0 Office Furniture and Equipment. No office furniture or equipment shall be provided to the COMS Contractor.

Y.7.0 Consumables. The Contractor shall provide all necessary consumables including batteries, needed for the operation and

maintenance of this device(s). The Government shall provide targets for installation on to the target holding devices.

Y.8.0 Tools and Test Equipment. The COMS Contractor shall provide all tools and test equipment needed for operation and or maintenance of the Range Systems.

Y.9.0 Spare and Repairable Parts. See paragraph 3.6 of the Basic SOW.

Y.10.0 Inspections. The Government will perform periodic contract compliance inspections, operational readiness, and maintenance checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections in providing the availability of the system, and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph .12

Y.11.0 Technical Data Support Package (TDSP). Prior to assuming support, the COMS Contractor shall be responsible for completing an Operator and Maintenance Training Course provided by the Original Equipment Manufacturer (CASWELL). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training device.

Y.12.0 Scheduled Operating Hours. The Range is scheduled for operation during normal installation operating hours. The Range may be operated outside of normal operating hours due to mission oriented training requirements. The published training schedule shall be provided to the COMS Contractor by the Government

Y.12.1 Additional Support Requirements. The Contractor shall provide quarterly site visits to MCAS Yuma to conduct the following actions:

Conduct an on-site inventory and functional test of all equipment and associated documentation of Range System.

Repair all malfunctions.

Perform scheduled and preventive maintenance.

Ensure all devices are at fully operational condition.

Conduct inventory of spare parts/batteries to ensure inventory levels support required training

As requested by the Government, the Contractor shall provide training for range instructors and operators as outlined below:
A. The training shall be presented as a train-the-trainer concept.
B. The instruction shall not exceed 4 hours per session with a maximum of 2 sessions per visit.
C. Training shall include, but is not limited to, the following topics:

System Set-up, Check Out and BIT/BITE
Operation of the Range Systems
Preventive and corrective maintenance
Basic fault isolation and troubleshooting (Org. level)
System ShutDown procedures
Operation and maintenance in accordance with approved documentation.

The Government shall notify the COMS Contractor of a training requirement at least fifteen (15) days prior to the normally scheduled quarterly visit. Class size shall not exceed 10 trainees

Y.13.0 Janitorial Requirements. There are no Contractor janitorial requirements associated with this appendix.

Y.14.0 Location of Training Device/System. the Range is located at MCAS Yuma, AZ.

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Z.1.0 Description and Quantity.

LOCATION: MARINE CORPS AIR STATION, YUMA, AZ.
TYPE RANGE: PISTOL COURSE

COMS Contractor Mobilization Start Date – 1 December 2007
COMS Contractor Support Date – 1 January 2008

EQUIPMENT LISTING – see par. Z.3 for hardware listing.

The Range is a permanent installation used to support the Marine Corp's Pistol Marksmanship Program. The range consists of the following:

A. Caswell International Corporation Model Turning Target System. This target system is a permanently installed, central controlled 20-lane marksmanship training range. It is deigned to provide targets that can turn or face the firing lines in response to the course of fire.

B. Known Distance 25 yard Firing Range. This is the area that contains the target system and has firing lines located at the 7, 15, and 25-yard lines. Cement sidewalks and small pebble rock in between define the firing lines.

Tower Area (Range Control) Equipment:

Model EC16 Omicron Range Timer (EC16): The EC16 Omicron Range Timer (Part # 20-5565) is a multi-cycle firing range course timer. The EC16 controls all target functions and operates the range with simple, intuitive commands from within the Range Control Tower. The EC16 specifications are found in the manuals that accompany the equipment.

Public Address System. Used by the range personnel to provide commands to the Marines on the firing line.

Target Line Equipment:

Range Interface Unit. This unit is located down range on the target line. It consists of two (2) separate mechanical boxes located in the pits. Each box controls 10 targets and can be run separately.

Base Assembly Pad Mount, Turning Target System, Standard Duty. The component turns the target to face towards or away from the firing lines.

Target Holding Devices. Components that hold the targets in place on the known distance portion of the pistol range. The set of twenty (20) target holders are provided by Caswell.

Firing Line Equipment:

Wood Tables. These tables are located at the 25 yard line and are permanently secured to the deck and are used by the shooters on the firing lines to rest their gear on.

Bench. At the 25 yard line there is a bench spanning the entire firing line.

Z.2.0 Operation and Maintenance Requirements.

Z.2.1 Operation. The Contractor is not responsible for operating the Range System during normal training exercises. The Contractor shall be fully capable of operating the Range System in order to troubleshoot and fault-isolate malfunctions. The Contractor shall have the ability to create/program new courses of fire for the range. The COMS Contractor shall assist Range personnel in the creation of new courses of fire as requested. (Note: All Courses of Fire created by the Contractor shall be considered Government property.)

Z.2.2 Maintenance. The Contractor shall provide the trained personnel, equipment, supplies and services to maintain the Range System in a fully operational state. The COMS Contractor shall be responsible for performing preventive and corrective maintenance for all Range Equipment listed in this SOW during quarterly visits, to include:

Target actuators, sensors, all connecting cables up to the power source, cabling inside the control tower, control systems, all down-range wiring, and the hardware (nuts, bolts, clamps) specifically used on the ranges. The COMS Contractor will ensure that the system calibration is maintained in accordance with Caswell recommended standards.

During these quarterly visits, the Contractor is also responsible for maintenance and cleanliness of the areas around the components. This includes removal of foreign material (e.g. sand, dirt, rocks, grass etc.) that might inhibit the operation of the target systems and cause damage to the components.

Z.2.3 Repair Parts Salvage. During the period of this contract Infantry Target Mechanisms (ITM's), Target Control Units (TCU's), and other ancillary equipment may be damaged beyond repair by direct hits by live fire rounds or other means beyond the Contractor's control. Whenever an ITM, TCU, or other piece of ancillary equipment is damaged beyond repair, the Contractor shall report this to the COR, recommend replacement of the damaged unit, and salvage whatever parts possible once replacement has been authorized by the COR. These parts shall be used for repair of other CPC ITM's, TCU's, or other ancillary devices as appropriate, and shall be added to the current inventory and shall remain the property of the Government. Equipment damaged beyond economical repair will be replaced by the Government, when the COR determines such damage is not the result of Contractor negligence, abuse, and/or Contractor failure to accomplish required preventive, planned or corrective maintenance.

Z.3.0 Major Hardware Items.

Nomenclature	Quantity
Public Address System	1
EC16 Omicron Range Timer (Part # 20-5565)	1
Base Assembly Pad Mount, Turning Target System, Standard Duty	20
Wooden Bench	2
Target Device Holders	20
Range Interface Unit (Mechanical Boxes)	2

Z.4.0 DEGRADED OPERATION MATRIX.
SEE PAR 5.2.2.3 OF THE BASIC SOW FOR REQUIREMENTS.

Z.5.0 Office, Storage and Maintenance Space. The Marine Corps shall provide adequate space for the COMS Contractor to perform maintenance actions.

Z.6.0 Office Furniture and Equipment. No office furniture or equipment shall be provided to the COMS Contractor.

Z.7.0 Consumables. The Contractor shall provide all necessary consumables including batteries, needed for the operation and maintenance of this device(s). The Government shall provide targets for installation on to the target holding devices.

Z.8.0 Tools and Test Equipment. The COMS Contractor shall provide all tools and test equipment needed for operation and or maintenance of the Range Systems.

Z.9.0 Spare and Repairable Parts. See paragraph 3.6 of the Basic SOW.

Z.10.0 Inspections. The Government will perform periodic contract compliance inspections, operational readiness, and maintenance checks on a scheduled and unscheduled basis. Under the terms of this contract, the Contractor shall comply with the COR, Quality Assurance Evaluator (QAE), or other Government representative performing these inspections in providing the availability of the system, and providing whatever assistance is required by the Government in the performance of these inspections. Inspection of training device or system by Government personnel will not be considered part of the Operational Hours or Planned Scheduling Requirements of the system as delineated in paragraph .12

Z.11.0 Technical Data Support Package (TDSP). Prior to assuming support, the COMS Contractor shall be responsible for completing an Operator and Maintenance Training Course provided by the Original Equipment Manufacturer (CASWELL). The COMS Contractor shall be responsible for maintaining all Technical Documentation provided with the training device.

12.0 Scheduled Operating Hours. The Range is scheduled for operation during normal installation operating hours. The Range may be operated outside of normal operating hours due to mission oriented training requirements. The published training schedule shall be provided to the COMS Contractor by the base.

Z.12.1 Additional Support Requirements. The Contractor shall provide quarterly site visits to MCAS Yuma to conduct the following actions:

Conduct an on-site inventory and functional test of all equipment and associated documentation of Range System.

Repair all malfunctions.

Perform scheduled and preventive maintenance.

Ensure all devices are at fully operational condition.

Conduct inventory of spare parts/batteries to ensure inventory levels support required training

As requested by the Government, the Contractor shall provide training for range instructors and operators as outlined below:
A. The training shall be presented as a train-the-trainer concept.
B. The instruction shall not exceed 4 hours per session with a maximum of 2 sessions per visit.
C. Training shall include, but is not limited to, the following topics:

System Set-up, Check Out and BIT/BITE
Operation of the Range Systems
Preventive and corrective maintenance
Basic fault isolation and troubleshooting (Org. level)
System ShutDown procedures
Operation and maintenance in accordance with approved documentation.

The Government shall notify the COMS Contractor of a training requirement at least fifteen (15) days prior to the normally scheduled quarterly visit. Class size shall not exceed 10 trainees

Z.13.0 Janitorial Requirements. There are no Contractor janitorial requirements associated with this appendix.

Z.14.0 Location of Training Device/System. The Range is located at MCAS Yuma, AZ.

CONTRACT DATA REQUIREMENTS LIST (CDRL)

(*1 Data Item*)

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Department of Defense, Executive Services Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **Please do not return your form to the above organization. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.**

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP ____ TM _____ OTHER LOGISTICS

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
COMS	M67854-07-R-8017	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A001	CONTRACTOR PERFORMANCE UTILIZATION REPORT	COMS MONTHLY UTILIZATION REPORT

17. PRICE GROUP

4. AUTHORITY (*Data Acquisition Document No.*)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-ILSS-80191D	SOW PAR 3.10 5	PMTRASYS COMS

18. ESTIMATED TOTAL PRICE
10.00

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT		MTHLY	SEE BLK 16
8. APP CODE		**11. AS OF DATE**	**13. DATE IF SUBSEQUENT SUBM.**
			SEE BLK 16

16. REMARKS

1.COMS PERFORMANCE UTILIZATION REPORT IS REQUIRED USING AVAILABILITY PERFORMANCE FACTOR (APF) PER STATEMENT OF WORK SECTION 5.0

2. BLOCKS 12/13: THE FIRST SUBMISSION SHALL BE DUE ON THE FIRST DAY OF THE MONTH FOLLOWING CONTRACTOR SUPPORT DATE (CSD). SUBSEQUENT REPORTS SHALL BE DUE MONTHLY THEREAFTER WITHIN FIVE (5) WORKING DAYS AFTER THE END OF THE REPORTING PERIOD.

THE SUBMITTED REPORTS SHALL BE SIGNED BY THE COMS CONTRACTING OFFICER'S REPRESENTATIVE (COR), A COPY GIVEN TO THE COR AND THEN DISTRIBUTION MADE TO THE ADDRESSEES VIA ELECTRONIC MAIL. ALL REPORTS SHALL BE IN MICROSOFT© OFFICE 2003 FORMAT OR LATER.

3. BLOCK 4:THE FOLLOWING PARAGRAPHS DO NOT APPLY: 10.2.2 PART II (OPTION 1) ; 10.2.3 PART II (OPTION 2) ; 10.2.4 PART II (H, I, J)

4. SEE ANNEX A FOR SAMPLE FORMAT OF PERFORMANCE UTILIZATION REPORT

14. DISTRIBUTION			
a. ADDRESSEE	b. COPIES		
	Draft	Final	
		Reg	Repro
PMTRASYS PJM		1	
PMTRASYS PCO		1	
NAWCTSD COMS		1	
15. TOTAL ——▶		3	

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
P.A. BOETTJER,NAWCTSD 6.6.4.10			

ANNEX A

COMS CONTRACTOR PERFORMANCE UTILIZATION REPORT

TO: DISTRIBUTION LIST IN ACCORDANCE WITH
CONTRACT CDRL No

FROM: COMPANY NAME AND ADDRESS

1. DEVICE NAMES AND SERIAL NUMBERS

2. CONTRACT NO

3. CONTRACT SUPPORT PERIOD: (ex. 1 Oct 00 to 30 Sept 05)

4. DATE OF REPORT: (ex. 1 Nov 94)

5. REPORTING PERIOD COVERED: (ex. 1 Oct 00 to 31 Sept 00)

6. ACTIVITY SERVICED: (ex.MAGTFTC 29 Palms)

7. REPORT NO: (ex. 1-00)

8. PERSONNEL TIME DISTRIBUTION

Device Type/No	Oper Hrs	Maint Hrs	Supply Hrs	Mod Hrs	Train Hrs	Doc Hrs	Admin Hrs

9. TRAINER DOWNTIME

Device Type/No	Maint Hrs.	Mod Hrs.	Parts Hrs	Facility Hrs	Other	Chg D/T Hrs	Non-Chg D/T Hrs

10. TRAINER PERFORMANCE/UTILIZATION SUMMARY (ANNUAL HOURS)

Device #	Sched. Train Hrs *	Actual Train Hrs**	FYTD Sched Train Hours *	FYTD Actual Train Hours **

FYTD - Fiscal Year to Date (Cumulative total)
* Hours requested by users, usually listed on the weekly/monthly schedule (when provided).
** Hours actually requiring/utilizing COMS Contractor Operator support.

11. TRAINER PERFORMANCE/UTILIZATION SUMMARY (ANNUAL DAYS)

Device #	Sched. Train Days *	Actual Train Days**	FYTD Sched Train Days *	FYTD Actual Train Days **

FYTD - Fiscal Year to Date (Cumulative total)
* training days requested by users, usually listed on the weekly/monthly schedule (when provided).
** Training days actually requiring/utilizing COMS Contractor support.

12.. DEVICE AVAILABILITY PERFORMANCE FACTOR (APF)*

Device Type/No.	Monthly Availability Performance Factor	FYTD Availability Performance Factor

*See Section 5.0 of the Basic SOW for calculation example.

13. MANPOWER SUMMARY

PERSONNEL ON SITE	Current Month	Previous Month	FYTD Avg.
Full Time			
Part Time			
Total			
Total M/Hrs Expended			

14. OPERATION, MAINTENANCE AND SUPPLY SUPPORT SUMMARY:

15. MODIFICATION/TRAINING

16. SUMMARY OF SPARE/REPAIRABLE ITEMS UTILIZED

Device	Utilized Item	Quantity	Part No.	Status of utilized Item

17. SIGNATURES

_____ _____

Signature of COMS Project Manager Signature of COMS COR

DATA ITEM DESCRIPTION

Title: TECHNICAL REPORT - STUDY/SERVICES
Number: **DI-MISC-80508A** Approval Date: 7 November 2000
Office of Primary Responsibility: G/TS-ALS
GIDEP Applicable: No Applicable Forms: No
AMSC Number: G7408
DTIC Applicable: Defense Technical Information Center (DTIC), 8725 John J. Kingman Rd., Ste. 0944, Ft. Belvoir, VA 22060-6218

Use/Relationship
A technical report provides fully documented results of studies or analyses performed. This data item description contains the format and content instructions for the data product generated by the specific and discrete task requirement as delineated in the contract.

This DID supersede DI-MISC-80508.
Requirements:

1. Format.
(a) The report and all attachments shall be typewritten, or otherwise clearly lettered, and shall be duplicated using non-fading ink.
(b) Text shall be prepared on standard letter size paper (8 1/2" x 11").
(c) When attachments are included, they shall be fully identified, referenced in the text, and folded to conform to the size paper used in the report.
(d) Security classification and distribution markings shall conform to the requirements of the contract, purchase description and security requirements checklist, as applicable.

2. Content.
(a) Title Page - Identifies the report by providing contract number, project name or purchase description title, task number, and reporting period.
(b) Table of Contents
(c) Section I - Includes the following:
(1) Introduction
(2) Summary - A brief statement of results obtained from the analytic effort.
(3) Conclusions and their condensed technical substantiation's.

(d) Section II - A complete and detailed description of the analytic results which led to the conclusions stated in Section I above.

CONTRACT DATA REQUIREMENTS LIST (CDRL)

(*1 Data Item*)

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Department of Defense, Executive Services Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **Please do not return your form to the above organization. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.**

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP ____ TM _____ OTHER _____

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
COMS	M67854-07-R-8017	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A002	TECHNICAL REPORT - STUDY/SERVICES	CONTRACT FUNDS STATUS REPORTS (CFSR)

4. AUTHORITY (*Data Acquisition Document No.*)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MISC-80508A	SOW PAR 3.10 5	PMTRASYS COMS

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT		MTHLY	SEE BLK 16
8. APP CODE		**11. AS OF DATE**	**13. DATE IF SUBSEQUENT SUBM.**
			SEE BLK 16

17. PRICE GROUP
18. ESTIMATED TOTAL PRICE

16. REMARKS

1. BLK 4: ALL DID PARAGRAPHS APPLY EXCEPT PARAGRAPHS 10.2.(A), (B), (C).(1), (C) (3), AND (D).
2. BLK 11 & 12: REPORTS SHALL BE TRANSMITTED NO LATTER THAN THE 5TH WORKING DAY AFTER EACH REPORTING PERIOD. THE FIRST REPORTING PERIOD SHALL BE FOR THE MOBILIZATION PERIOD.
3. BLK 13: SUBSEQUENT MONTHLY REPORTS DUE FROM CSD THROUGH THE END OF CONTRACT OR UNTIL ALL BALANCES ARE ZERO (0), AND NO MORE ACTIONS ARE PENDING (I.E., DOL, CLAIM, ETC.).
4. THE GOVERNMENT SHALL HAVE 15 DAYS FOR REVIEW FOR ACCEPTANCE OR REJECTION OF EACH SUBMISSION. NO RESPONSE COMMENTS WILL INDICATE ACCEPTANCE.
5. BLOCK 14: NOTE**: THE SUBMITTED REPORTS SHALL BE SIGNED BY THE COMS CONTRACTING OFFICER'S REPRESENTATIVE (COR), AND THEN DISTRIBUTION MADE TO THE ADDRESSEES VIA ELECTRONIC MAIL. ALL APPLICABLE ELECTRONIC MAIL ADDRESSES FOR DISTRIBUTION ADDRESSEE'S SHALL BE ON EACH SUBMISSION. ALL REPORTS SHALL BE ATTACHMENT FILES TO THE ELECTRONIC MAIL. ALL REPORTS SHALL BE IN MICROSOFT© OFFICE 2003 OR LATER FORMAT.
6. SEE ANNEX TO EXHIBIT A FOR SAMPLE REPORT.

14. DISTRIBUTION	b. COPIES		
a. ADDRESSEE	Draft	Final Reg	Final Repro
PMTRASYS PJM		1	
PMTRASYS PCO		1	
NAWCTSD COMS		1	
BASE COR		1	
15. TOTAL ——▶		4	

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
P.A. BOETTJER, NAWCTSD 6.6.4.10			

ANNEX A SAMPLE REPORT

CDRL: _A002___ **CONTRACT FUNDS STATUS REPORT** Contract: **M67854-_____**

Reporting Period: Month:_____ Year: _____ Contractor: _____

(1) CLIN/SLIN	(2) ACR	(3) DESCRIPTION OF SUPPLIES/SERVICES	(4) TOTAL CLIN/SLIN AMOUNT	(5) CLIN/SLIN FUNDING AMOUNT	(6) INVOICED / EXPENDED AMOUNT TO DATE	(7) CLIN/SLIN FUNDS REMAINING (5) – (6)	(8) PERCENT INVOICED OF FUNDED AMOUNT (6)/(5)	(9) DEDUCTIONS FOR PERIOD	(10) CUMULATIVE DEDUCTIONS	(11) AMOUNT PAID TO DATE
Example: 0002AA	AC	COMS @ 29 Palms	$2,400	$2,400	$400	$2000	18%	$00	$00	$400
TOTAL AMT			$2,400	$2400	$400	$2000	18%	$ 00	$00	$400

Sample CFSR for CDRL A002 Annex

HEADER INFORMATION. Data elements to be provided as header information are as follows, in the order shown.

a. Contract. Enter appropriate contract number.
b. Task Order. Enter appropriate task order number.
c. Contractor. Enter name of contractor's firm.
d. Reporting Period. Enter month and year for which report is being prepared.

REPORT BODY. The main body of the report shall be completed in accordance with the attached sample format. Entry of actual data is to be made in the appropriate column for the period covered by the report. Data element titles to be included are as follows:

a. CLIN / SLIN. Enter contract line item number / sub-line item number (CLIN / SLIN) which **are being performed or have been performed**, as shown in Section B of the task order. (The report is to be cumulative, showing all CLIN / SLIN which are currently active or have been active.)
b. ACR. Enter appropriate Accounting Classification Requirements (ACR) number for the CLIN / SLIN.
c. Description of Supplies / Services. Enter CLIN / SLIN description as shown in Section B.
d. Total CLIN / SLIN Amount. Enter total CLIN / SLIN amount as shown in Section B.
e. CLIN / SLIN Funded Amount. Enter CLIN / SLIN funded amount as shown in Section B.
f. Invoiced / Expended Amount to Date. Enter cumulative amount invoiced for CLIN / SLIN.
g. CLIN / SLIN Funds Remaining. Enter difference between CLIN / SLIN funded and invoiced amounts.
h. Percent Invoiced of Funded Amount. Enter invoiced amount as a percentage of funded amount.
i. Deductions for Period. Enter amount of any performance deduction taken against the CLIN / SLIN during the reporting period. Enter deduction amount or "N / A" (not applicable), as appropriate.
j. Cumulative Deductions. Enter cumulative total of all deductions taken to date against the CLIN / SLIN. Enter cumulative total or "N / A" as appropriate.
k. Amount Paid to Date. Enter amount which Contractor **has received payment** against the CLIN / SLIN.
l. Total Amount. Enter columnar sums.

DATA ITEM DESCRIPTION

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. TITLE	2. IDENTIFICATION NUMBER
CONTRACTOR DEVICE PERFORMANCE REPORT	DI-ILSS-80191D

3. DESCRIPTION/PURPOSE

3.1 This report documents time distribution, manning, work accomplished, problem areas, and summarizes training device performance during the contract period for Contractor Operation and Maintenance of Simulators/ Equipment (COMS/E). This report documents monthly hours to repair and Contractor Measurement Factor (CMF) for hardware assets during the period for Contractor Maintenance Services (CMS).

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE
940210	N/NAWCTSD-42		

7. APPLICATION/INTERRELATIONSHIP

7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by the specific and discrete task requirement as delineated in the contract.
7.2 This DID is required when COMS/E performance reporting is a contract line item.
7.3 This DID shall be tailored by applying 10.2.1, 10.2.2 or 10.2.3, and 10.2.4 on the Contract Data Requirements List (CDRL).
7.4 This DID supersedes DI-ILSS-80191C.

APPROVAL LIMITATION	9a. APPLICABLE FORMS	9b. AMSC NUMBER
		N6997

10. PREPARATION INSTRUCTIONS

10.1 Format. The report shall contain up to three parts as specified in the contract. Each part shall be prepared as delineated in the contract on hardcopy and/or on 3 1/2 inch disk in ASCII, DOS format. Hard copy format reports shall be reproducible on standard office copiers. Computer disk formats shall be readable on a DOS, IBM compatible computer. The summary portion Part II and Part III shall be presented in columnar format to facilitate reporting of data on multistation devices or where multiple devices are collocated.

10.2 Content.

10.2.1 Part I. The main body of the report shall contain information on the distribution, work accomplished, manning, and problem areas encountered. Data elements not applicable to a specific device shall be marked "NA" for alphanumeric fields and "0" (zero) for numeric fields. Data elements to be addressed are as follows, in the order shown. (See Figure 1 for a sample Contractor Device Performance Report.)

(Continued on Page 2)

DISTRIBUTION STATEMENT

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

Block 10, Preparation Instruction (Continued)

a. To. Addressees shall be in accordance with the contract.

b. From. Name of contractor providing services.

c. Title. Data shall be titled the same as the data item description.

d. Device/Equipment nomenclature. Identify by nomenclature the trainer(s) which is(are) the subject of the report. Use a 32 character alphanumeric field.

e. Device/Equipment Number. Identify the 12 character alphanumeric training device designation number assigned to the device by the Naval Air Warfare Center Training Systems Division (NAVAIRWARCENTRASYSDIV), excluding the initial character (prefix) of the training device designator. The first character must be numeric (1-9) or blank; the second character must be numeric (0-9); the third character must be alphabetic (A-Z); and the remaining characters can be a mix of numbers (0-9), letters (A-Z), and special characters. Devices not utilizing a NAVAIRWARCENTRASYSDIV designator must begin with "99Z".

f. Serial Number. Enter a six character alphanumeric serial number assigned to the device. To enable alphanumeric sorting, leading zeros (e.g., 000001, 000002) are required for numeric serial numbers.

g. Training Device Designator Prefix. Enter as a separate alpha character the initial character (prefix) of the training device designator. The default is "blank", which is the Cog 2"0" designator. Typical designators are prototype ("X"), Army ("A"), Air Force ("B"), non-Cog 2"0" ("S"), Interactive Courseware Hardware ("I").

h. Contract No. Self explanatory. A 16 character alphanumeric field.

i. Contract Support Period. Enter the start and completion dates of the contract. Use a MMDDYY numerical format for each date.

j. Date of Report. Enter the date that the report is completed. Use a MMDDYY numerical format.

Block 10, Preparation Instruction (Continued)

k. Report Period. Enter the ending date of the period covered by the report using a YYYYMM numerical format. When data is reported on a quarterly basis, use the last month in the quarter.

l. Activity Serviced/Device Location. Enter by 25 character alphanumeric field the activity assigned as the device custodian.

m. Activity Unit Identification Code (UIC). Enter the 5 digit Unit Identification Code (UIC) assigned to the custodian activity.

n. Report No. Number the reports consecutively throughout the COMS/E contract period. Use a 3 digit numeric field.

o. CASREP. Identify whether or not the device was CASREPT during the reporting period ("Yes" or "No").

p. Personnel Time Distribution. The time distribution of all contractor personnel for the report period covered shall be classified in the following categories:

(1) Operation
(2) Maintenance
(3) Supply Support
(4) Modification
(5) Training
(6) Verification of Documentation
(7) Other

For each category, enter the number of hours to the nearest hour, a numeric field limited to 99999.

q. Trainer Downtime. The number of hours the trainer was down and not available for scheduled training shall be reported. Downtime hours shall be classified as follows:

(1) Maintenance
(2) Device Modifications
(3) Parts/Supply Problems
(4) Facility Problems
(5) Lack of Instructors/Operators
(6) Lack of Setup Times
(7) Miscellaneous Other

Block 10, Preparation Instruction (Continued)

The sum of all such categorizations shall equal Total Trainer Downtime for the reporting period, a numeric field limited to 9999.9.

r. Course Identification Numbers (CINs). Enter the nine or ten digit alphanumeric code used to identify the course the device is used to support. If multiple courses are supported, enter the primary CINs up to a total of 5, with additional CIN data to be separately provided as may be requested.

s. Summary of Work Accomplished. Include, at the end of the report, a narrative summary containing the following:

(1) Operation, Maintenance, Supply Support. Provide a brief summary of major work items accomplished, citing any problem areas encountered.

(2) Modification. Describe all Government approved changes made to the device configuration.

(3) Training. Describe the nature and extent of training provided by the COMS contractor to its on site personnel.

t. Signature of Contractor Site Manager and Contracting Officer's Technical Representative (COTR). The report is to be signed by the Site Manager and by the COTR. Signature authority may be delegated to a designated Technical Assistant (TA) in writing by the COTR.

u. Classification of Report. Report originator shall ensure proper classification of the report in accordance with existing Navy regulations.

v. Contractor Personnel. At the end of the report, list all currently employed on and off site contractor personnel by name and Department of Labor category associated with this contract. Indicate if full time ("F") or part time ("P"). Describe nature and date of any change in employment status or assignment of contractor personnel.

10.2.2 Part II (Option 1) - Trainer Performance Summary, Aviation COMS/E. (See Figure 2 for a sample Aviation Performance Summary.) The following data elements shall be included:

Block 10, Preparation Instruction (Continued)

a. Report Period. Enter the ending date of the period covered by the report using a YYYYMM numerical format. When data is reported on a quarterly basis, use the last month in the quarter.

b. Activity Serviced/Device Location. Enter by 25 character alphanumeric field the activity assigned as the device custodian.

c. Device Number. Enter the appropriate alphanumeric device number and serial number.

d. Trainee Station. Indicate the trainee station number for multistation devices, or device serial number where multiple devices are collocated.

e. Contracted Training Time (CTT). The total time for the reporting period that the training device is contracted to be available for training. It is determined by adding the daily contracted training time hours as specified in the contract for all days of the reporting period, plus premium time and/or make up training time.

f. Contracted Training Time Utilized (CTTU). The "actual" portion of contracted training time that training occurs.

g. Scheduled Training Time (STT). Enter the total training hours scheduled by the scheduling authority for the reporting period.

h. Nonchargeable Downtime (NCDT). That portion of total downtime for which the contractor is not held responsible.

i. Chargeable Downtime (CDT). That portion of total downtime attributable to the failure of the contractor to provide systems capable of being used for training, such that training was either postponed, canceled or materially degraded.

j. Partial Mission Capability Quantity (PMCQ). That portion of CTT in which the device is used in a degraded status. The product of Partial Mission Capability Factor (PMCF) multiplied by Partial Mission Capability Time (PMCT).

Block 10, Preparation Instruction (Continued)

k. Hours Lost Because of No-shows and Cancellations. Enter the number of scheduled training time hours lost during the reporting period due to student no-shows and student cancellations. When an alternate event (i.e., a replacement event) is conducted during this period, do not count as lost hours.

l. Number of Students Scheduled (NSS). From the training schedule(s), enter the number of students so scheduled.

m. Number of Students Completed (NSC). Enter the number of students who completed training, as provided by the Government.

n. Utilization [of Availability] (UA). The quotient expressed by dividing CTTU, data element 10.2.2.f, by CTT, data element 10.2.2.e. The quotient will be expressed as a percentage to the nearest tenth of a percent.

o. Cumulative Contracted Training Time (CCTT). The total cumulative sum of all CTT, data element 10.2.2.e, for the fiscal year.

p. Cumulative Contracted Training Time Utilized (CCTTU). The total cumulative sum of all CTTU, data element 10.2.2.f, for the fiscal year.

q. Cumulative Utilization [of Availability]. The quotient expressed by dividing the CCTTU, data element 10.2.2.p, by the CCTT, data element 10.2.2.o. The quotient will be expressed as a percentage to the nearest tenth of a percent.

r. Student Completion Percent. The quotient expressed by dividing the Number of Students Completed by the Number of Students Scheduled.

s. Cumulative Student Completion. The quotient expressed by dividing the cumulative Number of Students Completed by the cumulative Number of Students Scheduled.

t. Contractor Performance Factor (CPF). A percentage calculated in accordance with the CPF formula specified in the contract.

Block 10, Preparation Instruction (Continued)

u. Cumulative CPF. A percentage calculated in accordance with the CPF formula specified in the contract utilizing the cumulative individual values of the elements of the formula's numerator and denominator. Such accumulations shall be over the current Government fiscal year reporting periods, expressed as a percentage to the nearest tenth of a percent.

10.2.3 Part II (Option 2) - Trainer Performance Summary, Sea/Land COMS/E. The following data elements shall be included for each device:

a. Trainee Station. Indicate the trainee station number for multistation devices, or device serial number where multiple devices are collocated.

b. Standard Utilization. Enter the currently approved standard utilization hours, normalized for a monthly or quarterly period, as appropriate. This is a numeric field limited to 9999.9 hours.

c. Standard Utilization Source. Enter the single alpha character indicating the source of the standard utilization, i.e., the Military Characteristics document ("M") or the Program Sponsor ("S").

d. Scheduled Usage Time. Enter the total device usage hours scheduled by the scheduling authority for the reporting period. This is a numeric field limited to 9999.9 hours.

e. Operationally Ready (OR) Time. Enter that portion of Scheduled Training Time during which all subsystems essential to the accomplishment of the scheduled usage mission are fully functional throughout the mission, or during which the material condition of the trainer otherwise enables successful completion of the scheduled mission, and, when required, a properly qualified trainer operator is present and performs operator duties. Mathematically, OR Time is equal to the Scheduled Training Time less Noncontractor Downtime, less Contractor Downtime. This is a numeric field limited to 9999.9 hours.

f. OR Time Utilized. Enter the total number of hours used for all events during the reporting period. The hours to be entered shall be total clock time, whether single student, multistudent, or crew/team training was conducted. The use of the device for all purposes, including demonstrations, will be included. OR Time Utilized cannot exceed OR Time, and is a numeric field limited to 9999.9 hours.

Block 10, Preparation Instruction (Continued)

g. Noncontractor Downtime. That portion of total downtime for which the contractor is not held responsible. The sum of Noncontractor Downtime and Contractor Downtime must equal Total Trainer Downtime.

h. Contractor Downtime. That portion of total downtime attributable to the failure of the contractor to provide systems capable of being used for its scheduled purpose, such that the scheduled usage was either postponed, canceled or materially degraded. The sum of Noncontractor Downtime and Contractor Downtime must equal Total Trainer Downtime.

i. Number of Students/Teams Scheduled. From the training schedule(s), enter the number of students/teams so scheduled. A numeric field limited to 99999.

j. Number of Students/Teams Completed. Enter the number of students/teams who completed training. A numeric field limited to 99999.

k. Standard Utilization Rate. The quotient expressed by dividing OR Time Utilized, data element 10.2.3.f., by the Standard Utilization, data element 10.2.3.b. The quotient will be expressed as a percentage to the nearest tenth of a percent. This percentage may exceed 100%, and is a numeric field limited to 999.9 percent.

l. Cumulative Utilization. The quotient expressed by dividing the accumulated OR Time Utilized by the accumulated Standard Utilization. The quotient will be expressed as a percentage to the nearest tenth of a percent. This percentage may exceed 100%, and is a numeric field limited to 999.9 percent.

m. Student/Team Completion Percent. The quotient expressed by dividing the Number of Students/Teams Completed by the Number of Students/Teams Scheduled, expressed as a percentage. This is a numeric field limited to 999.9.

n. Cumulative Student/Team Completion. The quotient expressed by dividing the accumulated Number of Students/Teams Completed by the accumulated Number of Students/Teams Scheduled. This is a numeric field limited to 999.9.

o. Utilization [of Availability] (UA). The quotient expressed by dividing OR Time Utilized, data element 10.2.3.f., by OR Time, data element 10.2.3.e. The quotient will be expressed as a percentage to the nearest tenth of a percent, and cannot exceed 100%. It is a numeric field limited to 999.9.

Block 10, Preparation Instruction (Continued)

p. Cumulative UA. The quotient expressed by dividing the accumulated OR Time Utilized by the accumulated OR Time. The quotient will be expressed as a percentage to the nearest tenth of a percent, and cannot exceed 100%. It is a numeric field limited to 999.9.

q. Hours Device Used By Activity. Enter by individual activity short-title the total number of hours that the device was used by each activity during the reporting period utilizing the following categories: Fleet; Foreign; Readiness Squadron; Reserves; Demonstrations; Quality Assurance and Revalidation (QA&R); Trainer Support; Pipeline Training; Other. These are all considered training utilization for reporting purposes. The sum of these hours must equal OR Time Utilized. For multiple UICs, specify the top five activities by UIC, and aggregate the remaining UICs as another entry. If multiple UICs are involved, and none predominate, enter a locally generated 5 digit numeric code that identifies the class, and can be traced to the attendees if necessary. This is a numeric field limited to 9999.9 hours.

r. Hours Lost Because of No-shows and Cancellations. Enter the number of usage hours lost during the reporting period due to student no-shows and student cancellations. This is a numeric field limited to 9999.9 hours.

s. Operational Performance Factor (OPF). Enter the relevant Operational Performance Factor (OPF), as calculated pursuant to the SOW. It is expressed as a percentage to the nearest tenth of a percent, and cannot exceed 100%.

t. Cumulative OPF. The quotient determined by dividing the accumulated OPF by the accumulated number of performance reporting periods, expressed as a percentage to the nearest tenth of a percent, and cannot exceed 100%.

u. Source. Enter the name of the organization providing the UR data. If the source is a contractor, also enter the name of the site COTR in the "Verified" field. The "Source" field is an 18 character alphanumeric field.

v. Verified. An 18 character alphanumeric field used to enter the name of the Government representative verifying the UR data.

Block 10, Preparation Instruction (Continued)

w. Explanation/comments. When applicable, enter a brief narrative to clarify any situation during the reporting period that had a material impact on device utilization, whether positive or negative. Include recommended actions to correct any deficiencies identified and/or appropriate plans of action and milestones, as agreed to by the program sponsor, to correct said deficiencies. Additionally, provide status comments to previously reported deficiencies.

10.2.4 Part III. Contractor performance summary for hardware maintenance (CMS). (See Figure 3 for a sample CMS CMF equipment group summary.) The following data elements shall be included:

a. Contract No. Self explanatory.

b. Equipment Group. A grouping of hardware equipment under CMS whose aggregate average monthly contractor measurement factor (AMCMF) is associated with an individual contract line item.

c. Covered period. Enter the ending date of the period covered by the report using a YYYYMM numerical format. When data is reported on a quarterly basis, use the last month in the quarter.

d. Hardware Nomenclature. Identify the appropriate alphanumeric manufacturer's name of the hardware.

e. Model Number. Identify hardware model number.

f. Serial Number. Identify manufacturer's hardware serial number.

g. Hours to Repair. Time lapse from when the Government notifies the Contractor of the requirement for repair or maintenance action to the time the hardware item is delivered to the Government in operational condition.

h. Contractor Measurement Factor (CMF). The tangible measure of Contractor success in meeting Government operational requirements of hardware. CMF is computed in accordance with the contract.

i. Total. The total of hardware CMF for the reporting period.

Block 10, Preparation Instruction (Continued)

j. Average Monthly Contractor Measurement Factor (AMCMF). The tangible measure of Contractor success in meeting Government operational requirements for an equipment group. AMCMF is computed in accordance with the contract. (Note: A grouping of hardware equipment under CMS whose aggregate AMCMF is associated with an individual contract line item.

Block 10, Preparation Instruction (Continued)

CONTRACTOR OPERATIONS AND MAINTENANCE OF SIMULATORS/EQUIPMENT/COMS/PERFORMANCE REPORT	1. DEVICE/EQUIP NOMENCLATURE:	2. DEV/EQUIP NO./SER/PREFIX DESIG:
	3. CONTRACT NO:	4. CONTRACT SUPPORT PERIOD: FROM:_____ TO:_____
	5. DATE OF REPORT:	6. PERIOD COVERED:
	7. ACTIVITY SERVICE:	8. ACTIVITY LOCATION/UIC:
	9. REPORT NO:	10. CASREP THIS PERIOD: _____YES _____NO

11. PERSONNEL TIME DISTRIBUTION	(HRS)	12. TRAINER DOWN TIME	(HRS)
OPERATION		MAINTENANCE	
MAINTENANCE		DEVICE MODIFICATION	
SUPPLY SUPPORT		PARTS/SUPPLY PROBLEMS	
MODIFICATIONS		FACILITY PROBLEMS	
TRAINING		LACK OF INSTRUCTORS/OPERATORS	
VERIFICATION OF DOCUMENTATION		LACK OF SETUP TIME	
OTHER _____		MISCELLANEOUS	
TOTAL =		TOTAL =	

13. COURSE IDENTIFICATION NUMBERS:	

14. SUMMARY OF WORK ACCOMPLISHED:

15. SIGNATURE OF CONTRACTOR SITE MANAGER:	16. SIGNATURE OF COTR/DESIGNATED TA:
17. CLASSIFICATION OF REPORT:	18. REMARKS:

FIGURE 1. Example of an aviation COMS performance report

Block 10, Preparation Instruction (Continued)

CONTRACTOR PERSONNEL:

CONTRACT NUMBER: _____ **REPORT PERIOD:** _____ **SITE:** _____

DOL CATEGORY	CONTRACTOR EMPLOYEE NAME	STATUS F-FULL P-PART TIME	NATURE AND DATE OF ANY CHANGE IN EMPLOYMENT STATUS OR ASSIGNMENT

FIGURE 1. Example of an aviation COMS performance report - Continued

Block 10, Preparation Instruction (Continued)

REPORTING PERIOD: _____

ACTIVITY/DEVICE/EQUIPMENT LOCATION: _____

		DEVICE:								
		TRAINEE STATION:								
1	CONTRACTED TRAINING TIME	(CTT)(HRS)								
2	CTT UTILIZED	(CTTU) HRS)								
3	SCHEDULED TRAINING TIME	(STD)(HRS)								
4	NON-CHARGEABLE DOWNTIME	(NCDT)(HRS)								
5	CHARGEABLE DOWNTIME	(CDT)(HRS)								
6	PMCQ	(HRS)								
7	HOURS LOST TO CANCELLATIONS	(HRS)								
8	NUMBER OF STUDENTS SCHEDULED									
9	NUMBER STUDENTS COMPLETED									
10	UTILIZATION OF AVAIL.	(%)								
11	CUMULATIVE CTT	(CCTT)(%)								
12	CUMULATIVE CTTU	(CCTTU)(%)								
13	CUMULATIVE UTILIZATION	(%)								
14	STUDENT COMPLETION PERCENT	(%)								
15	CUMULATIVE STUDENT COMPLETION	(%)								
16	CONTRACTOR PERF. FACTOR (CPF)	(CPF)(%)								
17	CUMULATIVE CPF	(%)								

FIGURE 2. Example of an aviation performance summary

Block 10, Preparation Instruction (Continued)

CMS CMF HARDWARE EQUIPMENT GROUP SUMMARY

CONTRACT NUMBER: _____

EQUIPMENT GROUP: _____

COVERED PERIOD: _____

HARDWARE EQUIPMENT NOMENCLATURE	MODEL NUMBER	SERIAL NUMBER	HOURS TO REPAIR	CMF
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				
31.				
32.				
33.				
			TOTAL =	
			HARDWARE EQUIPMENT GROUP AMCMF =	

FIGURE 3. Example of a CMS CMF equipment group summary

Mobilization Milestone Chart (sample).

This chart shall display the offeror's plan to meet the contractual requirements for the established Contractor Support Date (CSD). Include schedule dates to bring personnel on board, provide training and transfer documentation, material and equipment to meet requirements and assume full performance responsibilities at CSD.

SITE: MAGTFTC 29 Palms MOBILIZATION DEC 1, 2007 *****
DEVICE(S):MULTIPLE

	MOBILIZATION PERIOD (WEEKS)									
EVENTS/ACTIONS	-3	-2	-1	0	1	2	3	4		DATE COMPLETED
1. Contractor Weekly Report										
2. Key Personnel										
a. Project Manager on Board.										
b. Site Manager on Board										
c. Operator/Maintenance Personnel on board										
3. Security Clearance										
a. Submitted										
b. Completed										
4. Training										
a.Trainer Operation										
b.Mission Operation										
c.Trainer Unique Eqip										
d.Software Maint.										
5. Operational Analysis										
6. Inventory of GFP										
a.Device(s)										
b. Spare/Repair Parts										
c. Technical Manuals										
d Software Support										
e Materials										
7. GFP Storage										
8. Security/Safety										

Legend: > Start Event
< Complete Event
-- Work in Process

***** Prospective offerors should submit a Mobilization Milestone chart depicting events for devices requiring support.

CONTRACTOR OPERATION AND MAINTENANCE SERVICES (COMS) WITH SUPPLY SUPPORT

at

MAGTF-TC 29 Palms, CA

and

MCAS Yuma, AZ

Volume II-Technical/Management Proposal

Solicitation: M67854-07-R-8017

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-Disclaimer-
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INTRODUCTION

This volume will directly address information related to the technical and management requirements as set forth in Section L of Solicitation Number M67854-07-R-8017. The specific information provided herein is based on AHNTECH's superior performance, experience, and proven methodologies used in performance of our USMC COMS and other range contracts. As the former West Coast COMS contractor and current East Coast COMS contractor we have a thorough understanding of what is required to be successful as a USMC COMS contractor.

In Factor 1 — Technical Understanding, we will demonstrate that we have a thorough understanding of the job and the knowledge and ability to satisfactorily perform the tasks set forth in the solicitation. Included in this section are:

- [redacted]
- [redacted].
- [redacted]
- [redacted]
- [redacted]

In Factor 2 — Operations, we present an overview of our operational policies and procedures in order to demonstrate our logistical competence in meeting or exceeding all Government requirements. Included are:

- [redacted]
- [redacted].
- [redacted]
- [redacted].

Finally in Factor 3 — Resources, we demonstrate our commitment to providing adequate resources for all requirements and our corporate commitment to fully supporting the training mission of the Marine Corps. We provide:

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

In reviewing our proposal you will observe a comprehensive, well thought out plan to not only accomplish all tasks required by the solicitation, but to do so with the conscientious efforts and mature experience of a dedicated company that excels in training device and training range operation, maintenance, and management.

Over the years, AHNTECH has built a solid reputation for dedicated service and superior job performance for not only the Marine Corps but for other US military organizations as well. At a myriad of ranges nationwide, we provide the operations, maintenance, support, and steadfast performance needed to give the US Military that "extra sharp edge of combat training" necessary to meet US global commitments. Today, we believe we can provide that same superior service for this COMS effort at a lower cost than our competitors, thereby providing the Government with the best value.

Figure 1.0 is a map showing the breadth of our operations throughout the United States. Our technologically diverse workforce currently provides quality support to Air Force, Marine Corps, and Army training ranges across the country. We have the experience, technical capability, know-how, and resources to support the Marine Corps COMS program at the highest levels possible for many years to come.

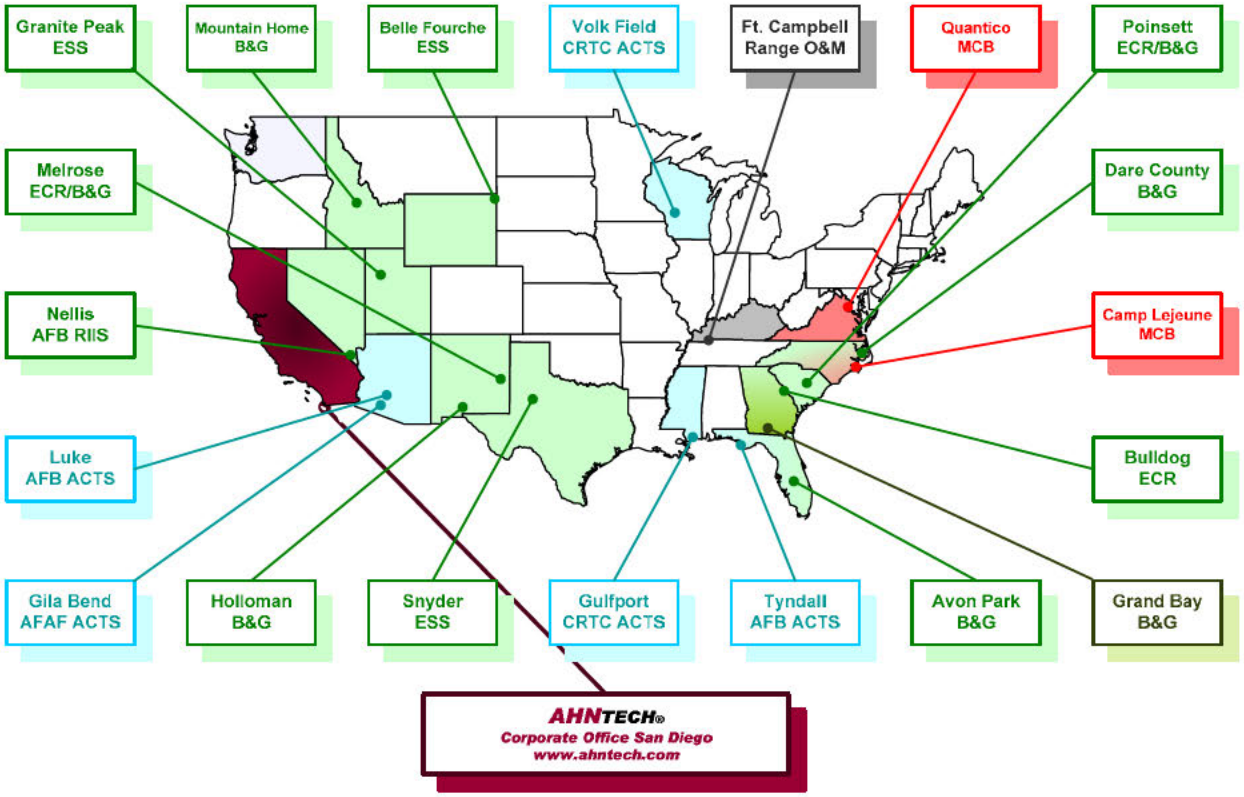

Figure 1.0 - AHNTECH Locations

Our methodology for providing the greatest possible support begins with employing the best, most dedicated, highly skilled workforce guided by a proven leader experienced in training device and range maintenance and operations and knowledgeable of Marine Corps training requirements. We will provide our workforce with all corporate means necessary to meet the management challenges presented by the USMC COMS program. We believe that this combined effort of corporate commitment, knowledge, leadership, and workforce drive will enable us to exceed the requirements of the solicitation.

As a former West Coast COMS contractor and the current East Coast COMS contractor, if selected, our mobilization efforts will be as seamless as possible to our USMC customers. Our mobilization plan takes into account all actions necessary to continue operations as they are to ensure our customers are fully supported at the highest levels. [redacted]

Inherent in the performance of this contract is a considerable responsibility for care, repair, and maintenance of Marine Corps resources including: training devices, facilities, targetry, property, and equipment assets. Since we recognize that we must maintain these assets in a safe and operable condition, we will continue to ensure that we "set the bar high" in our staffing plans so that we hire only the best technically minded people available. We have access to the most

skilled employees available and will provide them with the optimum wages available for the area. Additionally, employees will work under the auspices of a proven Employee Policy Manual that provides them with proven Standards of Conduct and individual self-improvement programs that are designed to enhance their long-term career goals.

In addition to the preceding [redacted]

Our many years of experience as a Government contractor has shown us that optimum contract performance can only be obtained through a comprehensive Quality Program. Our Quality Program has been time tested, [redacted] related operations across the country. It will continue in full force when applied to this contract. Our Quality Control Plan, [redacted] will be specifically tailored to the unique requirements of this contract, and will help ensure that we meet or exceed all customer expectations. [redacted] When it is employed, it will [redacted]

In summary, AHNTECH stands ready to accept responsibility for this effort and looks forward to the opportunity to support the vital USMC COMS mission for our valued customers — the US Marine Corps — and to perform as we state herein at a reasonable cost to the Government.

1. FACTOR 1 – Technical Understanding [Section L, Factor 1 - Technical Understanding]

1.1 Introduction [Section L, Factor 1 - Technical Understanding (1-A)]

In this Factor, we discuss how we will meet the technical and management requirements set forth in Section L Sub Factor 1 of the solicitation. The following paragraphs will demonstrate our knowledge of the requirement and provide information to assure you of our ability to operate and maintain the contracted systems in a manner which provides the needed training with minimal downtime to include surge support and flexible scheduling. This factor also includes information to familiarize the reader with AHNTECH's experience and expertise in the area of COMS type contracts. AHNTECH is fully prepared to assume responsibility for and provide superior support to MAGTF-TC 29 Palms, CA and MCAS Yuma, AZ.

1.2 [redacted] [Section L, Factor 1 - Technical Understanding (1-A)]

Throughout our years of experience on Ranges, AHNTECH has learned that the [redacted]. In order to meet the needs of the customer, [redacted] As such, our managers are indoctrinated to plan for the worst case scenario and hope for the best. While surges in different requirements call for different measures of support, the basic premise is the same in all cases - we must be prepared to provide personnel on short notice to perform whatever mission is dictated.

Our managers will handle these events using various methods of support. [redacted]

In the case of range operations, [redacted] If a unit requests the two hour training extension, [redacted]

AHNTECH realizes the importance supporting the Combined Arms MOUT operations in a timely manner; [redacted]

AHNTECH is aware that change in support of one range, or the extension of hours of use on another could impact the work schedule [redacted]
In order to alleviate any impact of this, AHNTECH utilizes [redacted]

In the event it is determined that additional support or expertise is required, [redacted] Depending on the situation and type of expertise required, [redacted]

[redacted]

1.3 [redacted] **[Section L, Factor 1 - Technical Understanding (1-B)]**

During our current tenure as the East Coast COMS contractor and our five year tenure as a West Coast COMS contractor we have gained considerable experience in supporting legacy systems (e.g., [redacted]. We are fully aware of the challenges involved in providing this support. We will utilize [redacted] When required [redacted]. Our experience has proven that thorough Internet research frequently yields sources for outdated parts. During the stages of mobilization, our Program Manager will review the resumes of technicians and insure our initial manning structure includes technicians with experience on the older equipment and systems. As a part [redacted]

1.4 [redacted] **[Section L, Factor 1 - Technical Understanding (1-C)]**

From the start of mobilization [redacted] While we realize there will be times that downtime is inevitable, we also are aware of the impact on training units when they have to wait for repairs, or operator delays. [redacted] As such we take all reasonable efforts to avoid it. Examples of efforts taken to prevent downtime would include:

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

Should down time occur due to equipment or personnel problems on our part [redacted]

1.5 [redacted] [Section L, Factor 1 - Technical Understanding (1-D)]

As often seen in military chain of commands and working units, management levels and organization structures evolve over time. AHNTECH's organization structure has evolved over the past few years to provide a more direct level of Program Management to the USMC. [redacted]

Our entire corporate structure is built around the requirements of Department of Defense (DoD) operation and maintenance contracts. AHNTECH has been successfully performing contracts of this nature for more than 20 years and our management staff has the knowledge and experience to continue to provide the highest quality of support to our current contracts and to this COMS contract.

Our Management Plan is presented in the following subparagraphs.

1.6 [redacted] [Section L, Factor 1 - Technical Understanding (1-D)]

AHNTECH will provide COMS support for range and training systems at MAGTF-TC 29 Palms and MCAS Yuma. The relationship of the USMC Program to our corporate structure is shown in Figure 1.6. In order to insure the [redacted]

[redacted]

1.6.1 [redacted] [Section L, Factor 1 - Technical Understanding (1-D)]

General duties and responsibilities as well as the reporting chain for positions involved in this contract are shown below. Specific individual responsibilities are defined throughout this plan, including all appendices and attachments thereto.

1.6.1.1 [redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]

1.6.1.2 [redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

1.6.1.3 [redacted]

- [redacted]
- [redacted]
- [redacted]

1.6.1.4 [redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]

1.6.1.5 [redacted]

- [redacted]
- [redacted]
- [redacted]

1.6.2 [redacted] **[Section L, Factor 1 - Technical Understanding (1-D)]**

Maintaining the expertise of the workforce is critical to successful transition of a contract of this type. AHNTECH historically retains a large portion of the incumbent work force. Typically at least [redacted] of our available positions are filled by incumbent employees. Our proposed Management Team will also bring additional relevant experience to the contract.

As mentioned previously, [redacted]

[redacted]

1.6.3 [redacted] [Section L, Factor 1 - Technical Understanding (1-D)] *[SOW, 3.2, 3.3]*

Support includes:

- [redacted]
- [redacted].
- [redacted]
- [redacted].
- [redacted].
- [redacted].
- [redacted]
- [redacted]
- [redacted].

1.6.4 [redacted] [Section L, Factor 1 - Technical Understanding (1-D)] *[SOW, 3.2]*

AHNTECH will provide contractor support [redacted] On site repairs [redacted]

AHNTECH will provide contractor support [redacted]

[redacted].

Our experience has shown tha[redacted]

We plan to use[redacted]

Our 29 Palms site will be staffed[redacted]

1.7 [redacted] **[Section L, Factor 1 - Technical Understanding (1-E)]**

As the West Coast USMC COMS contractor from 1997-2002, AHNTECH provided a staff of technicians with extensive experience in the operation and maintenance of the CAX (now Live Fire) Target system, Precision Gunnery Target System (PGTS), Portable Infantry Target Systems (PITS), NIDA Radio Trainers, and many of the Minor Devices that are a part of this solicitation. Additionally personnel performed O&M of ten RETS-based ranges; six at 29 Palms and four at MCB Camp Pendleton, CA. Our Program Manager[redacted]

Currently we are providing COMS services to the Marine Corps as the East Coast COMS contractor and providing O&M services for twelve RETS ranges at Ft Campbell, Kentucky. All of these services are similar to those to be provided under this contract.

The quality of our performance under our current and previous contracts has been exceptional. As the East Coast COMS contractor we have never been subject to chargeable down time. During the 12 years of performance under our fixed price contract at Fort Stewart we have had no deficiencies noted. Additionally, during the five years that we were the West Coast COMS contractor we were never subject to chargeable downtime and during our 5 year tenure as O&M contractor for the Multi-Purpose Range Complex at Yakima, WA, we consistently received more than 95% of the award fee.

2. FACTOR 2 – Operations [Section L, Factor 2 - Operations (2-A)]

2.1 [redacted] [Section L, Factor 2 - Operations (2-A)] *[SOW, 3.1]*

This sub-factor describes [redacted]

[redacted]

[redacted]

[redacted].

[redacted]

[redacted],

[redacted]

[redacted]

Figure 2.1 – Mobilization Schedule

2.1.1 [redacted] [Section L, Factor 2 - Operations (2-A)] *[SOW, 3.1.2]*

Executing a smooth mobilization at MCAGTF-TC 29 Palms and MCAS Yuma [redacted]

2.1.2 [redacted] [Section L, Factor 2 - Operations (2-A)]

Upon contract award, arrangements will be made with the Contracting Officer or COR to meet with Government and any incumbent/Contractor Logistics Support (CLS) contractor representatives to discuss items of mutual interest. These items include:

- [redacted]
- [redacted]
- [redacted]

After this initial meeting and with Government approval, we will interface directly with the incumbent COMS and CLS contractors. This will be accomplished by telephone or in person to facilitate the transfer of information, records, and documents. [redacted]

Key milestones of the mobilization process are presented in Figure 2.1. [redacted]

2.1.3 [redacted] [Section L, Factor 2 - Operations (2-A)]

Although our Mobilization Plan will be designed for implementation with minimum involvement from the Government, the incumbent COMS contractor and any incumbent CLS contractors, there are items we will require to complete a timely mobilization. For example, [redacted]

Our mobilization schedules will provide an overview of the mobilization process. We will evaluate all Government requested changes resulting from our post-award meetings [redacted]

2.1.4 [redacted] [Section L, Factor 2 - Operations (2-A)]

Our goal is to effect the transition from the incumbent contractor to our team in a manner that is all but invisible to the Marines that are using the various training ranges and devices. To ensure we achieve that, [redacted]

2.2 [redacted] [Section L, Factor 2 - Operations (2-B)] *[SOW, 3.6]*

We will provide [redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted]

2.2.1 [redacted] [Section L, Factor 2 - Operations (2-B)]

[redacted]

2.2.2 [redacted] [Section L, Factor 2 - Operations (2-B)]

All component and spare parts listings will be reviewed by [redacted]

- [redacted]

[redacted]

[redacted]

[redacted]

2.2.3 [redacted] [Section L, Factor 2 - Operations (2-B)] *[SOW, 3.6.5]*

Our on-site personnel will work closely with [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

2.2.4 [redacted] [Section L, Factor 2 - Operations (2-B)]

[redacted]

2.2.5 [redacted] [Section L, Factor 2 - Operations (2-B)] *[SOW, 3.6.7]*

All Government Furnished Property [redacted] All Government property will be [redacted]

[redacted]

2.2.6 [redacted] **[Section L, Factor 2 - Operations (2-B)]** ***[SOW, 3.6.3.1 and 3.6.4]***

Our [redacted] Per the requirements of paragraph H.9 of the contract, the cost of an item in excess of $25,000 will be borne by the Government. As discussed in H.9, we will provide a detailed cost estimate within five days of diagnosing these failures.

The [redacted]

2.2.7 [redacted] **[Section L, Factor 2 - Operations (2-B)]**

The [redacted]

2.2.8 [redacted] **[Section L, Factor 2 - Operations (2-B)]**

[redacted]

2.3 [redacted] **[Section L, Factor 2 - Operations (2-C)]**

Our corporate philosophy [redacted]

2.3.1 [redacted] [Section L, Factor 2 - Operations (2-C)]

[redacted].

[redacted]

Figure 2.3.1A - Quality Policy and Authority

[redacted]

Figure 2.3.1B - Quality Objectives

2.3.2 [redacted] [Section L, Factor 2 - Operations (2-C)]

Recognizing the contract SOW and related directives encompass all facets of COMS operations, maintenance, and support, [redacted]

Our quality function is [redacted]

2.3.3 [redacted] [Section L, Factor 2 - Operations (2-C)]

2.3.3.1 [redacted]

The [redacted]

- [redacted]
- [redacted]
- [redacted]

2.3.3.2 [redacted]

The [redacted]

The [redacted]

- [redacted]

[redacted]

2.3.3.3 [redacted]

The [redacted].

The [redacted]

The [redacted]

[redacted]

- [redacted]
- [redacted]
  - [redacted]
  - [redacted]
  - [redacted]
    - [redacted]
    - [redacted]
  - [redacted]
  - [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

2.3.3.4 [redacted]

[redacted]

[redacted]

2.3.4 [redacted] **[Section L, Factor 2 - Operations (2-C)]**

[redacted]

The [redacted]

The [redacted]

2.3.4.1 [redacted]

[redacted]

2.3.4.2 [redacted]

[redacted]

2.3.4.3 [redacted]

2.3.4.3.1 [redacted]

[redacted]

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

2.3.4.3.2 [redacted]

[redacted]

[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

[redacted]

2.3.4.3.3 [redacted]

The [redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted]

2.3.4.3.4 [redacted]

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

2.3.5 [redacted] **[Section L, Factor 2 - Operations (2-C)]**

[redacted]

before the report is returned to the QI will contain adequate information for tracking the item as [redacted]

[redacted]

2.3.6 [redacted] **[Section L, Factor 2 - Operations (2-C)]** ***[SOW, 3.2.2]***

[redacted]

2.3.7 [redacted] **[Section L, Factor 2 - Operations (2-C)]** ***[SOW, 3.10.9]***

There is ALWAYS a better way to "skin the cat". "We've always done it this way" is hardly ever the correct answer. AHNTECH [redacted]

Supporting the MISSION [redacted]

2.3.8 [redacted] **[Section L, Factor 2 - Operations (2-C)]** ***[SOW, 5.2]***

[redacted]

[redacted]

2.3.9 [redacted] **[Section L, Factor 2 - Operations (2-C)]**

[redacted]

2.4 [redacted] **[Section L, Factor 2 - Operations (2-D)]**

2.4.1 [redacted] **[Section L, Factor 2 - Operations (2-D)]**

[redacted]

2.4.1.1 [redacted]

The [redacted] the Contract Administrator at PMTRASYS. [redacted] and the PMTRASYS is shown in Figure 2.4.1.1. As depicted, AHNTECH [redacted]

[redacted]

Figure 2.4.1.1 - Program Manager Relationships

2.4.1.2 On-Site Organization

After review of the work break down for 29 Palms and MCAS Yuma, [redacted]

[redacted]

2.4.2 [redacted] [Section L, Factor 2 - Operations (2-D)]

This group consists of the [redacted].

The [redacted]

The [redacted]

The [redacted]

The [redacted]

2.4.2.1 [redacted] *[SOW, Appendices A through H]*

The [redacted]

[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

[redacted]

[redacted].

2.4.2.2 [redacted] ***[SOW, Appendices X through Z, Appendix R, Appendix S, Appendix T, Appendix V]***

The [redacted]

[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

[redacted]

2.4.2.2.1 [redacted]

This [redacted]

[redacted]

2.4.2.2.2 [redacted]

This [redacted]

2.4.2.2.3 [redacted]

This [redacted]

2.4.2.2.4 [redacted] ***[SOW, Appendices M through Q and Appendix W]***

The [redacted]

[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	

[redacted]

[redacted]

[redacted]

3. FACTOR 3 – Resources [Section L, Factor 3 - Resources]

Introduction

This Factor discusses the resources necessary to support the COMS effort at MCAGTF-TC 29 Palms and MCAS Yuma. This information is presented in response to Section L of the RFP and describes our [redacted]

As the current East Coast and former West Coast COMS contractor, AHNTECH understands the COMS mission and its resource and support requirements. We have repeatedly proven our ability to support O&M contracts in an efficient and cost-effective manner.

3.1 [redacted] [Section L, Factor 3 - Resources (3-A)]

The [redacted]

- [redacted]
- [redacted]
- [redacted]

[redacted]

Our workforce [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

3.1.1 [redacted] [L.10.3 Section 3 - Resources (3-A)]

The experience gained during our current and previous COMS contracts has shown that the most effective utilization of our manpower is achieved [redacted]

- [redacted]
- [redacted]
- [redacted]

3.1.2 [redacted] [Section L, Factor 3 - Resources (3-A)] *[SOW, 1.2.1]*

Critical to providing effective and responsive trainer operations and maintenance [redacted]

- [redacted]
- [redacted]
- [redacted]

[redacted]

3.1.3 [redacted]

After thoroughly reviewing the requirements of the solicitation, [redacted]

[redacted]

AHNTECH is very familiar with the policies and procedures [redacted]

3.1.4 [redacted] **[Section L, Factor 3 - Resources (3-B)]** ***[SOW, 3.13]***

Our Position Descriptions are as follows:

3.1.4.1 [redacted]

All jobs on this project will require a [redacted]

[redacted]

3.1.4.2 [redacted]

The [redacted]

3.1.4.3 [redacted]

3.1.4.4 [redacted]

[redacted]

3.1.4.5 Electronics Technician, Maintenance (all levels)

Maintains, repairs, and installs various types of electronic equipment and related devices such as electronic transmitting and receiving equipment (e.g., radar, radio, television, telecommunication, sonar, and navigational aids); personal and mainframe computers and terminals; industrial, medical, measuring, and controlling equipment; satellite equipment; and industrial robotic devices. Applies technical knowledge of electronics principles in determining equipment malfunctions and applies skill in restoring equipment operations.

3.1.4.6 Electronics Technician, Maintenance I (SCA Code 23181)

Applies technical knowledge to perform simple or routine tasks following detailed instructions. Performs such tasks as replacing components and wiring circuits; repairing simple electronic equipment; and taking test readings using common instruments such as digital multimeters, signal generators, semiconductor testers, curve tracers, and oscilloscopes.

Receives technical guidance, as required, from supervisor or higher level technician. Work is spot-checked for accuracy.

3.1.4.7 Electronics Technician, Maintenance II (SCA Code 23182)

Applies comprehensive technical knowledge to solve complex problems by interpreting manufacturers' manuals or similar documents. Work requires familiarity with the interrelationships of circuits and judgments in planning work sequence and in selecting tools and testing instruments.

Receives technical guidance, as required, from supervisor or higher level technician, and work is reviewed for compliance with accepted practices. May provide technical guidance to lower level technicians.

3.1.4.8 Electronics Technician, Maintenance III (SCA Code 23183)

Applies advanced technical knowledge to solve unusually complex problems that typically cannot be solved solely by referencing manufacturers' manuals or similar documents. Examples of such problems include determining the location and density of circuitry, evaluating electromagnetic radiation, isolating malfunctions, and incorporating engineering changes.

Work typically requires a detailed understanding of the interrelationships of circuits. Exercises independent judgment in performing such tasks as making circuit analyses, calculating wave forms, and tracing relationships in signal flow. Uses complex test instruments such as high frequency pulse generators, frequency synthesizers, distortion analyzers, and complex computer control equipment. Work may be reviewed by supervisor for general compliance with accepted practices. May provide technical guidance to lower level technicians.

3.1.4.9 Maintenance Trades Helper (SCA Code 23580)

Assists one or more workers in the skilled maintenance trades by performing specific or general duties of lesser skill, such as keeping a worker supplied with materials and tools; cleaning working area, machine, and equipment; assisting journeyman by holding materials or tools; and performing other unskilled tasks as directed by journeyman. The kind of work the helper is permitted to perform varies from trade to trade. In some trades the helper is confined to supplying, lifting, and holding materials and tools, and cleaning working areas; and in others the worker is permitted to perform specialized machine operations, or parts of a trade that are also performed by workers on a full-time basis.

3.1.4.10 Computer Operator (all levels)

Monitors and operates the control console of a mainframe digital computer, a group of minicomputers (or individual computer), or personal computers in accordance with operating instructions, to process data. Work is characterized by the following duties:

- Studies operating instructions to determine equipment setup needed
- Loads equipment with required items (tapes, cards, paper, etc.)
- Switches necessary auxiliary equipment into system
- Starts and operates control console
- Diagnoses and corrects minor equipment malfunctions
- Reviews error messages and makes corrections during operation or refers problems
- Maintains operating records
- Develops pre-structured operational scenarios
- Conducts tests of new or modified programs and assists in modifying systems or programs

3.1.4.11 Computer Operator I (SCA Code 14041)

Works under close personal supervision and is provided detailed written or oral guidance before and during assignments. As instructed, resolves common operating problems. May serve as an assistant operator working under close supervision or performing a portion of a more senior operator's work.

3.1.4.12 Computer Operator II (SCA Code 14042)

Processes scheduled routines which present few difficult operating problems (e.g., infrequent or easily resolved error conditions). In response to computer output instructions or error conditions, applies standard operating or corrective procedure. Refers problems which do not respond to preplanned procedure. May serve as an assistant operator, working under general supervision.

3.1.4.13 General Clerk (all levels)

Performs a combination of clerical tasks to support office, business, or administrative operations, such as: maintaining records; receiving, preparing, or verifying documents; searching for and compiling information and data; and responding to routine requests with standard answers (by phone, in person, or by correspondence). The work requires a basic knowledge of proper office procedures. Follows prescribed procedures or steps to process paperwork; may perform other routine office support work (e.g., typing, filing, or operating a keyboard controlled data entry device to transcribe data into a form suitable for data processing). Clerical work is controlled (e.g., through spot checks, complete review, or subsequent processing) for both quality and quantity. Supervisors (or other employees) are available to assist and advise clerks on difficult problems and to approve their suggestions for significant deviations from existing instructions.

3.1.4.14 General Clerk II (SCA Code 01112)

Follows a number of specific procedures in completing several repetitive clerical steps performed in a prescribed or slightly varied sequence, such as coding and filing documents in an extensive alphabetical file, simple posting to individual accounts, opening mail, running mail through metering machines, and calculating and posting charges to departmental accounts. Little or no subject-matter knowledge is required, but the clerk needs to choose the proper procedure for each task.

3.1.4.15 Material Coordinator (SCA Code 21030)

Coordinates and expedites flow of material, parts, and assemblies within or between departments in accordance with production and shipping schedules or department supervisors' priorities. Reviews production schedules and confers with department supervisors to determine material required or overdue and to locate material. Requisitions material and establishes delivery sequences to departments according to job order priorities and anticipated availability of material. Arranges for in-plant transfer of materials to meet production schedules. Arranges with department supervisors for repair and assembly of material and its transportation to various departments. Examines material delivered to production departments to verify if type specified. May monitor and control movement of material and parts along conveyor system, using remote-control panelboard. May compute amount of material needed for specific job orders, applying knowledge of product and manufacturing processes and using adding machine. May compile report of quantity and type of material on-hand. May move or transport material from one department to another, using hand truck or industrial truck. May compile perpetual production records in order to locate material in process of production, using manual or computerized system. May maintain employee records.

3.1.4.16 General Maintenance Worker (SCA Code 23370)

Performs general maintenance and repair of equipment and buildings requiring practical skill and knowledge (but not proficiency) in such trades as painting, carpentry, plumbing, masonry, and electrical work. Work involves a variety of the following duties: Replacing electrical

receptacles, wires, switches, fixtures, and motors; using plaster or compound to patch minor holes and cracks in walls and ceilings; repairing or replacing sinks, water coolers, and toilets; painting structures and equipment; repairing or replacing concrete floors, steps, and sidewalks; replacing damaged paneling and floor tiles; hanging doors and installing door locks; replacing broken window panes; and performing general maintenance on equipment and machinery.

3.1.4.17 Heavy Equipment Operator (SCA Code 23440)

Operates heavy equipment such as cranes, clamshells, power shovels, motor graders, heavy loaders, carryalls, bulldozers, rollers, scrapers, and large industrial tractors with pan or scrapper attachments. Equipment is used to excavate, load or move dirt, gravel or other materials. Operator may read and interpret grade and slope stakes and simple plans. May grease, adjust and make emergency repairs to equipment.

3.1.4.18 Welder, Combination, Maintenance (SCA Code 23960)

Welds metal components together to fabricate or repair products, such as machine parts, plant equipment, mobile homes, motors and generators, according to layouts, blueprints or work orders, using brazing and a variety of arc and gas welding equipment. Welds metal parts together, using both gas welding or brazing and any combination of arc welding processes. Performs related tasks such as thermal cutting and grinding. Repairs broken or cracked parts, fills holes and increases size of metal parts. Positions and clamps together components of fabricated metal products preparatory to welding. May locate and repair cracks in industrial engine cylinder heads, using inspection equipment and gas torch. May perform repairs only. May be required to pass employer performance tests or standard tests to meet certification standards of governmental agencies or professional and technical associations.

3.1.4.19 Carpenter, Maintenance (SCA Code 23130)

Performs the carpentry duties necessary to maintain in good repair building woodwork and equipment such as bins, cribs, counters, benches, partitions, doors, floors, stairs, casings, and trim made of wood. Work involves most of the following: Planning and laying out of work from blueprints, drawings, models, or verbal instructions, using a variety of carpenter's hand tools, portable power tools and standard measuring instruments; making standard shop computations relating to dimensions of work; and selecting materials necessary for the work. In general, the work of the maintenance carpenter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

3.1.4.20 Laborer, Grounds Maintenance (SCA Code 11210)

Maintains grounds of industrial, commercial or public property such as buildings, camp and picnic grounds, parks, playgrounds, greenhouses, and athletic fields, and repairs structures and equipment, performing one or more of the following tasks: Cuts grass, using walking-type or riding mowers (less than 2000 lbs.). Trims hedges and edges around walks, flower beds, and wells, using hedge trimmers, clippers, and edging tools. Prunes shrubs and trees to shape and improve growth, using shears and other hand tools. Sprays lawn, shrubs, and trees with fertilizer or insecticide. Plants grass, flowers, trees, and shrubs. Waters lawn and shrubs during dry periods, using hose or activating sprinkler system. Picks up and burns or carts away leaves, paper or other litter. Removes snow from walks, driveways, roads, or parking lots, using shovel and snow blower. Spreads salt on walkways and other areas. Repairs and paints fences, gates, benches, tables, guardrails, and outbuildings. Assists in repair of roads, walks, buildings, and

mechanical equipment. May clean comfort stations, office and workshop areas, and parking lots by sweeping, washing, mopping, and polishing.

3.1.5 [redacted] [Section L, Factor 3 - Resources (3-B)]

[redacted]

3.1.5.1 Laborer (SCA Code 23470)

Performs tasks which require mainly physical abilities and effort involving little or no specialized skill or prior work experience. The following tasks are typical of this occupation: Loads and unloads trucks, and other conveyances; moves supplies and materials to proper location by wheelbarrows or handtrucks; stacks materials for storage or binning; collects refuse and salvageable materials. Digs, fills, and tamps earth excavations; levels ground using pick, shovel, tamper and rake; shovels concrete and snow; cleans culverts and ditches; cuts tree and brush; operates power lawnmowers. Moves and arranges heavy pieces of office and household furniture, equipment, and appliances; moves heavy pieces of automotive, medical engineering, and other types of machinery and equipment. Spreads sand and salt on icy roads and walk-ways; picks up leaves and trash.

3.1.5.2 Data Entry Operator (all levels)

This position operates keyboard-controlled data entry devices such as a computer, key-operated magnetic tape, or disc encoder to transcribe data into a format suitable for computer processing. Job task requires skill in operating an alphanumeric keyboard, and an understanding of transcribing procedures and relevant data entry equipment.

3.2 [redacted] [Section L, Factor 3 - Resources (3-C)] *[SOW, 3.10.2.1]*

As critical as adequate staffing [redacted]

[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

[redacted]

3.3 [redacted] [Section L, Factor 3 - Resources (3-D)]

[redacted]

3.4 Management Actions and Policies [Section L, Factor 3 - Resources (3-E)]

3.4.1 [redacted] [Section L, Factor 3 - Resources (3-E)]

[redacted].

In addition, [redacted]

3.4.1.1 [redacted]

In the event [redacted]

3.4.1.2 [redacted]

Our [redacted]

3.4.1.3 [redacted]

The following criteria will be used [redacted]

[redacted]

[redacted]

3.5 [redacted] **[Section L, Factor 3 - Resources (3-E)]**

AHNTECH believes that training [redacted]

3.5.1 [redacted] **[Section L, Factor 3 - Resources (3-E)]**

Upon notification of contract award, [redacted]

3.5.2 [redacted] **[Section L, Factor 3 - Resources (3-E)]**

Prior to their hiring, all prospective employees will be screened [redacted]

As the mobilization period progresses, all personnel under training will be expected [redacted]

3.5.3 [redacted] [Section L, Factor 3 - Resources (3-E)]

One of our basic precepts in establishing a reasonable manning policy is [redacted] This approach benefits AHNTECH and the Government with a cost-effective solution to the O&M effort. [redacted]

- [redacted]
- [redacted]
- [redacted]

3.5.4 [redacted] [Section L, Factor 3 - Resources (3-E)]

As personnel are lost through attrition or for other reasons, replacement personnel will be [redacted].

3.5.5 [redacted] [Section L, Factor 3 - Resources (3-E)]

All training will be conducted [redacted]

3.6 Motivating/Stabilizing the Work Force [Section L, Factor 3 - Resources (3-E)]

3.6.1 [redacted] [Section L, Factor 3 - Resources (3-E)]

Competitive pay, in-house upgrading, and promotions of qualified personnel stabilize our work

[redacted]

3.6.2 [redacted] [Section L, Factor 3 - Resources (3-E)]

[redacted]

[redacted]