

**Combat Engineer Platoon Sergeant  
Engineer Operations Chief**

**Course Curriculum Review Board (CCRB)**

**MOS 1371 (2000 Level)  
NAVMC 3500.12\_ Engineer and Utilities  
Training and Readiness Manual**

**Courses:**

**CENCO = Combat Engineer Noncommissioned Officer**

**CEPS = Combat Engineer Platoon Sergeant**

**EOC = Engineer Operations Chief**

**UB = Urban Breacher's**

x = Event location in POIs at FLC

MOJT = Manage on the Job Training

<b>2000 Level (Event Location at FLC)</b>	<b>NCO</b>	<b>CEPS</b>	<b>EOC</b>	<b>UB</b>
1371-ADMN-2001 Manage unit training		x	x	
1371-ADMN-2002 Deliver a military brief		x	x	
1371-CMOB-2001 Recommend obstacle placement	x			
1371-CMOB-2002 Prepare an obstacle plan		x		
1371-CMOB-2003 Employ booby traps	x			
1371-CMOB-2004 Destroy bridges using explosives	x			
1371-DEMO-2001 Engage targets with expedient demolitions	x			
1371-DEMO-2002 Use specialized explosives	x			
1371-DEMO-2003 Maintain a Breacher's Logbook	x			x
1371-DEMO-2004 Compute the Net Explosive Weight (NEW)	x			x
1371-DEMO-2005 Take appropriate protective measures	x			x
1371-DEMO-2006 Identify building construction	x			x
1371-DEMO-2007 Employ a doughnut charge	x			x
1371-DEMO-2008 Employ a window charge	x			x
1371-DEMO-2009 Employ a water charge	x			x
1371-DEMO-2010 Employ an oval charge	x			x
1371-DEMO-2011 Employ a Uli knot slider charge	x			x
1371-DEMO-2012 Employ a detonating cord linear charge	x			x
1371-DEMO-2013 Employ a concrete charge	x			x
1371-DEMO-2014 Employ a fence charge	x			x

<b>2000 Level (Event Location at FLC) (cont.)</b>	<b>NCO</b>	<b>CEPS</b>	<b>EOC</b>	<b>UB</b>
<b>1371-DEMO-2015 Prepare demolition target folder</b>	<b>MOJT</b>			
1371-EOPS-2001 Establish operations center			x	
1371-EOPS-2002 Manage engineer forms and reports			x	
1371-EOPS-2003 Analyze engineer form/reports			x	
1371-EOPS-2004 Repair damaged airfields (ADR)	x			
1371-EOPS-2005 Design concrete structures		x		
<b>1371-EOPS-2006 Employ construction equipment kits</b>	<b>MOJT</b>			
1371-EOPS-2007 Estimate requirements for engineer projects			x	
1371-EOPS-2008 Conduct chainsaw operations	x			
1371-EOPS-2009 Conduct rigging	x			
<b>1371-EOPS-2010 Requisition required materials</b>	<b>MOJT</b>			
1371-EOPS-2011 Establish project/operation schedules		x	x	
1371-EOPS-2012 Arrange external support for engineer projects/operations		x	x	
1371-EOPS-2013 Conduct range operations		x		
1371-HORZ-2001 Perform hasty soil analysis	x			
1371-HORZ-2002 Design expedient drainage structures	x			
<b>1371-HORZ-2003 Construct expedient drainage structures</b>	<b>MOJT</b>			
1371-HORZ-2004 Design a concrete slab on grade	x			
1371-HORZ-2005 Determine required concrete mixture		x		
1371-MANT-2001 Maintain the unit's engineer equipment, chests, sets and kits maintenance programs	x	x		
1371-MANT-2002 Monitor the maintenance management of the unit's combat engineer equipment, chests, sets and kits maintenance programs		x		
1371-MOBL-2001 Design Tactical Landing Zones (TLZ)/Expeditionary Airfields (EAF)	x			
1371-MOBL-2002 Manage the employment of the Medium Girder Bridge (MGB)	x			
1371-MOBL-2003 Operate Bridge Erection Boat (BEB)	x			
1371-MOBL-2004 Manage the employment of the Improved Ribbon Bridge (IRB)	x			
1371-MOBL-2005 Manage military rafting operations	x			
1371-MOBL-2006 Determine raft size required for wet gap crossing		x		
1371-MOBL-2007 Determine tactical bridging assets required to span a gap		x		
1371-MOBL-2008 Plan engineer aspects of gap crossing operations			x	
1371-MOBL-2009 Design a non-standard bridge			x	
1371-MOBL-2010 Employ M58/M68 linear demolition charge	x			
1371-MOBL-2011 Employ the APOBS	x			
1371-MOBL-2012 Conduct obstacle breaching operations	x			
1371-MOBL-2013 Engage stationary targets with the shotgun	x			x
1371-MOBL-2014 Perform select shot drills with the shotgun	x			x
<b>1371-MOBL-2015 Qualify with the shotgun</b>	<b>MOJT</b>			
1371-MOBL-2016 Conduct ballistic breach	x			x
1371-MOBL-2017 Plan breaching of a complex obstacle		x		
1371-MOBL-2018 Lead a dismounted route sweep	x			
1371-MOBL-2019 Perform manual breaching	x			x
1371-MOBL-2020 Direct explosive hazards reduction operations			x	
1371-MOBL-2021 Lead Route and Area Clearance Operations	x	x		

<b>2000 Level (Event Location at FLC) (cont.)</b>	<b>NCO</b>	<b>CEPS</b>	<b>EOC</b>	<b>UB</b>
1371-MOBL-2022 Identify Explosive Hazards (EH)	X	X		
1371-MOBL-2023 Reduce Explosive Hazards (EH)	X	X		
1371-MOBL-2024 Operate the Route Clearance Medium Mine Protected Vehicle (MMPV)	MOJT			
1371-MOBL-2025 Operate the Route Clearance Mine Protected Clearance Vehicle (MPCV)	MOJT			
1371-MOBL-2026 Operate the Route Clearance Vehicle Mounted Mine Detector (VMMD) Vehicle	MOJT			
1371-MOBL-2027 Operate the Route Clearance Vehicle's Government Furnished Equipment (GFE)	MOJT			
1371-MOBL-2028 Operate a Combat Rubber Reconnaissance Craft (CRRC)	MOJT			
1371-MOBL-2035 Operate a Robot	X	X		
1371-PLAN-2001 Participate in the Marine Corps Planning Process (MCP)		X	X	
1371-PLAN-2002 Plan a base camp		X	X	
1371-RECN-2001 Conduct engineer reconnaissance	X			
1371-RECN-2002 Conduct demolition reconnaissance	X			
1371-SURV-2001 Design survivability positions	X			
1371-SURV-2002 Prepare a survivability plan		X		
1371-VERT-2001 Plan wood frame structure		X		
1371-VERT-2002 Layout wood frame structure	X			

**1371-ADMN-2001:** Manage unit training

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 12 months

**GRADES:** GYSGT, MSGT, MGYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given an engineer unit, training requirements and references.

**STANDARD:** To meet training requirements sustaining engineer operations in accordance with NAVMC 3500.12\_ Marine Corps Engineer and Utilities Training and Readiness Manual.

**PERFORMANCE STEPS:**

1. Determine mission requirements.
2. Determine current unit capabilities.
3. Identify training shortfalls and strengths of unit.
4. Determine specific training objectives to correct shortfalls in accordance with the T&R Manual and METs.
5. Develop logical sequence for training.
6. Brief commander on training plan, as required.
7. Prepare a training schedule.
8. Issue order.
9. Coordinate logistical support.
10. Submit required reports.



7. Determine work sequence.
8. Determine task organization.
9. Determine coordination required.

**REFERENCES:**

1. MCRP 3-17.2D Explosive Hazard Operations
  2. MCRP 3-17.7L Explosives and Demolitions
  3. MCRP 3-17A Engineer Field Data
  4. MCRP 3-17B Engineer Forms and Reports
  5. MCWP 3-17 Engineer Operations
  6. MCWP 3-17.5 Combined Arms Obstacle Integration
  7. MCWP 3-41.1 Rear Area Operations
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**1371-CMOB-2002:** Prepare an obstacle plan

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 12 months

**GRADES:** GYSGT, MSGT, MGYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a tactical situation, intelligence reports, map, operations order, and references.

**STANDARD:** To recommend obstacle types, placement, and resources required to fix, turn, block and disrupt enemy movement in accordance with MCWP 3-17.5 Combined Arms Obstacle Integration.

**PERFORMANCE STEPS:**

1. Analyze mission.
2. Conduct Intelligence Preparation of the Battlespace (IPB).
3. Identify Requests for Information (RFI).
4. Provide guidance for the location and intent of obstacles to the S-3.
5. Identify logistics requirements.
6. Identify and prioritize fire support requirements.
7. Prepare an overlay and an obstacle plan appendix to the operations order.

**REFERENCES:**

1. GTA 90-01-011 Joint Forward Operations Base (JFOB) Protection Handbook
  2. GTA 90-01-018 Joint Entry Control Point & Escalation of Force Procedures
  3. MCRP 2-3A Intelligence Preparation of the Battlefield/Battlespace
  4. MCRP 3-17.2D Explosive Hazard Operations
  5. MCWP 3-1 Ground Combat Operations
  6. MCWP 3-17.4 Engineer Reconnaissance
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**1371-CMOB-2003:** Employ booby traps

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given the proper authority to set booby traps, Class V,

demolition tools, a blank DA Form 1355 and personal protective equipment (PPE).

**STANDARD:** To slow the enemy's advance; deny the enemy use of facilities or material; warn of enemy approach; or deny the enemy use of terrain not covered by direct fire in accordance with MCRP 3-17.2D Explosive Hazard Operations.

**PERFORMANCE STEPS:**

1. Review the mission.
2. Perform area reconnaissance.
3. Determine location(s).
4. Determine type of trap (explosive/non-explosive).
5. Determine type of firing device(s).
6. Determine types and amount of Class V.
7. Complete the firing chain.
8. Arm booby trap(s).
9. Camouflage to its natural state.
10. Record the booby traps on DA Form 1355.
11. Turn in all safety pins and clips to the NCOIC.
12. Submit required report(s).

**REFERENCES:**

1. MCRP 3-17.2D Explosive Hazard Operations
2. MCRP 3-17.7L Explosives and Demolitions
3. MCRP 3-17A Engineering Field Data
4. MCRP 3-17B Engineer Forms and Reports
5. MCWP 3-17 Engineering Operations

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

<u>DODIC</u>	<u>Quantity</u>
G940 Grenade, Hand Green Smoke M18	2 grenades per Team
G945 Grenade, Hand Yellow Smoke M18	2 grenades per Team
G982 Grenade, Hand Practice Smoke TA M83	2 grenades per Team
L495 Flare, Surface Trip M49 Series	2 flares per Team
L594 Simulator, Projectile Ground Burst M	2 Simulator per Team
L598 Simulator, Explosive Booby Trap Flas	2 Simulator per Team
M023 Charge, Demolition Block M112 1-1/4	10 charges per Team
M327 Coupling Base, Firing Device with Pr	4 detonators per Team
M456 Cord, Detonating PETN Type I Class E	350 FT per Team
ML03 Firing Device, Demolition Multi-Purp	4 detonators per Team
MN52 MK154 Mod 0	4 detonators per Team

**RANGE/TRAINING AREA:**

Facility Code 17413 Field Training Area  
Facility Code 17830 Light Demolition Range

**EQUIPMENT:** Squad demolitions kit.

**MATERIAL:** Barbed wire roll, nails, coffee cans, glass shards, shrapnel, secondary projectiles.

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Communications (radio).

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** All explosive booby trap devices training will be constructed in accordance with MCRP 3-17.2D Explosive Hazards Operations and conducted on approved demolition ranges.

**ORDNANCE ADDITIONAL INSTRUCTIONS:**

DODIC	Nomenclature	Additional Instructions
G940	Grenade, Hand Green Smoke M18	
G945	Grenade, Hand Yellow Smoke M18	
G982	Grenade, Hand Practice Smoke TA M83	
L495	Flare, Surface Trip M49 Series	
L594	Simulator, Projectile Ground Burst M115A2	
L598	Simulator, Explosive Booby Trap Flash M117	
M023	Charge, Demolition Block M112 1-1/4 pound C-4	
M327	Coupling Base, Firing Device with Primer	
M456	Cord, Detonating PETN Type I Class E	
ML03	Firing Device, Demolition Multi-Purpose M142	
MN52	MK154 Mod 0	

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**1371-CMOB-2004:** Destroy bridges using explosives

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** SGT, SSGT, GYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a mission, a bridge reconnaissance report, personnel, Class V, a demolition kit, protective field equipment and references.

**STANDARD:** To ensure that the demolition results in either a gap that exceeds the enemy's assault bridging capability by 5 meters, or that leaves

demolished components which are unable to provide sufficient bearing capacity for enemy assault breaching assets.

**PERFORMANCE STEPS:**

1. Review the mission/bridge reconnaissance report.
2. Determine bridge category.
3. Design collapse mechanism.
4. Select method of attack.
5. Establish security.
6. Calculate charges.
7. Place charges.
8. Initiate demolition.

**REFERENCES:**

1. GTA 05-10-033 Demolition Card
2. MCRP 3-17.7L Explosives and Demolitions
3. MCRP 3-17A Engineer Field Data

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** This task replicates training needed for wartime conditions to impede enemy mobility. Class V (W) explosives is not annotated due to different types of bridges and task standards for either destroying a span, intermediate support, or bridge abutment.

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**1371-DEMO-2001:** Engage targets with expedient demolitions

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 3 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a target, demolitions tools and equipment, Class V, improvised materials, and protective field equipment.

**STANDARD:** To produce the desired effect on the target equivalent to the effect of a similar conventional explosive or demolition charge.

**PERFORMANCE STEPS:**

1. Analyze target.
2. Construct a platter charge.
3. Construct an expedient claymore.
4. Construct a grape shot directional charge.
5. Construct an omni (360 degree) charge.
6. Construct an expedient shaped charge.
7. Construct an expedient flame charge.
8. Construct an expedient bangalore torpedo.
9. Engage target.

**REFERENCES:**

1. GTA 05-10-033 Demolition Card
2. MCRP 3-17.2D Explosive Hazard Operations
3. MCRP 3-17.7L Explosives and Demolitions
4. MCRP 3-17A Engineer Field Data
5. SWO 60-AA-MMA-010 Demolition Materials



**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

<u>DODIC</u>	<u>Quantity</u>
M023 Charge, Demolition Block M112 1-1/4	10 charges per Team
M032 Charge, Demolition Block TNT 1-Pound	10 charges per Team
M130 Cap, Blasting Electric M6	8 blasting caps per Team
M131 Cap, Blasting Non-Electric M7	8 blasting caps per Team
M456 Cord, Detonating PETN Type I Class E	250 FT per Team
M670 Fuse, Blasting Time M700	50 FT per Team
ML03 Firing Device, Demolition Multi-Purp	5 detonators per Team
ML47 Cap, Blasting Non-Electric M11 with	3 blasting caps per Team
MN08 Igniter, Time Blasting Fuse with Sho	8 igniters per Team
MN52 MK154 Mod 0	5 detonators per Team
MN88 Cap, Blasting, 500 ft mini-tube M21	3 blasting caps per Team

**RANGE/TRAINING AREA:**

Facility Code 17830 Light Demolition Range

**EQUIPMENT:** Squad demolitions kit, PPE.

**MATERIAL:** Ammonium Nitrate (33% Nitrogen), JP-8 fuel.

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Safety vehicle, Ammunition vehicle, Communications (radio).

**MISCELLANEOUS:**

**ORDNANCE ADDITIONAL INSTRUCTIONS:**

DODIC	Nomenclature	Additional Instructions
M023	Charge, Demolition Block M112 1-1/4 pound C-4	
M032	Charge, Demolition Block TNT 1-Pound	
M130	Cap, Blasting Electric M6	
M131	Cap, Blasting Non-Electric M7	
M456	Cord, Detonating PETN Type I Class E	
M670	Fuse, Blasting Time M700	
ML03	Firing Device, Demolition Multi-Purpose M142	
ML47	Cap, Blasting Non-Electric M11 with 30ft Shock Tube	

MN08 Igniter, Time Blasting Fuse  
with Shock Tube Capabi

MN52 MK154 Mod 0

MN88 Cap, Blasting, 500 ft mini-  
tube M21

**1371-DEMO-2002:** Use specialized explosives

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 3 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a mission to destroy or disable a target, demolition tools and equipment, Class V material, protective field equipment and references.

**STANDARD:** To produce the desired effect on the target per mission requirements.

**PERFORMANCE STEPS:**

1. Review demo target reconnaissance information.
2. Choose proper explosive.
3. Calculate correct quantity of explosive.
4. Place the charge on the target.
5. Prime the explosive.
6. Detonate the explosive.

**REFERENCES:**

1. GTA 05-10-033 Demolition Card
2. MCIP 3-17.01 Combined Arms Improvised Explosive Device Defeat Operations
3. MCRP 3-17.7L Explosives and Demolitions
4. SWO 60-AA-MMA-010 Demolition Materials

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

<u>DODIC</u>	<u>Quantity</u>
AX14 Primer, Percussion 12 Gauge W209	4 primers per Team
M023 Charge, Demolition Block M112 1-1/4	4 charges per Team
M130 Cap, Blasting Electric M6	10 blasting caps per Team
M131 Cap, Blasting Non-Electric M7	10 blasting caps per Team
M670 Fuse, Blasting Time M700	50 FT per Team
M766 Igniter, M60 for Time Blasting Fuse	11 igniters per Team
M982 Charge, Demolition Sheet 0.161 Inch	1 FT per Team
ML47 Cap, Blasting Non-Electric M11 with	2 blasting caps per Team
MM45 Charge, Demolition Flexible Linear S	1 charges per Team
MM46 Charge, Demolition Flexible Linear S	1 charges per Team
MM47 Charge, Demolition Flexible Linear S	1 charges per Team
MM48 Charge, Demolition Flexible Linear S	1 charges per Team
MN08 Igniter, Time Blasting Fuse with Sho	6 igniters per Team
MN14 Firing Device, Dual Mode MK54	1 igniters per Team

MN52 MK154 Mod 0	4 detonators per Team
MN88 Cap, Blasting, 500 ft mini-tube M21	1 blasting caps per Team
MN90 Cap, Blasting, 1000 ft mini-tube M23	1 blasting caps per Team

**RANGE/TRAINING AREA:**

Facility Code 17830 Light Demolition Range

**EQUIPMENT:** Squad demolitions kit, PPE.

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Communications (radio).

**MISCELLANEOUS:**

**ORDNANCE ADDITIONAL INSTRUCTIONS:**

DODIC	Nomenclature	Additional Instructions
AX14	Primer, Percussion 12 Gauge W209	
M023	Charge, Demolition Block M112 1-1/4 pound C-4	
M130	Cap, Blasting Electric M6	
M131	Cap, Blasting Non-Electric M7	
M670	Fuse, Blasting Time M700	
M766	Igniter, M60 for Time Blasting Fuse	
M982	Charge, Demolition Sheet 0.161 Inch Thick	
ML47	Cap, Blasting Non-Electric M11 with 30ft Shock Tube	
MM45	Charge, Demolition Flexible Linear Shaped 75 Grain	
MM46	Charge, Demolition Flexible Linear Shaped 225 Grai	
MM47	Charge, Demolition Flexible Linear Shaped 400 Grai	
MM48	Charge, Demolition Flexible Linear Shaped 600 Grai	
MN08	Igniter, Time Blasting Fuse with Shock Tube Capabi	

MN14 Firing Device, Dual Mode MK54  
MN52 MK154 Mod 0  
MN88 Cap, Blasting, 500 ft mini-  
tube M21  
MN90 Cap, Blasting, 1000 ft mini-  
tube M23

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**1371-DEMO-2003:** Maintain a Breacher's Logbook

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a breaching mission, and breacher's logbook.

**STANDARD:** To compile useful data as a reference for follow on breaching missions making all required entries and verifying the logbook accuracy.

**PERFORMANCE STEPS:**

1. Compile all necessary information.
2. Complete pre-mission entries.
3. Complete post-mission entries.

**REFERENCES:**

1. MCRP 3-17.7L Explosives and Demolitions
2. VOLUME I Guidebook for Assault Entry Techniques, Volume I

**SUPPORT REQUIREMENTS:**

**MATERIAL:** Breacher's Logbook

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**1371-DEMO-2004:** Compute the Net Explosive Weight (NEW)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given an explosive charge, a charge logbook, a calculator and references.

**STANDARD:** To determine safe blast and fragmentation distances for an explosive charge in accordance with MCRP 2-17.7L Explosives and Demolitions.

**PERFORMANCE STEPS:**

1. Utilizing conversion factors, convert weights of all explosives used into



**CONDITION:** Given a targeted structure, and references.

**STANDARD:** To determine an appropriate breaching technique in accordance with NSWC/DL TR-3714 Urban Building Characteristics.

**PERFORMANCE STEPS:**

1. Identify building construction composition.
2. Identify physical structural requirements for multi-level construction.
3. Identify standard construction methods and materials by region of the world.

**REFERENCES:**

1. NSWC TR 79-224 Characteristics of Urban Terrain
  2. NSWC/DL TR-3714 Urban Building Characteristics
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**1371-DEMO-2007:** Employ a doughnut charge

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given Class V, breaching tools, non-explosive materials, a target to attack, and personal protective equipment (PPE).

**STANDARD:** To execute a successful breach in accordance with MCRP 3-17.7L Explosives and Demolitions.

**PERFORMANCE STEPS:**

1. Select the appropriate explosives for the target.
2. Construct the charge.
3. Prepare an initiating system.
4. Compute the Net Explosive Weight (NEW).
5. Position assault element.
6. Place the charge.
7. Detonate the charge.
8. Follow up with mechanical breaching as required.

**REFERENCES:**

1. MCRP 3-17.7L Explosives and Demolitions
2. SWO 60-AA-MMA-010 Demolition Materials
3. SWO60-AA-MMA-020 DEMOLITION MATERIALS (Vol II)
4. VOLUME I Guidebook for Assault Entry Techniques, Volume I

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

	<u>Quantity</u>
DODIC	
AX14 Primer, Percussion 12 Gauge W209	2 primers per Marine
M130 Cap, Blasting Electric M6	1 blasting caps per Marine
M456 Cord, Detonating PETN Type I Class E	5 FT per Marine
ML03 Firing Device, Demolition Multi-Purp	1 detonators per Team
MN52 MK154 Mod 0	1 detonators per Marine

**RANGE/TRAINING AREA:**

Facility Code 17961 Combat In Cities Facility

**EQUIPMENT:** Marine Assault Breacher's kit, Squad demolitions kit, PPE.

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Communications (radio).

**MISCELLANEOUS:**

**ORDNANCE ADDITIONAL INSTRUCTIONS:**

DODIC	Nomenclature	Additional Instructions
AX14	Primer, Percussion 12 Gauge W209	
M130	Cap, Blasting Electric M6	
M456	Cord, Detonating PETN Type I Class E	
ML03	Firing Device, Demolition Multi-Purpose M142	
MN52	MK154 Mod 0	

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**1371-DEMO-2008:** Employ a window charge

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given Class V, breaching tools, non-explosive materials, a target to attack, and personal protective equipment (PPE).

**STANDARD:** To execute a successful breach in accordance with MCRP 3-17.7L Explosives and Demolitions.

**PERFORMANCE STEPS:**

1. Select the appropriate explosives for the target.
2. Construct the charge.
3. Prepare an initiating system.
4. Compute the Net Explosive Weight (NEW).
5. Position assault element.
6. Place the charge.
7. Detonate the charge.
8. Follow up with mechanical breaching as required.

**REFERENCES:**

1. MCRP 3-17.7L Explosives and Demolitions
2. SWO60-AA-MMA-010 Demolition Materials
3. SWO60-AA-MMA-020 DEMOLITION MATERIALS (Vol II)
4. VOLUME I Guidebook for Assault Entry Techniques, Volume I

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

<u>DODIC</u>	<u>Quantity</u>
AX14 Primer, Percussion 12 Gauge W209	2 primers per Marine
M130 Cap, Blasting Electric M6	2 blasting caps per Marine
M456 Cord, Detonating PETN Type I Class E	5 FT per Marine
ML03 Firing Device, Demolition Multi-Purp	1 detonators per Team
MN52 MK154 Mod 0	1 detonators per Marine

**RANGE/TRAINING AREA:**

Facility Code 17961 Combat In Cities Facility

**EQUIPMENT:** Marine Assault Breacher's kit, squad demolitions kit, PPE.

**MATERIAL:** Appropriate medium, double sided tape, rubber conveyor belt material, waterproof tape.

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Communications (radio).

**MISCELLANEOUS:**

**ORDNANCE ADDITIONAL INSTRUCTIONS:**

DODIC	Nomenclature	Additional Instructions
AX14	Primer, Percussion 12 Gauge W209	
M130	Cap, Blasting Electric M6	
M456	Cord, Detonating PETN Type I Class E	
ML03	Firing Device, Demolition Multi-Purpose M142	
MN52	MK154 Mod 0	

**1371-DEMO-2009:** Employ a water charge

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL



**CONDITION:** Given Class V, breaching tools, non-explosive materials, a target to attack, and personal protective equipment (PPE).

**STANDARD:** To execute a successful breach in accordance with MCRP 3-17.7L Explosives and Demolitions.

**PERFORMANCE STEPS:**

1. Select the appropriate explosives for the target.
2. Construct the charge.
3. Prepare an initiating system.
4. Compute the Net Explosive Weight (NEW).
5. Position assault element.
6. Place the charge.
7. Detonate the charge.
8. Follow up with mechanical breaching as required.

**REFERENCES:**

1. MCRP 3-17.7L Explosives and Demolitions
2. SWO60-AA-MMA-010 Demolition Materials
3. SWO60-AA-MMA-020 DEMOLITION MATERIALS (Vol II)
4. VOLUME I Guidebook for Assault Entry Techniques, Volume I
5. VOLUME II Guidebook for Assault Entry Techniques Volume II

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

<u>DODIC</u>	<u>Quantity</u>
AX14 Primer, Percussion 12 Gauge W209	2 primers per Marine
M456 Cord, Detonating PETN Type I Class E	12 FT per Marine
ML03 Firing Device, Demolition Multi-Purp	1 detonators per Team
MN52 MK154 Mod 0	1 detonators per Marine

**RANGE/TRAINING AREA:**

Facility Code 17961 Combat In Cities Facility

**EQUIPMENT:** Assault Breacher's kit, squad demolitions kit, PPE.

**MATERIAL:** 550 Parachute Cord, Prop stick, double sided tape, backing material, electrical tape, IV bag(s), rigger's tape.

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Communications (radio).

**MISCELLANEOUS:**

**ORDNANCE ADDITIONAL INSTRUCTIONS:**

DODIC	Nomenclature	Additional Instructions
AX14	Primer, Percussion 12 Gauge W209	
M456	Cord, Detonating PETN Type I	

Class E

ML03 Firing Device, Demolition  
Multi-Purpose M142

MN52 MK154 Mod 0

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**1371-DEMO-2010:** Employ an oval charge

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given Class V, breaching tools, non-explosive materials, a target to attack, and personal protective equipment (PPE).

**STANDARD:** To execute a successful breach in accordance with MCRP 3-17.7L Explosives and Demolitions.

**PERFORMANCE STEPS:**

1. Select the appropriate explosives for the target.
2. Construct the charge.
3. Prepare an initiating system.
4. Compute the Net Explosive Weight (NEW).
5. Position assault element.
6. Place the charge.
7. Detonate the charge.
8. Follow up with mechanical breaching as required.

**REFERENCES:**

1. MCRP 3-17.7L Explosives and Demolitions
2. SWO60-AA-MMA-010 Demolition Materials
3. SWO60-AA-MMA-020 DEMOLITION MATERIALS (Vol II)
4. VOLUME I Guidebook for Assault Entry Techniques, Volume I

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

<u>DODIC</u>	<u>Quantity</u>
AX14 Primer, Percussion 12 Gauge W209	2 primers per Marine
M130 Cap, Blasting Electric M6	2 blasting caps per Marine
M456 Cord, Detonating PETN Type I Class E	96 FT per Marine
ML03 Firing Device, Demolition Multi-Purp	1 detonators per Team
MN52 MK154 Mod 0	1 detonators per Marine

**RANGE/TRAINING AREA:**

Facility Code 17961 Combat In Cities Facility

**EQUIPMENT:** Assault Breacher's kit, squad demolitions kit, PPE.

**MATERIAL:** Prop stick, backing material, grease, waterproof tape.

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Communications (radio)

**MISCELLANEOUS:**

**ORDNANCE ADDITIONAL INSTRUCTIONS:**

DODIC	Nomenclature	Additional Instructions
AX14	Primer, Percussion 12 Gauge W209	
M130	Cap, Blasting Electric M6	
M456	Cord, Detonating PETN Type I Class E	
ML03	Firing Device, Demolition Multi-Purpose M142	
MN52	MK154 Mod 0	

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**1371-DEMO-2011:** Employ a Uli knot slider charge

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given Class V, breaching tools, non-explosive materials, a target to attack, and personal protective equipment (PPE).

**STANDARD:** To execute a successful breach in accordance with MCRP 3-17.7L Explosives and Demolitions.

**PERFORMANCE STEPS:**

1. Select the appropriate explosives for the target.
2. Construct the charge.
3. Prepare an initiating system.
4. Compute the Net Explosive Weight (NEW).
5. Position assault element.
6. Place the charge.
7. Detonate the charge.
8. Follow up with mechanical breaching as required.

**REFERENCES:**

1. MCRP 3-17.7L Explosives and Demolitions
2. SWO 60-AA-MMA-010 Demolition Materials
3. VOLUME I Guidebook for Assault Entry Techniques, Volume I

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

<u>DODIC</u>	<u>Quantity</u>
AX14 Primer, Percussion 12 Gauge W209	2 primers per Marine
M130 Cap, Blasting Electric M6	2 blasting caps per Marine
M131 Cap, Blasting Non-Electric M7	2 blasting caps per Marine
M456 Cord, Detonating PETN Type I Class E	18 FT per Marine
M670 Fuse, Blasting Time M700	12 FT per Marine
ML03 Firing Device, Demolition Multi-Purp	1 detonators per Team
MM30 Charge, Flexible 20 Gram PETN MK140	2 charges per Marine
MN08 Igniter, Time Blasting Fuse with Sho	2 igniters per Marine
MN52 MK154 Mod 0	1 detonators per Marine

**RANGE/TRAINING AREA:**

Facility Code 17961 Combat In Cities Facility

**EQUIPMENT:** Assault Breacher's kit, Squad demolitions kit, PPE.

**MATERIAL:** Appropriate medium, double sided tape, waterproof tape.

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Communications (radio).

**MISCELLANEOUS:**

**ORDNANCE ADDITIONAL INSTRUCTIONS:**

DODIC	Nomenclature	Additional Instructions
AX14	Primer, Percussion 12 Gauge W209	
M130	Cap, Blasting Electric M6	
M131	Cap, Blasting Non-Electric M7	
M456	Cord, Detonating PETN Type I Class E	
M670	Fuse, Blasting Time M700	
ML03	Firing Device, Demolition Multi-Purpose M142	
MM30	Charge, Flexible 20 Gram PETN MK140 Mod 0	
MN08	Igniter, Time Blasting Fuse with Shock Tube Capabi	
MN52	MK154 Mod 0	

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**1371-DEMO-2012:** Employ a detonating cord linear charge

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given Class V, breaching tools, non-explosive materials, a target to attack, and personal protective equipment (PPE).

**STANDARD:** To execute a successful breach in accordance with MCRP 3-17.7L Explosives and Demolitions.

**PERFORMANCE STEPS:**

1. Select the appropriate explosives for the target.
2. Construct the charge.
3. Prepare an initiating system.
4. Compute the Net Explosive Weight (NEW).
5. Position assault element.
6. Place the charge.
7. Detonate the charge.
8. Follow up with mechanical breaching as required.

**REFERENCES:**

1. MCRP 3-17.7L Explosives and Demolitions
2. SWO60-AA-MMA-010 Demolition Materials
3. VOLUME I Guidebook for Assault Entry Techniques, Volume I

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

<u>DODIC</u>	<u>Quantity</u>
AX14 Primer, Percussion 12 Gauge W209	2 primers per Marine
M130 Cap, Blasting Electric M6	2 blasting caps per Marine
M131 Cap, Blasting Non-Electric M7	2 blasting caps per Marine
M456 Cord, Detonating PETN Type I Class E	33 FT per Marine
M670 Fuse, Blasting Time M700	12 FT per Marine
ML03 Firing Device, Demolition Multi-Purp	1 detonators per Team
MN08 Igniter, Time Blasting Fuse with Sho	2 igniters per Marine
MN52 MK154 Mod 0	1 detonators per Marine

**RANGE/TRAINING AREA:**

Facility Code 17961 Combat In Cities Facility

**EQUIPMENT:** Assault Breacher's kit, Squad demolitions kit, PPE.

**MATERIAL:** Double sided tape, waterproof tape.

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Communications (radio).

**MISCELLANEOUS:**

**ORDNANCE ADDITIONAL INSTRUCTIONS:**

DODIC	Nomenclature	Additional Instructions
AX14	Primer, Percussion 12 Gauge W209	
M130	Cap, Blasting Electric M6	
M131	Cap, Blasting Non-Electric M7	
M456	Cord, Detonating PETN Type I Class E	
M670	Fuse, Blasting Time M700	
ML03	Firing Device, Demolition Multi-Purpose M142	
MN08	Igniter, Time Blasting Fuse with Shock Tube Capabi	
MN52	MK154 Mod 0	

**1371-DEMO-2013:** Employ a concrete charge

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given Class V, breaching tools, non-explosive materials, a target to attack, and personal protective equipment (PPE).

**STANDARD:** To execute a successful breach in accordance with MCRP 3-17.7L Explosives and Demolitions.

**PERFORMANCE STEPS:**

1. Select the appropriate explosives for the target.
2. Construct the charge.
3. Prepare an initiating system.
4. Compute the Net Explosive Weight (NEW).
5. Position assault element.
6. Place the charge.
7. Detonate the charge.
8. Follow up with mechanical breaching as required.

**REFERENCES:**

1. MCRP 3-17.7L Explosives and Demolitions
2. SWO60-AA-MMA-010 Demolition Materials
3. VOLUME I Guidebook for Assault Entry Techniques, Volume I
4. VOLUME II Guidebook for Assault Entry Techniques Volume II

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

<u>DODIC</u>	<u>Quantity</u>
AX14 Primer, Percussion 12 Gauge W209	2 primers per Marine
M023 Charge, Demolition Block M112 1-1/4	6 charges per Marine
M130 Cap, Blasting Electric M6	2 blasting caps per Marine
M131 Cap, Blasting Non-Electric M7	2 blasting caps per Marine
M456 Cord, Detonating PETN Type I Class E	32 FT per Marine
M670 Fuse, Blasting Time M700	12 FT per Marine
MM30 Charge, Flexible 20 Gram PETN MK140	3 charges per Marine
MN08 Igniter, Time Blasting Fuse with Sho	2 igniters per Marine
MN52 MK154 Mod 0	1 detonators per Marine

**RANGE/TRAINING AREA:**

Facility Code 17961 Combat In Cities Facility

**EQUIPMENT:** Assault Breacher's kit, Squad demolitions kit, PPE.

**MATERIAL:** Prop stick, double sided tape, grease, waterproof tape.

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Communications (radio).

**MISCELLANEOUS:**

**ORDNANCE ADDITIONAL INSTRUCTIONS:**

DODIC	Nomenclature	Additional Instructions
AX14	Primer, Percussion 12 Gauge W209	
M023	Charge, Demolition Block M112 1-1/4 pound C-4	
M130	Cap, Blasting Electric M6	
M131	Cap, Blasting Non-Electric M7	
M456	Cord, Detonating PETN Type I Class E	
M670	Fuse, Blasting Time M700	
MM30	Charge, Flexible 20 Gram PETN MK140 Mod 0	
MN08	Igniter, Time Blasting Fuse with Shock Tube Capabi	
MN52	MK154 Mod 0	

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**1371-DEMO-2014:** Employ a fence charge

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 12 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given Class V, breaching tools, non-explosive materials, a target to attack, and protective field equipment.

**STANDARD:** To execute a successful breach in accordance with MCRP 3-17.7L Explosives and Demolitions.

**PERFORMANCE STEPS:**

1. Select the appropriate explosives for the target.
2. Construct the charge.
3. Prepare an initiating system.
4. Compute the Net Explosive Weight (NEW).
5. Position assault element.
6. Place the charge.
7. Detonate the charge.
8. Follow up with mechanical breaching as required.

**REFERENCES:**

1. MCRP 3-17.7L Explosives and Demolitions
2. SWO60-AA-MMA-010 Demolition Materials
3. VOLUME I Guidebook for Assault Entry Techniques, Volume I

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

<u>DODIC</u>	<u>Quantity</u>
AX14 Primer, Percussion 12 Gauge W209	2 primers per Marine
M023 Charge, Demolition Block M112 1-1/4	4 charges per Marine
M130 Cap, Blasting Electric M6	2 blasting caps per Marine
M131 Cap, Blasting Non-Electric M7	2 blasting caps per Marine
M456 Cord, Detonating PETN Type I Class E	15 FT per Marine
M670 Fuse, Blasting Time M700	12 FT per Marine
ML03 Firing Device, Demolition Multi-Purp	1 detonators per Team
MN08 Igniter, Time Blasting Fuse with Sho	2 igniters per Marine
MN52 MK154 Mod 0	1 detonators per Marine

**RANGE/TRAINING AREA:**

Facility Code 17961 Combat In Cities Facility

**EQUIPMENT:** Assault Breacher's kit, Squad demolitions kit, PPE.

**MATERIAL:** Treble hook, electrical tape, duct tape.

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Communications (radio).

**MISCELLANEOUS:**

**ORDNANCE ADDITIONAL INSTRUCTIONS:**



DODIC	Nomenclature	Additional Instructions
AX14	Primer, Percussion 12 Gauge W209	
M023	Charge, Demolition Block M112 1-1/4 pound C-4	
M130	Cap, Blasting Electric M6	
M131	Cap, Blasting Non-Electric M7	
M456	Cord, Detonating PETN Type I Class E	
M670	Fuse, Blasting Time M700	
ML03	Firing Device, Demolition Multi-Purpose M142	
MN08	Igniter, Time Blasting Fuse with Shock Tube Capabi	
MN52	MK154 Mod 0	

**1371-DEMO-2015:** Prepare demolition target folder

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 3 months

**GRADES:** MSGT, MGYSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided DA Form 2203-R, blank target folder, photograph of target, maps of target area, drawing paper, pen or pencil, and the references.

**STANDARD:** To meet mission requirements in accordance with STANAG 2123 ENGR (EDITION 2) Obstacle Folder.

**PERFORMANCE STEPS:**

1. Review DA Form 2203-R.
2. Complete required sections of the target folder in specific language(s).

**REFERENCES:**

1. MCRP 3-17.2D Explosive Hazard Operations
2. MCRP 3-17.7L Explosives and Demolitions
3. STANAG 2123 Obstacle Folder

**1371-EOPS-2001:** Establish operations center

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** GYSGT, MSGT, MGYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a mission, personnel, a tent or other type of elemental shelter, communications equipment, and a site for the operations center.

**STANDARD:** In accordance with MCWP 3-40.1 Command and Control.

**PERFORMANCE STEPS:**

1. Review the mission and commander's intent.
2. Determine personnel requirements.
3. Establish communication plan within the operations center.
4. Coordinate for physical security.
5. Assess cover and concealment requirements.
6. Establish security plan.
7. Ensure site isolation from major enemy avenues of approach.
8. Ensure set up of elemental shelter.

**REFERENCES:**

1. MCWP 3-17 Engineering Operations
  2. MCWP 3-40.1 MAGTF Command and Control
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**1371-EOPS-2002:** Manage engineer forms/reports

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 12 months

**GRADES:** GYSGT, MSGT, MGYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided completed engineer form(s)/report(s), operations plan, map, unit SOP(s) and references.

**STANDARD:** To ensure all engineer form(s) and/or report(s) are received from the reporting unit, evaluated to identify any deficiencies, and distributed/forwarded as required per the unit SOP and references.

**PERFORMANCE STEPS:**

1. Receive form(s)/report(s).
2. Review the appropriate section(s) of the references.
3. Examine form(s)/report(s) for deficiencies.
4. List all deficiencies.
5. Return form(s)/report(s) to originator for corrections if necessary.
6. Prepare evaluation of form(s)/report(s) as required.
7. File and Submit form(s)/report(s) to higher headquarters as required.

**REFERENCES:**

1. Local Standard Operating Procedures (SOP)
2. MCIP 3-17.01 Combined Arms Improvised Explosive Device Defeat Operations
3. MCRP 3-17.2D Explosive Hazard Operations
4. MCRP 3-17.7F Construction Project Management
5. MCRP 3-17B Engineer Forms and Reports
6. MCWP 3-17.2 MAGTF Explosive Ordnance Disposal
7. MCWP 3-17.4 Engineer Reconnaissance



1. Brief damage assessment teams.
2. Conduct damage assessment.
3. Recommend MOS.
4. Coordinate UXO clearance (as required).
5. Repair spalls and craters to meet surface roughness criteria.
6. Install FOD cover on repaired crater(s) (as required).

**REFERENCES:**

1. MCWP 3.21.1 Aviation Ground Support
2. UFC 3-270-07 Airfield Damage Repair

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**

Facility Code 17918 Road/Airfield Construction Training Site

**EQUIPMENT:** Airfield Damage repair (ADR) kit, 260 CFM, engineer equipment (420 backhoe, multi-terrain loader).

**MATERIAL:** Fine/course aggregate, sand grid, Pavemend.

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**1371-EOPS-2005:** Design concrete structures

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** SSGT, GYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided specifications, writing/sketching materials, a calculator, and the reference.

**STANDARD:** To specify type of materials to be used, proper spacing of all components, and quantity and type of material required for finished structures capable of supporting all loads considered per the specifications and in accordance with MCRP 3-17.7D Concrete & Masonry.

**PERFORMANCE STEPS:**

1. Review the specifications.
2. Design a concrete footing.
3. Design a concrete wall.
4. Design a reinforced concrete structure.
5. Design a concrete block structure.
6. Generate a Bill of Materials for each type of design.

**REFERENCES:**

1. MCRP 3-17.7D Concrete and Masonry
  2. NAVPERS 0-486-20242-9 Basic Construction Techniques for Houses and Small Buildings
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**1371-EOPS-2006:** Employ construction equipment kits

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided a construction shop with live power outlets, and references.

**STANDARD:** To ensure operability of all required components in accordance with appropriate technical manuals.

**PERFORMANCE STEPS:**

1. Determine shop set electrical power requirements.
2. Assemble construction shop components set(s) (if required).
3. Select appropriate component(s).
4. Operate component(s).
5. Disassemble construction shop components set(s).

**REFERENCES:**

1. Appropriate Manufacturer's Assembly Manual/Instructions
2. TM 00425B-OR Tool Kit, Mason and Concrete Finisher
3. TM 08165B-OR Tool Kit, Shop Construction
4. TM 11441A-OR Tool Kit, Carpenter, Platoon
5. TM 11441AOR/1 Tool Kit, Carpenter, Squad

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**

Facility Code 17330 Covered Training Area

**EQUIPMENT:** Family of Engineer Tool Construction Kits (FETCK).

**OTHER SUPPORT REQUIREMENTS:** Fuel and electrical requirements.

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**1371-EOPS-2007:** Estimate requirements for engineer projects

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT, SSGT, GYSGT, MSGT, MGYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a mission, construction drawings, blueprints, specifications, calculator, writing materials, appropriate form(s), and references.

**STANDARD:** To list all personnel and equipment resources necessary to accomplish mission requirements in accordance with MCRP 3-17.7F Project Management.

**PERFORMANCE STEPS:**

1. Review mission.
2. Prepare materials estimates/materials takeoff list.
3. Prepare a Bill of Materials (BOM).
4. Prepare manpower estimates.
5. Prepare equipment estimates.

**REFERENCES:**

1. MCRP 3-17.7A Planning and Design of Roads, Airfields, and Heliports in the Theater of Operations - Road Design
  2. MCRP 3-17.7B Planning and Design of Roads, Airfields, and Heliports in the Theater of Operations - Airfield and Heliport Design
  3. MCRP 3-17.7C Carpentry
  4. MCRP 3-17.7D Concrete and Masonry
  5. MCRP 3-17.7F Construction Project Management
  6. MCRP 3-17.7I Earthmoving Operations
  7. MCRP 3-17.7M Construction Estimating
  8. MCRP 3-17A Engineer Field Data
  9. MCWP 3-17 Engineer Operations
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**1371-EOPS-2008:** Conduct chainsaw operations

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 12 months

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** In an operating environment, given a mission, personnel, equipment, and references.

**STANDARD:** To safely fell, limb and buck standing timber without injury to personnel and equipment in accordance with OSHA standards.

**PERFORMANCE STEPS:**

1. Analyze the mission.
2. Conduct site survey.
3. Determine escape routes.
4. Establish safe areas.
5. Task organize cut team(s).
6. Task organize equipment.
7. Ensure safety equipment is donned (or on site).
8. Establish control procedures.
9. Perform mission.
10. Submit required reports.

**REFERENCES:**

1. DoDI 6055.1 DoD Safety and Occupational Health (SOH) Program
2. MCRP 3-17B Engineer Forms and Reports
3. TC 90-6 Mountain Operations
4. TM 11423A-OR Tool Kit, Pioneer Platoon
5. USDA Forest Service, 1998 Safe Timber Harvesting, Univ. New Hampshire

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**

Facility Code 17413 Field Training Area

**EQUIPMENT:** Platoon Pioneer kit, PPE.

**UNITS/PERSONNEL:** Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Safety vehicle, Communications (radio).

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**1371-EOPS-2009:** Conduct rigging

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 12 months

**GRADES:** CPL, SGT, SSGT, GYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a rigging task to be performed, appropriate timbers, lumber, fasteners, tools and equipment, suitable rope for the task, and references.

**STANDARD:** To meet the mission rigging requirements without incident in accordance with MCRP 3-17.7J Rigging Techniques (FM 5-125).

**PERFORMANCE STEPS:**

1. Review Mission.
2. Examine rigging assets available.
3. Examine resources as required.
4. Examine rigging for serviceability.
5. Tie appropriate knots and lashings.
6. Employ appropriate equipment to achieve required mechanical advantage.
7. Submit required reports.

**REFERENCES:**

1. MCRP 3-17.7J Rigging Techniques, Procedures, and Applications
2. MCRP 3-17A Engineer Field Data

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**

Facility Code 17413 Field Training Area

**EQUIPMENT:** Pioneer Kits (Squad, Platoon), Rope, Block and tackle, PPE.

**UNITS/PERSONNEL:** Safety Officer, Corpsman.

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**1371-EOPS-2010:** Requisition required materials

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 12 months

**GRADES:** CPL, SGT, SSGT, GYSGT, MSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided a mission and bill(s) of materials,

**STANDARD:** In accordance with the mission and accepted purchasing and accounting procedures.

**PERFORMANCE STEPS:**

1. Review the mission.
2. Review the bill(s) of materials.





4. Ensure required support is coordinated/provided.

**REFERENCES:**

1. JP 3-34 Joint Engineer Operations
  2. MCWP 3-17 Engineering Operations
  3. MCWP 3-21.1 Aviation Ground Support
  4. MCWP 3-40.1 MAGTF Command and Control
  5. MCWP 4-1 Logistics Operations
  6. MCWP 4-11.5 SeaBee Operations in the MAGTF
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**1371-EOPS-2013:** Conduct range operations

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** SSGT, GYSGT, MSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given the requirement to conduct live fire training, approved range, valid RSO card, Class V, target material, personal protective equipment (PPE), communications equipment, and references.

**STANDARD:** To complete required training without injury to personnel and equipment in accordance with AR 385-63 Range Safety Operations.

**PERFORMANCE STEPS:**

1. Plan training.
2. Conduct site reconnaissance, if required.
3. Build target folders(s), if required.
4. Submit logistical support requirements.
5. Calculate Class V requirements.
6. Review SDZs/range regulations, if required.
7. Conduct training.
8. Submit required reports
9. Conduct accountability of personnel, weapons, and equipment.
10. Repair/restore range, as required.
11. Conduct line-out.

**REFERENCES:**

1. AR 385-63/ DA PAM 385-63 / MCO 3570.1B Range Safety
2. MCO 3500.27\_ Operational Risk Management (ORM)
3. MCO 3570.1\_ Range Safety
4. MCRP 3-17.7L Explosives and Demolitions
5. NAVMC 3500.12\_ Marine Corps Engineer and Utilities Training and Readiness Manual
6. NAVMC 3500.3 Personnel Administration T&R Manual

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**

Facility Code 17502 Non-Standard Small Arms Range  
Facility Code 17581 Machine Gun Field Fire Range  
Facility Code 17830 Light Demolition Range

**EQUIPMENT:** M4, M16A4, M9, M249, M240G, M2, MK19, MK153, Military Demolitions, Shotgun, PPE, Range Folder.

**UNITS/PERSONNEL:** Corpsman w/medical supplies, Ammo Tech, Armorer.

**OTHER SUPPORT REQUIREMENTS:** Safety vehicle, Communications (radio), Class V transport vehicle.

**MISCELLANEOUS:**

**SPECIAL PERSONNEL CERTS:** Approved RSO/OIC card, Special permits (if applicable)

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**1371-HORZ-2001:** Perform hasty soil analysis

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given an unidentified soil sample, an SL-3 complete soil test kit and references.

**STANDARD:** To obtain a two-letter USCS classification, CBR, and moisture content in accordance with FM 3-410 Military Soils Engineering.

**PERFORMANCE STEPS:**

1. Obtain a soil sample.
2. Perform a visual examination of the soil.
3. Separate gravel.
4. Conduct field identification tests on the -40 material.
5. Determine the USCS classification.
6. Determine the CBR.
7. Determine the moisture content.
8. Record and report results.

**REFERENCES:**

1. MCRP 3-17.7G Military Soils Engineering
2. MCRP 3-17.7H Materials Testing
3. MCRP 3-17A Engineering Field Data

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**

Facility Code 17413 Field Training Area

**EQUIPMENT:** Soils Test kit, Pioneer kit.

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**1371-HORZ-2002:** Design expedient drainage structures

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a drainage structure requirement, a map, and references.

**STANDARD:** To intercept, collect, and remove surface water flowing toward a designated area from adjacent areas in accordance with MCRP 3-17.7A, Planning and Design of Roads, Airbases, and Heliports in the Theater of Operations.

**PERFORMANCE STEPS:**

1. Review site specifications.
2. Calculate area of waterway/peak run off.
3. Determine type of drainage structure required.
4. Calculate size/amount of culvert required.
5. Design a drainage ditch.

**REFERENCES:**

1. MCRP 3-17.7A Planning and Design of Roads, Airfields, and Heliports in the Theater of Operations - Road Design
  2. MCRP 3-17A Engineering Field Data
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**1371-HORZ-2003:** Construct expedient drainage structures

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 12 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given design specifications, personnel, tools and equipment, and construction materials.

**STANDARD:** To ensure that ditch side slopes and longitudinal ditch slope; culverts; headwalls/wingwalls; and ditch lining all conform to the design specifications in accordance with MCRP 3-17.7A Planning and Design of Roads, Airbases, and Heliports in Theater of Operations.

**PERFORMANCE STEPS:**

1. Review site specifications.
2. Task organize personnel and equipment.
3. Cut drainage ditches.
4. Excavate for culverts as required.
5. Install culverts.
6. Construct headwalls/wingwalls as required.
7. Install check dams as required.
8. Line ditches as required.

**REFERENCES:**

1. MCRP 3-17.7A Planning and Design of Roads, Airfields, and Heliports in the Theater of Operations - Road Design
2. MCRP 3-17.7D Concrete and Masonry
3. MCRP 3-17.7I Earthmoving Operations
4. MCRP 3-17A Engineer Field Data

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**

Facility Code 17918 Road/Airfield Construction Training Site



**PERFORMANCE STEPS:**

1. Determine the type of cement to be used.
2. Identify suitable water source.
3. Identify suitable aggregate.
4. Determine desired slump.
5. Determine percentage of air entrainment, as required.
6. Determine amount of water.
7. Determine a water:cement ratio.
8. Determine amount of cement.
9. Determine loose volume of gravel.
10. Convert weights to absolute volumes.
11. Determine weight of sand.
12. Determine loose volume of sand.
13. List final proportions for a one cubic yard batch.
14. Perform field moisture test on the aggregates.
15. Adjust mix design to account for aggregate moisture as required.

**REFERENCES:**

1. MCRP 3-17.7D Concrete and Masonry
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**1371-MANT-2001:** Maintain the unit's engineer equipment, chests, sets and kits maintenance programs

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 12 months

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** With access to Global Combat Support System-Marine Corps (GCSSMC), combat engineer equipment, chests, sets and kits, equipment records, maintenance forms and references.

**STANDARD:** To ensure maintenance management functions, maintenance resources, production, and information conform to unit MMSOP requirements per thereferences.

**PERFORMANCE STEPS:**

1. Maintain a publications library.
2. Complete GCSS-MC entries or Consolidated Engineer Equipment Log and Service Record (NAVMC 10524), as required.
3. Complete a Service Request (SR), as required.
4. Document Parts Requirements, as required.
5. Complete GCSS-MC entries or Engineer Equipment Operational Records (NAVMC 10523), as required.
6. Complete GCSS-MC entries or a General Purpose Transaction Document (NAVMC 696), as required.
7. Analyze the Maintenance Production Report (MPR).
8. Reconcile outstanding supply requests.
9. Complete modification control records, as required.
10. Direct maintenance program related actions, as required.

**REFERENCES:**

1. Appropriate Technical Manuals
2. UNIT SOP Unit's Standing Operating Procedures
3. GPN Applicable GCSS-MC Procedural Notices (GPN)

4. MCO P4400.150\_ Consumer Level Supply Policy Manual
  5. MCRP 3-0B How to Conduct Training
  6. TM 4700-15/1\_ Ground Equipment Record Procedures
- 

**1371-MANT-2002:** Monitor the maintenance management of the unit's combat engineer equipment, chests, sets and kits

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 12 months

**GRADES:** SSGT, GYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** With access to Global Combat Support System-Marine Corps (GCSSMC), maintenance management reports, supporting documentation, combat engineer equipment, chests, sets and kits and references.

**STANDARD:** So accuracy of the combat engineer equipment, chests, sets and kits maintenance is validated and unit's readiness and equipment serviceability are enhanced.

**PERFORMANCE STEPS:**

1. Obtain current Maintenance Process Report (MPR).
2. Review references.
3. Review supporting documentation (equipment records).
4. Review MPR maintenance cycle times.
5. Validate maintenance reports (per units SOP).
6. Identify "exceptions."
7. Determine actions to correct "exceptions (as required).

**REFERENCES:**

1. GCSS-MC Aid Global Combat Support System-Marine Corps Job Aid
2. GCSS-MC Guide Global Combat Support System-Marine Corps Guide
3. MCBUL 3000 Marine Corps Automated Readiness Evaluation System (MARES)
4. UNIT SOP Unit's Standing Operating Procedures
5. MCO 3000.11\_ Ground Equipment Condition and Supply Materiel Readiness Reporting (MRR) Policy
6. MCO 4400.16\_ Uniform Material Movement and Issue Priority System (UMMIPS)
7. MCRP 3-0B How to Conduct Training
8. TM 4700-15/1\_ Ground Equipment Record Procedures

**SUPPORT REQUIREMENTS:**

**MATERIAL:** Maintenance Process Reports (MPR)

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**1371-MOBL-2001:** Design Tactical Landing Zones (TLZ)/Expeditionary Airfields (EAF)

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT, SSGT, GYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a mission specifying number and/or type(s) of aircraft, DA Form 1711-R, engineer tools and equipment, EAF support, materials, and personnel.

**STANDARD:** To provide aircraft landing sites that meet structural and geometric design criteria for the type(s)/number(s) of aircraft anticipated for a TLZ, a surfaced EAF or an unsurfaced EAF per the mission specifications in accordance with MCRP 3-17.7A Planning and Design of Roads, Airfields, and Heliports in the Theater of Operations.

**PERFORMANCE STEPS:**

1. Analyze METT-T and reconnaissance forms, if provided.
2. Determine whether mission calls for a TLZ or a EAF.
3. Conduct site reconnaissance, keying on soil composition, drainage and obstructions.
4. Conduct area clearance as required.
5. Determine appropriate configuration.
6. Determine matting requirement (for EAF).
7. Calculate scope of engineer effort to prepare site.
8. Determine equipment requirements.
9. Estimate matting materials as required (for EAF).
10. Determine marking requirements.

**REFERENCES:**

1. MCRP 3-17.7B Planning and Design of Roads, Airfields, and Heliports in the Theater of Operations - Airfield and Heliport Design
  2. MCRP 3-17B Engineer Forms and Reports
  3. MCWP 3-17.4 Engineer Reconnaissance
  4. NAVAIR 00-80T-115 Expeditionary Airfield NATOPS Manual
  5. NAVAIR 51-60A-1( ) AM2 Airfield Mat and Accessories
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**1371-MOBL-2002:** Manage employment of the Medium Girder Bridge (MGB)

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** As a designated bridge master, provided a completed MGB Pro Forma, a gap, Medium Girder Bridge set, tools, a launch vehicle, personnel and references.

**STANDARD:** To meet design specifications and intended bridge classification per the Pro Forma, while observing safety precautions and technical specifications during build, boom and launch in accordance with TM 5-5420-212-12 Medium Girder Bridge.

**PERFORMANCE STEPS:**

1. Review the references and the Pro Forma.
2. Make crew assignments.
3. Brief crews.
4. Direct lay out the site based on critical pallet loads.
5. Direct installation of front roller beam.
6. Direct build end of bridge (EOB)+1 components.
7. Direct installation of rear roller beam.

8. Direct the building and booming of bridge (to include nose configuration).
9. Direct the launch of bridge.
10. Direct the setting of bridge on deck (near and far shore).
11. Direct dressing of bridge.
12. Direct anchoring as required.
13. Direct MGB retrieval (as required).

**REFERENCES:**

1. MCRP 3-17A Engineer Field Data
2. TM 5-5420-212-12 Medium Girder Bridge
3. TM 5-5420-212-12-1 Link Reinforcement Set

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**

Facility Code 17920 Panel Bridge Area

**EQUIPMENT:** Medium Girder Bridge (MGB) set, MGB Erection set, MGB Link Reinforcement set, 7-ton MTVR.

**UNITS/PERSONNEL:** MGB Bridge Master, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Communications (radio), Safety vehicle.

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**1371-MOBL-2003:** Operate Bridge Erection Boat (BEB)

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a body of water, a bridge erection boat, tools, personnel, personal protective equipment (PPE), and the reference.

**STANDARD:** Using controls to maneuver 360 degrees around a stationary buoy while maintaining a 1 yard radius; perform a series of pier touches; and a pier side docking maneuver, all without damage to equipment while observing all safety and navigational precautions in accordance with TM 10020C-OI Operator's Manual Boat, Bridge Erection (MKIII).

**PERFORMANCE STEPS:**

1. Inspect the launch area.
2. Perform before/during/after operations checks on the boat/engine, as required.
3. Perform start up procedures.
4. Maneuver the boat using the buckets.
5. Maneuver the boat using the helm.

**REFERENCES:**

1. TM 10020C-OI Bridge Erection Boat (MKIII) Operator's Manual

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**

Facility Code 17922 Floating Bridge Site



**EQUIPMENT:** MKIII Bridge Erection Boat (BEB) SL-3 complete, 7-ton MTRV.

**UNITS/PERSONNEL:** Corpsman, Safety swimmer.

**MISCELLANEOUS:**

**SPECIAL PERSONNEL CERTS:** BEB licensed operator's per TM 11275-15/4  
Engineer Equipment Licensing Manual.

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**1371-MOBL-2004:** Manage the employment of the Improved Ribbon Bridge (IRB)

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** As a float bridge master, given a complete IRB design, a wet gap crossing site, IRB components, bridge erection boats, fuel, IRB tools and equipment, motor transport support, personnel, personal protective equipment (PPE), and references.

**STANDARD:** To provide force mobility, employing the IRB within the time frame listed in the design criteria, while observing safety precautions in accordance with TM 5-5420-278-10 Operators Manual Improved Ribbon Bridge (IRB).

**PERFORMANCE STEPS:**

1. Review the references and the design specifications.
2. Brief crew on assignments.
3. Don all PPE.
4. Perform pre-operation checks and services on boats and IRB bays.
5. Deploy BEBs.
6. Deploy IRB bays.
7. Capture IRB bays.
8. Connect IRB bays.
9. Position the bridge.
10. Anchor the bridge.
11. Provide up-stream, in water security measures.
12. Retrieve the bridge.

**REFERENCES:**

1. MCRP 3-17A Engineer Field Data
2. TM 10020C-OI Bridge Erection Boat (MKIII) Operator's Manual
3. TM 11518A-OR Improved Ribbon Bridge (IRB) Operators Manual

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**

Facility Code 17922 Floating Bridge Site

**EQUIPMENT:** Improved Ribbon Bridge (IRB) set, MKIII Bridge Erection Boat (BEB) SL-3 complete, MK48/18 LVSR, 7-ton MTRV.

**UNITS/PERSONNEL:** Float bridge master, Corpsman, Safety swimmer.

**MISCELLANEOUS:**

**SPECIAL PERSONNEL CERTS:** Licensed MKIII BEB operators per TM 11275-15/4 Engineer Equipment Licensing Manual.

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**1371-MOBL-2005:** Manage military rafting operations

**EVALUATION-CODED:** NO                      **SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** As a designated raft commander, provided mission specifications, a wet gap crossing site, IRB components, bridge erection boats, fuel, IRB tools, motor transport support, personnel, personal protective equipment (PPE), and references.

**STANDARD:** To provide force mobility while maintaining proper speed and adhering to navigational and operational safety requirements in accordance with TM 5-5420-278-10 Operators Manual Improved Ribbon Bridge (IRB).

**PERFORMANCE STEPS:**

1. Review the references and specifications.
2. Brief/instruct the crew on the mission/assignment.
3. Inspect IRB components.
4. Don all PPE.
5. Conduct pre-operation checks and services on BEBs.
6. Launch BEBs.
7. Launch IRB components (ramp and interior bays as required in specifications).
8. Capture IRB components.
9. Maneuver IRB components into position.
10. Construct raft.
11. Re-position BEBs and rig to raft according to specifications.
12. Load raft.
13. Maneuver the raft.
14. Maintain rafting schedule.
15. Perform during-operation checks.
16. Perform post-operation checks and services.

**REFERENCES:**

1. MCRP 3-17A Engineer Field Data
2. MCWP 3-17.8 Combined Arms Mobility Operations
3. TM 10020C-OI Bridge Erection Boat (MKIII) Operator's Manual
4. TM 11518A-OR Improved Ribbon Bridge (IRB) Operators Manual

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**

Facility Code 17922 Floating Bridge Site

**EQUIPMENT:** Improved Ribbon Bridge (IRB) set, MKIII Bridge Erection Boat (BEB) SL-3 complete, MK48/18 LVSR, 7-ton MTRV.

**UNITS/PERSONNEL:** Raft Commander, Corpsman, Safety Swimmer.

**OTHER SUPPORT REQUIREMENTS:** Safety boat.

**MISCELLANEOUS:**

**SPECIAL PERSONNEL CERTS:** Licensed MKIII BEB operators per TM 11275-15/4 Engineer Equipment Licensing Manual.

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**1371-MOBL-2006:** Determine raft size required for wet gap crossing

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 12 months

**GRADES:** SSGT, GYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a mission specifying a military load class requirement, completed engineer reconnaissance reports with hydrographic information, and references.

**STANDARD:** To meet mission requirements based on available resources and to deliver the troops and equipment across the gap with a minimum number of trips in accordance with MCWP 3-17.8 Combined Arms Mobility Operations.

**PERFORMANCE STEPS:**

1. Review the reconnaissance reports.
2. Determine raft size based on MLC.
3. Determine rafting configuration based on current velocity.
4. Determine rafting cycle time.
5. Determine total force crossing time.
6. Determine logistical requirements.

**REFERENCES:**

1. MCRP 3-17A Engineer Field Data
  2. MCWP 3-17.4 Engineer Reconnaissance
  3. MCWP 3-17.8 Combined Arms Mobility Operations
  4. TM 10020C-OI Bridge Erection Boat (MKIII) Operator's Manual
  5. TM 11518A-OR Improved Ribbon Bridge (IRB) Operators Manual
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**1371-MOBL-2007:** Determine tactical bridging assets required to span a gap

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 12 months

**GRADES:** SSGT, GYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a mission specifying a military load class requirement, a map, reconnaissance report(s), and references.

**STANDARD:** For a wet gap crossing, determine the length of bridge, number and type of IRB bays required, number of BEBs required, anchoring system to be employed, all logistical requirements, and calculate total time to construct

the bridge in accordance with TM 5-5420-278-10 Operators Manual Improved Ribbon Bridge (IRB). For a dry gap crossing, determine the MGB configuration, calculate pallets required, determine all logistical requirements, and calculate total time to construct the bridge in accordance with TM 5-5420-212-12 Medium Girder Bridge (MGB).

**PERFORMANCE STEPS:**

1. Review the mission, reconnaissance reports, maps, and any other intelligence data available.
2. Evaluate potential crossing sites.
3. Select the best crossing means.
4. Select final bridge site.
5. Calculate required bridge length.
6. Fill out Pro Forma as necessary.
7. Determine bridging assets required, i.e., number of bays, number of boats, number of pallets.
8. Determine crew size.
9. Determine logistical support.
10. Calculate total time to construct the bridge.

**REFERENCES:**

1. MCRP 3-17A Engineer Field Data
2. MCWP 3-17.4 Engineer Reconnaissance
3. MCWP 3-17.8 Combined Arms Mobility Operations
4. TM 5-5420-212-12 Medium Girder Bridge
5. TM 5-5420-212-12-1 Link Reinforcement Set

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**1371-MOBL-2008:** Plan engineer aspects of gap crossing operations

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 12 months

**GRADES:** GYSGT, MSGT, MGYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a tactical situation, a map, an operations order, completed engineer reconnaissance forms and references.

**STANDARD:** To ensure the crossing is supportable and consistent with the commander's intent, while accounting for all tactical control measures in accordance with MCWP 3-17.8 Combined Arms Mobility Operations.

**PERFORMANCE STEPS:**

1. Analyze the mission.
2. Conduct Intelligence Preparation of the Battlespace (IPB).
3. Identify Requests for Information (RFI).
4. Plan/conduct reconnaissance.
5. Determine support requirements.
6. Coordinate with supported unit commanders.
7. Complete an overlay with engineer related tactical control measures.
8. Prepare order/appropriate appendix to operations order.

**REFERENCES:**

1. MCRP 2-3A Intelligence Preparation of the Battlefield/Battlespace
2. MCRP 3-17B Engineer Forms and Reports
3. MCWP 3-17 Engineering Operations

4. MCWP 3-17.3 MAGTF Breaching Operations
  5. MCWP 3-17.4 Engineer Reconnaissance
  6. MCWP 3-17.8 Combined Arms Mobility Operations
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**1371-MOBL-2009:** Design a non-standard bridge

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** GYSGT, MSGT, MGYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a requirement for non-standard gap crossing, completed engineer reconnaissance forms, a design MLC, and references.

**STANDARD:** Showing all calculations for abutments (if required), substructure (if required), and superstructure components that will meet or exceed required MLC in accordance with MCRP 3-17.1B Military Non-Standard Bridges.

**PERFORMANCE STEPS:**

1. Review engineer reconnaissance reports.
2. Conduct site reconnaissance.
3. Determine the bridge type based on gap size and MLC.
4. Design the superstructure.
5. Design the substructure, if required.
6. Design the abutments, if required.
7. Calculate the bill of materials.
8. Determine logistical support requirements.
9. Illustrate final design.

**REFERENCES:**

1. MCRP 3-17.1B Military Non-Standard Fixed Bridging
  2. MCRP 3-17A Engineer Field Data
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**1371-MOBL-2010:** Employ M58/M68 linear demolition charge

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 3 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given an M58/M68 Linear Demolition Charge, MK 22 Rocket, MK 155 Trailer Mounted Launcher, towing vehicle, personal protective equipment, and an area to fire the charge,

**STANDARD:** To breach a lane through a minefield or other linear obstacles as directed to enable force mobility in accordance with TM 08982A-14&P/2B Operators Manual for MK 155 Mine Clearance System.

**PERFORMANCE STEPS:**

1. Inspect all equipment.
2. Set up M58/M68/M155 for employment.
3. Perform all circuit/pre-operational checks.

4. Move to firing area.
5. Ensure proper standoff distance.
6. Fire the rocket.
7. Fire the charge.
8. Perform immediate actions for misfire (if required).

**REFERENCES:**

1. MCRP 3-17.2D Explosive Hazard Operations
2. MCWP 3-17.3 MAGTF Breaching Operations
3. MCWP 3-17.8 Combined Arms Mobility Operations
4. TM 08982A-14&P/2B Operator's Manual for MK 155 Mine Clearance System

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

<u>DODIC</u>	<u>Quantity</u>
J143 Rocket Motor, 5-inch MK22 Mod 4	1 rocket per Team
M913 Charge, Demolition High Explosive Li	1 charges per Team
M914 Charge, Demolition Inert Linear M68A	1 charges per squad

**RANGE/TRAINING AREA:**

Facility Code 17820 Engineer Qualification Range, Non-Standardized

**EQUIPMENT:** MCLIC Trailer (M353), PPE.

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Crane (loading/unloading, Ammunition vehicle, Safety vehicle, Communications (radio)).

**MISCELLANEOUS:**

**ORDNANCE ADDITIONAL INSTRUCTIONS:**

DODIC	Nomenclature	Additional Instructions
J143	Rocket Motor, 5-inch MK22 Mod 4	
M913	Charge, Demolition High Explosive Linear M58A4	
M914	Charge, Demolition Inert Linear M68A2	

**1371-MOBL-2011:** Employ the APOBS

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given an anti-personnel minefield or wire obstacle, Antipersonnel Obstacle Breaching System (APOBS), demolition tools, equipment, and personal protective equipment.

**STANDARD:** To clear a lane through the obstacle while observing all safety precautions in accordance with TM 013750-13&P Operators Manual MK-7 MOD 1 Anti-Personnel Obstacle Breaching System (ABOBS).

**PERFORMANCE STEPS:**

1. Inspect all equipment.
2. Set up APOBS.
3. Perform circuit/pre-deployment checks.
4. Move to firing area.
5. Ensure proper standoff.
6. Initiate the system.
7. Perform immediate action for misfire (if required).

**REFERENCES:**

1. MCRP 3-17.2D Explosive Hazard Operations
2. TM 013750-13&P Operators Manual MK-7 MOD. 1 Anti-Personnel Obstacle Breaching System (APOBS)

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

<u>DODIC</u>	<u>Quantity</u>
MN79 Mine, Antipersonnel Obstacle Breachi	1 charges per Team

**RANGE/TRAINING AREA:**

Facility Code 17820 Engineer Qualification Range, Non-Standardized

**EQUIPMENT:** PPE.

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Ammunition vehicle, Safety Vehicle, Communications (radio).

**MISCELLANEOUS:**

**ORDNANCE ADDITIONAL INSTRUCTIONS:**

<u>DODIC</u>	<u>Nomenclature</u>	<u>Additional Instructions</u>
MN79	Mine, Antipersonnel Obstacle Breaching System MK 7	

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**1371-MOBL-2012:** Conduct obstacle breaching operations

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a mission specifying available supporting arms, personnel with full combat load per T/O weapon, demolitions tools, engineer equipment, and Class V.

**STANDARD:** To reduce linear obstacles or breach a lane through a minefield/explosive hazard in accordance with MCWP 3-17.3 MAGTF Breaching Operations.

**PERFORMANCE STEPS:**

1. Analyze METT-T and available reconnaissance reports.
2. Organize obstacle clearing detachment(s).
3. Proceed to final assembly area.
4. Verify obstacle location(s) and possible bypass route(s).
5. Move to obstacle while suppressing enemy fire.
6. Direct reduction of enemy positions.
7. Coordinate obscuration of entire obstacle with supporting arms.
8. Direct reduction of the obstacle(s).
9. Set up security on near side of obstacle.
10. Proof the lane.
11. Mark the lane.
12. Control movement through the breach.
13. Conduct turnover of breaching lane(s) to supporting units.
14. Consolidate and re-supply the breach force.

**REFERENCES:**

1. Applicable technical references
2. MCRP 3-17.2D Explosive Hazard Operations
3. MCRP 3-17.7L Explosives and Demolitions
4. MCRP 3-17A Engineer Field Data
5. MCWP 3-17.3 MAGTF Breaching Operations
6. MCWP 3-17.8 Combined Arms Mobility Operations
7. TM 013750-13&P Operators Manual MK-7 MOD. 1 Anti-Personnel Obstacle Breaching System (APOBS)
8. TM 08982A-14&P/2B Operator's Manual for MK 155 Mine Clearance System

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

<u>DODIC</u>	<u>Quantity</u>
G940 Grenade, Hand Green Smoke M18	2 grenades per Team
G945 Grenade, Hand Yellow Smoke M18	2 grenades per Team
G982 Grenade, Hand Practice Smoke TA M83	2 grenades per Team
HX05 Rocket, 83mm Assault MK3 Mod 0 (SMAW)	2 rockets per Team
J143 Rocket Motor, 5-inch MK22 Mod 4	1 rocket per Team
L312 Signal, Illumination Ground White St	2 signals per Team
L314 Signal, Illumination Ground Green St	2 signals per Team
M023 Charge, Demolition Block M112 1-1/4	2 charges per Marine
M028 Demolition Kit, Bangalore Torpedo M1	1 cases per Team
M130 Cap, Blasting Electric M6	6 blasting caps per Team
M131 Cap, Blasting Non-Electric M7	6 blasting caps per Team
M456 Cord, Detonating PETN Type I Class E	1500 FT per Team
M670 Fuse, Blasting Time M700	500 FT per Team
M757 Charge, Assembly Demolition M183 Com	1 cases per Team
M913 Charge, Demolition High Explosive Li	1 charges per Team
MN08 Igniter, Time Blasting Fuse with Sho	8 igniters per Team
MN14 Firing Device, Dual Mode MK54	1 detonators per Team
MN52 MK154 Mod 0	6 detonators per Team



MN88 Cap, Blasting, 500 ft mini-tube M21 2 blasting caps per Team

**RANGE/TRAINING AREA:**

Facility Code 17410 Maneuver/Training Area, Light Forces  
Facility Code 17413 Field Training Area  
Facility Code 17420 Maneuver/Training Area, Heavy Forces  
Facility Code 17820 Engineer Qualification Range, Non-Standardized  
Facility Code 17830 Light Demolition Range

**EQUIPMENT:** MCLIC trailer, Squad demolitions kit, Minefield marking kit, MK153 SMAW, PPE.

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** AAV vehicle, 7-ton MTRV, ACE, Ammunition vehicle, Safety vehicle.

**MISCELLANEOUS:**

**ORDNANCE ADDITIONAL INSTRUCTIONS:**

DODIC	Nomenclature	Additional Instructions
G940	Grenade, Hand Green Smoke M18	
G945	Grenade, Hand Yellow Smoke M18	
G982	Grenade, Hand Practice Smoke TA M83	
HX05	Rocket, 83mm Assault MK3 Mod 0 (SMAW)	
J143	Rocket Motor, 5-inch MK22 Mod 4	
L312	Signal, Illumination Ground White Star Parachute M	
L314	Signal, Illumination Ground Green Star Cluster M12	
M023	Charge, Demolition Block M112 1-1/4 pound C-4	
M028	Demolition Kit, Bangalore Torpedo M1A2	
M130	Cap, Blasting Electric M6	
M131	Cap, Blasting Non-Electric M7	
M456	Cord, Detonating PETN Type I Class E	

M670 Fuse, Blasting Time M700

M757 Charge, Assembly Demolition  
M183 Comp C-4

M913 Charge, Demolition High  
Explosive Linear M58A4

MN08 Igniter, Time Blasting Fuse  
with Shock Tube Capabi

MN14 Firing Device, Dual Mode MK54

MN52 MK154 Mod 0

MN88 Cap, Blasting, 500 ft mini-  
tube M21

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**1371-MOBL-2013:** Engage stationary targets with the shotgun

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a shotgun, personal protective equipment, targets, and ammunition, while employing combat marksmanship techniques.

**STANDARD:** To assess ammunition effects on paper targets from 15 yards.

**PERFORMANCE STEPS:**

1. Perform weapons handling procedures with the shotgun.
2. Clear the shotgun.
3. Select the appropriate ammunition type.
4. Fill the magazine tube.
5. Place the weapon in Condition 1.
6. Effectively engage targets on command.
7. Place weapon in Condition 4.
8. Assess ammunition effects from 15 yards.
9. Repeat steps 1 through 7 with "weak" side from 15 yards.
10. Unload weapon and show clear.
11. Maintain the shotgun.

**REFERENCES:**

1. Appropriate Technical Manuals
2. MCRP 3-10 A Rifle Marksmanship
3. TM 1003A/07172A/09081A-13P Operator and Maintenance Manual, Model 500, Mossberg 12-gauge shotgun
4. TM 1005A-303-14 SHOTGUN M1200 WINCHESTER

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

<u>DODIC</u>	<u>Quantity</u>
A011 Cartridge, 12 Gauge #00 Buckshot M16	6 rounds per Marine
A023 Cartridge, 12 Gauge 1 Ounce Slug Com	3 rounds per Marine

**RANGE/TRAINING AREA:**

Facility Code 17502 Non-Standard Small Arms Range

**EQUIPMENT:** Shotgun, PPE.

**MATERIAL:** B Mod target.

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Safety vehicle, Communications (radio).

**MISCELLANEOUS:**

**ORDNANCE ADDITIONAL INSTRUCTIONS:**

<u>DODIC</u>	<u>Nomenclature</u>	<u>Additional Instructions</u>
A011	Cartridge, 12 Gauge #00 Buckshot M162 Sub f/AA60	
A023	Cartridge, 12 Gauge 1 Ounce Slug Commercial	

**1371-MOBL-2014:** Perform select shot drills with the shotgun

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a shotgun, personal protective equipment (PPE), targets and ammunition.

**STANDARD:** Without allowing the shotgun to cycle out of ammunition.

**PERFORMANCE STEPS:**

1. Clear the shotgun.
2. Assume the Ready Carry.
3. Fill the magazine tube with three rounds.
4. Place the weapon in Condition 1.
5. Engage paper targets while conducting magazine tube not fully filled procedures.
6. Place the weapon in Condition 4.
7. Fill the magazine tube completely.
8. Place the weapon in Condition 1.
9. Fill the magazine tube with one final round.
10. Engage paper targets while conducting magazine tube fully filled procedures.

11. Place the weapon in Condition 4.
12. Maintain the shotgun.

**REFERENCES:**

1. MCRP 3-10 A Rifle Marksmanship
2. TM 1003A/07172A/09081A-13P Operator and Maintenance Manual, Model 500, Mossberg 12-gauge shotgun
3. TM 1005A-303-14 SHOTGUN M1200 WINCHESTER

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

<u>DODIC</u>	<u>Quantity</u>
A011 Cartridge, 12 Gauge #00 Buckshot M16	6 rounds per Marine
A023 Cartridge, 12 Gauge 1 Ounce Slug Com	3 rounds per Marine
AA54- Cartridge, 12 Gauge, Breaching, M103	3 rounds per Marine

**RANGE/TRAINING AREA:**

Facility Code 17502 Non-Standard Small Arms Range

**EQUIPMENT:** Shotgun, PPE.

**MATERIAL:** B Mod target material.

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Safety vehicle, Communications (radio).

**MISCELLANEOUS:**

**ORDNANCE ADDITIONAL INSTRUCTIONS:**

DODIC	Nomenclature	Additional Instructions
A011	Cartridge, 12 Gauge #00 Buckshot M162 Sub f/AA60	
A023	Cartridge, 12 Gauge 1 Ounce Slug Commercial	
AA54-	Cartridge, 12 Gauge, Breaching, M1030	

**1371-MOBL-2015:** Qualify with the shotgun

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 12 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given a shotgun, personal protective equipment (PPE), targets, a scorecard, a verifier, and ammunition.

**STANDARD:** Scoring a minimum of 70% in total hits on a stationary target from 25 yards.

**PERFORMANCE STEPS:**

1. Clear the shotgun.
2. Fill magazine tube with appropriate ammunition.
3. Place the weapon in Condition One.
4. Engage targets on command.
5. Place the weapon in Condition Four.
6. Assess targets.
7. Fill magazine tube with appropriate ammunition.
8. Place the weapon in Condition One.
9. Engage targets on command.
10. Place the weapon in Condition Four.
11. Assess targets.
12. Maintain the shotgun.

**REFERENCES:**

1. Appropriate Technical Manuals
2. MCRP 3-10 A Rifle Marksmanship
3. TM 1003A/07172A/09081A-13P Operator and Maintenance Manual, Model 500, Mossberg 12-gauge shotgun
4. TM 1005A-303-14 SHOTGUN M1200 WINCHESTER

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

<u>DODIC</u>	<u>Quantity</u>
A011 Cartridge, 12 Gauge #00 Buckshot M16	10 rounds per Marine

**RANGE/TRAINING AREA:**

Facility Code 17502 Non-Standard Small Arms Range

**EQUIPMENT:** Shotgun, PPE.

**MATERIAL:** Target material to score hits.

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Safety vehicle, Communications (radio).

**MISCELLANEOUS:**

**ORDNANCE ADDITIONAL INSTRUCTIONS:**

DODIC	Nomenclature	Additional Instructions
A011	Cartridge, 12 Gauge #00 Buckshot M162 Sub f/AA60	

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**1371-MOBL-2016:** Conduct ballistic breach

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a determined point of entry to breach, a shotgun, ammunition, personal protective equipment (PPE), and a door in frame with lockset.

**STANDARD:** To defeat the target in accordance with FM 3-06.11 Combined Arms Operations in Urban Terrain.

**PERFORMANCE STEPS:**

1. Select the appropriate ammunition.
2. Fill the magazine tube with suitable ammunition.
3. Place the weapon in Condition One.
4. Select attack point(s) on the target.
5. Position the muzzle.
6. Fire the shotgun.
7. Perform immediate action as required.
8. Perform remedial action as required.
9. Follow up with mechanical breaching as required.
10. Reload and prepare for follow-on actions.
11. Maintain the shotgun.

**REFERENCES:**

1. Appropriate Reference Materials
2. MCWP 3-35.3 Military Operations on Urbanized Terrain (MOUT)
3. TM 1003A/07172A/09081A-13P Operator and Maintenance Manual, Model 500, Mossberg 12-gauge shotgun
4. TM 1005A-303-14 SHOTGUN M1200 WINCHESTER

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

<u>DODIC</u>	<u>Quantity</u>
AA54- Cartridge, 12 Gauge, Breaching, M103	6 rounds per Marine

**RANGE/TRAINING AREA:**

Facility Code 17961 Combat In Cities Facility

**EQUIPMENT:** Shotgun, Marine assault breacher's kit, PPE.

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Safety vehicle, Communications (radio).

**MISCELLANEOUS:**

**ORDNANCE ADDITIONAL INSTRUCTIONS:**

DODIC	Nomenclature	Additional Instructions
AA54-	Cartridge, 12 Gauge, Breaching, M1030	

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**1371-MOBL-2017:** Plan breaching of a complex obstacle

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** GYSGT, MSGT, MGYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a tactical situation, an operations order, a map, current obstacle intelligence, and references.

**STANDARD:** That will result in a sufficient number of cleared lanes for assured mobility per the commander's intent in accordance with MCWP 3-17.3 MAGTF Breaching Operations.

**PERFORMANCE STEPS:**

1. Analyze the mission.
2. Identify possible bypasses.
3. Identify the type of breaching operation required.
4. Identify the number of lanes required.
5. Identify potential breach sites.
6. Identify Requests for Information (RFI).
7. Determine type of explosive/non-explosive breaching assets available.
8. Task organize engineer personnel and equipment within the assault breach force.
9. Determine proper sequencing of the breach force.
10. Develop battle drills.
11. Determine support requirements.
12. Plan, prioritize, and recommend fire support.
13. Prepare appendix for the operation order.

**REFERENCES:**

1. MCRP 2-3A Intelligence Preparation of the Battlefield/Battlespace
  2. MCWP 3-1 Ground Combat Operations
  3. MCWP 3-17 Engineering Operations
  4. MCWP 3-17.3 MAGTF Breaching Operations
  5. MCWP 3-17.4 Engineer Reconnaissance
  6. MCWP 3-17.8 Combined Arms Mobility Operations
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**1371-MOBL-2018:** Lead a dismounted route sweep

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 3 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a tactical situation, a route to be swept, route sweeping equipment, a map, personnel, and a route sweep order.

**STANDARD:** To locate, mark, and/or reduce all explosive hazards/obstacles on the designated route in accordance with MCRP 3-17.2D Explosive Hazard Operations.

**PERFORMANCE STEPS:**

1. Analyze mission.
2. Task organize personnel and equipment.
3. Issue the order.
4. Conduct rehearsals.
5. Ensure all mines/obstacles are detected, marked, and reduced (as required).
6. Submit required reports.

**REFERENCES:**

1. MCIP 3-17.01 Combined Arms Improvised Explosive Device Defeat Operations
2. MCRP 3-17.2D Explosive Hazard Operations
3. MCRP 3-17A Engineer Field Data
4. MCRP 3-17B Engineer Forms and Reports
5. MCWP 3-17 Engineering Operations
6. MCWP 3-17.3 MAGTF Breaching Operations
7. MCWP 3-17.4 Engineer Reconnaissance

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**

Facility Code 17410 Maneuver/Training Area, Light Forces

**EQUIPMENT:** Handheld detectors, Minefield marking kit.

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**1371-MOBL-2019:** Perform manual breaching

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 12 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a designated target, breaching tools, and personal protective equipment (PPE).

**STANDARD:** To execute a successful breach utilizing the appropriate mechanical method in accordance with MCWP 3-35.3 Military Operations on Urbanized Terrain (MOUT).

**PERFORMANCE STEPS:**

1. Conduct target analysis.
2. Select appropriate tool.
3. Employ the tool.

**RELATED EVENTS:**

1371-DEMO-2007	1371-DEMO-2008	1371-DEMO-2009
1371-DEMO-2010	1371-DEMO-2011	1371-DEMO-2012
1371-DEMO-2013	1371-DEMO-2014	

**REFERENCES:**

1. MCWP 3-35.3 Military Operations on Urbanized Terrain (MOUT)
2. VOLUME I Guidebook for Assault Entry Techniques, Volume I
3. VOLUME II Guidebook for Assault Entry Techniques Volume II

**SUPPORT REQUIREMENTS:**



**RANGE/TRAINING AREA:**

Facility Code 17961 Combat In Cities Facility

**EQUIPMENT:** Marine Assault Breacher's kit, PPE.

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Safety vehicle, Communications (radio).

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**1371-MOBL-2020:** Direct explosive hazards reduction operations

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** GYSGT, MSGT, MGYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a tactical scenario in an explosive hazard route or area.

**STANDARD:** To reduce explosive hazards safely for the assured mobility of operating forces.

**PERFORMANCE STEPS:**

1. Review mission.
2. Task organize personnel.
3. Task organize equipment.
4. Identify explosive hazards.
5. Conduct coordination with higher and adjacent units.
6. Plan for destruction of explosive hazards within capabilities
7. Report results to higher headquarters

**REFERENCES:**

1. GTA 05-10-033 Demolition Card
2. MCIP 3-17.01 Combined Arms Improvised Explosive Device Defeat Operations
3. MCRP 3-17.2D Explosive Hazard Operations
4. MCRP 3-17.7L Explosives and Demolitions

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**

Facility Code 17410 Maneuver/Training Area, Light Forces

Facility Code 17420 Maneuver/Training Area, Heavy Forces

**EQUIPMENT:** Handheld detection equipment, R2C equipment, robots.

**MATERIAL:** Inert explosive hazards.

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**1371-MOBL-2021:** Lead Route and Area Clearance Operations

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 3 months

**GRADES:** CPL, SGT, SSGT, GYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a tactical situation, a route/area to be cleared, clearance equipment, a map, and an operation order.

**STANDARD:** To locate, identify, mark, and/or reduce all explosive/non-explosive obstacles on the designate route/area.

**PERFORMANCE STEPS:**

1. Analyze mission.
2. Task organize personnel and equipment.
3. Issue the order.
4. Conduct rehearsals.
5. Ensure all obstacles are detected, identified, and marked.
6. Reduce or by-pass obstacle per commander's intent.
7. Submit required reports.

**REFERENCES:**

1. Appropriate Equipment Manual
2. Supported Battalion SOP
3. MCIP 3-17.01 Combined Arms Improvised Explosive Device Defeat Operations
4. MCRP 3-17.2D Explosive Hazard Operations
5. MCRP 3-17.7L Explosives and Demolitions
6. MCRP 3-17A Engineer Field Data
7. MCRP 3-17B Engineer Forms and Reports
8. MCWP 3-17 Engineer Operations
9. MCWP 3-17.3 MAGTF Breaching Operations
10. MCWP 3-17.8 Combined Arms Mobility Operations

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**

Facility Code 17410 Maneuver/Training Area, Light Forces  
Facility Code 17420 Maneuver/Training Area, Heavy Forces

**EQUIPMENT:** Handheld detection equipment, R2C equipment, robots, PPE.

**MATERIAL:** Inert explosive hazards.

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**1371-MOBL-2022:** Identify Explosive Hazards (EH)

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 3 months

**GRADES:** CPL, SGT, SSGT, GYSGT, MSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given an operating environment, suspected explosive hazards, combat engineer equipment, field protective equipment and publications/ORDATA II.

**STANDARD:** By category, country of origin, type of function, safeties and conditions.

**PERFORMANCE STEPS:**

1. Visually identify explosive hazard markers and indicators.

2. Identify components of Improvised Explosive Devices (IEDs).
3. Identify booby traps.
4. Identify thrown munitions.
5. Identify projected munitions.
6. Identify dropped munitions.
7. Identify placed munitions.
8. Record and report results.

**REFERENCES:**

1. Appropriate Reference Materials
2. CHB Country Handbooks
3. MCIP 3-17.01 Combined Arms Improvised Explosive Device Defeat Operations
4. MCRP 3-17.2D Explosive Hazard Operations
5. MCRP 3-17.7L Explosives and Demolitions
6. MCRP 3-17A Engineer Field Data
7. ORD ORDATA II (Software)
8. SWO 60-AA-MMA-010 Demolition Materials

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**

Facility Code 17410 Maneuver/Training Area, Light Forces  
Facility Code 17420 Maneuver/Training Area, Heavy Forces

**EQUIPMENT:** Ordata II, robots.

**MATERIAL:** Inert explosive hazards.

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**1371-MOBL-2023:** Reduce Explosive Hazards (EH)

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT, SSGT, GYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given an operating environment, a positively identified explosive hazard, combat engineer equipment, Class V, personal protective equipment, commander's decision and references.

**STANDARD:** By calculating, placing and detonating an explosive charge that will result in the reduction of the explosive hazard and allow for assured mobility in accordance with MCIP 3-17.1 Improvised Explosive Device (IED) Defeat.

**PERFORMANCE STEPS:**

1. Evaluate go/no go criteria per the explosive hazard decision matrix.
2. Employ protective measures.
3. Build a charge.
4. Remotely place the charge.
5. Detonate the charge.
6. Report results.

**REFERENCES:**

1. Appropriate Technical Manuals
2. MCIP 3-17.01 Combined Arms Improvised Explosive Device Defeat Operations

3. MCRP 3-17.2D Explosive Hazard Operations
4. MCRP 3-17.7L Explosives and Demolitions
5. MCRP 3-17A Engineer Field Data
6. MCRP 5-12.1C Risk Management - Cancelled w/o replacement
7. MCWP 3-1 Ground Combat Operations
8. MCWP 3-17 Engineer Operations
9. MCWP 3-17.2 MAGTF Explosive Ordnance Disposal
10. MCWP 3-17.3 MAGTF Breaching Operations
11. MCWP 3-17.4 Engineer Reconnaissance
12. MCWP 3-17.8 Combined Arms Mobility Operations
13. MCWP 3-35.3 Military Operations on Urbanized Terrain (MOUT)

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

<u>DODIC</u>	<u>Quantity</u>
M023 Charge, Demolition Block M112 1-1/4	2 charges per Marine
M131 Cap, Blasting Non-Electric M7	4 blasting caps per Team
M456 Cord, Detonating PETN Type I Class E	10 FT per Marine
M670 Fuse, Blasting Time M700	500 FT per Team
M757 Charge, Assembly Demolition M183 Com	2 charges per Team
MN08 Igniter, Time Blasting Fuse with Sho	2 igniters per Marine
MN88 Cap, Blasting, 500 ft mini-tube M21	1 detonators per Team
MN90 Cap, Blasting, 1000 ft mini-tube M23	1 detonators per Marine

**RANGE/TRAINING AREA:**

Facility Code 17830 Light Demolition Range

**EQUIPMENT:** Squad demolitions kit, robot, PPE.

**MATERIAL:** Electrical tape, duct tape, prop stick.

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer, Corpsman.

**OTHER SUPPORT REQUIREMENTS:** Ammunition vehicle, Safety vehicle, Communications (radio).

**MISCELLANEOUS:**

**ORDNANCE ADDITIONAL INSTRUCTIONS:**

DODIC	Nomenclature	Additional Instructions
M023	Charge, Demolition Block M112 1-1/4 pound C-4	
M131	Cap, Blasting Non-Electric M7	
M456	Cord, Detonating PETN Type I Class E	
M670	Fuse, Blasting Time M700	
M757	Charge, Assembly Demolition M183 Comp C-4	

MN08 Igniter, Time Blasting Fuse  
with Shock Tube Capabi

MN88 Cap, Blasting, 500 ft mini-  
tube M21

MN90 Cap, Blasting, 1000 ft mini-  
tube M23

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**1371-MOBL-2024:** Operate the Route Clearance Medium Mine Protected Vehicle (MMPV)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 3 months

**GRADES:** PVT, PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given an operational MMPV, the applicable peculiar support equipment (PSE), operator forms/records, and a vehicle crew.

**STANDARD:** To safely complete the vehicle operation without injury to personnel, or damage to the vehicle in accordance with appropriate manufacture TM.

**PERFORMANCE STEPS:**

1. Perform before operational Preventative Maintenance Checks and Services (PMCS).
2. Prepare operator forms/records.
3. Perform applied government furnished equipment (GPE) initializations (as required).
4. Communicate using the vehicle's internal crew communications equipment (as required).
5. Operate the vehicle in prescribed tactical formation(s).
6. Operate the vehicle with the applied Mine Roller System (MRS) equipment (as required).
7. Operate the vehicle in varied terrains/surfaces.
8. Operate the vehicle in varied limited visibility conditions.
9. Perform vehicle egress procedures (as required).
10. Perform vehicle recovery procedures (as required).
11. Operate on-board MRAP winch (as required).
12. Perform during operational PMCS.
13. Perform post operational PMCS.
14. Complete operator forms/records.

**REFERENCES:**

1. Appropriate Technical Manuals
2. TM 10001620 Operator's Manual for Cougar, Mine Resistant Ambush Protected (MRAP) 4X4
3. TM 10001624 Operator's Manual for Cougar, Mine Resistant Ambush Protected (MRAP) 6X6
4. TM 4700-15/1\_ Ground Equipment Record Procedures

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** In accordance with the current licensing manuals, MMPV operators must possess a valid OF-346 Incidental Operator's License for the Up-Armored HMMWV, and have either a CAT I/II MRAP license or a valid CAT I/II Learner's Permit until licensing standards have been met.

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**1371-MOBL-2025:** Operate the Route Clearance Mine Protected Clearance Vehicle (MPCV)

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 3 months

**GRADES:** PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** As a member of a route clearance team, given an operational MPCV, the applicable government furnished equipment (GFE), operator forms/records, a vehicle crew and references.

**STANDARD:** To safely complete the vehicle operation without injury to personnel, or damage to the vehicle in accordance with the appropriate manufacture TM.

**PERFORMANCE STEPS:**

1. Perform before operations Preventative Maintenance Checks and Services (PMCS).
2. Prepare operator forms/records.
3. Perform applied government furnished equipment (GFE) initializations (as required).
4. Perform Interrogation Arm/Camera initializations.
5. Communicate using the vehicle's internal crew communications equipment (as required).
6. Operate the vehicle in prescribed tactical formation(s).
7. Operate the vehicle in varied terrains/surfaces.
8. Operate the vehicle in varied limited visibility conditions.
9. Perform Interrogation Arm/Camera operations (as required).
10. Perform vehicle egress procedures (as required).
11. Perform vehicle recovery procedures (as required).
12. Perform during operations PMCS.
13. Perform post operations PMCS.
14. Complete operational forms/records.

**REFERENCES:**

1. Appropriate Technical Manuals
2. TM 11217A-OI/1 Operator's Manual for Buffalo Mine Protected Clearance Vehicle, MK1&MK2
3. TM 4700-15/1\_ Ground Equipment Record Procedures

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** In accordance with the current licensing manuals, MPCV operators must possess a valid OF-346 Incidental Operator's License for the Up-Armored HMMWV and CAT I/II MRAP; and have either a CAT III license or a valid CAT III learners permit until the MPCV licensing standards have been met.

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**1371-MOBL-2026:** Operate the Route Clearance Vehicle Mounted Mine Detector (VMMD) Vehicle

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 1 month

**GRADES:** PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** As a member of a route clearance team, given an operational VMMD, Mine Detonation Trailer (MDT) set, and the operator forms/records and references.

**STANDARD:** To safely complete the vehicle operation without injury to personnel, or damage to the vehicle in accordance with the manufacture TM.

**PERFORMANCE STEPS:**

1. Perform before operations Preventative Maintenance Checks and Services (PMCS).
2. Prepare operator forms/records.
3. Perform Mine Detection System (MDS) system initializations.
4. Perform applied government furnished equipment (GFE) initializations (as required).
5. Operate the vehicle in prescribed tactical formation(s).
6. Operate the vehicle in varied terrains/surfaces.
7. Operate the vehicle in varied limited visibility conditions.
8. Perform detection operations PIR (as required).
9. Perform detection with the GPR.
10. Perform vehicle egress procedures (as required).
11. Perform vehicle recovery procedures (as required).
12. Perform during operations PMCS.
13. Perform post operations PMCS.
14. Complete operator forms/records.

**REFERENCES:**

1. Appropriate Technical Manuals
2. TM 4700-15/1\_ Ground Equipment Record Procedures
3. TM X-XXX-XXX-XX (Draft) Operator's Manual for Interim Vehicle Mounted Mine Detection (IVMMD) MK II System
4. User Guide Husky, MK III Vehicle Mounted Mine Detector (VMMD) Operator's Field User's Guide

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** In accordance with the current licensing manuals, VMMD operators must possess a valid OF-346 Operator's License for the VMMD.

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**1371-MOBL-2027:** Operate the Route Clearance Vehicle's Government Furnished Equipment (GFE)

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 1 month

**GRADES:** PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** As a member of a route clearance team, given an operational route clearance vehicle, the GFE components, and references.

**STANDARD:** To safely operate the GFE during vehicle operations without injury to personnel, or damage to the GFE component(s) in accordance with the manufacture TM.

**PERFORMANCE STEPS:**

1. Perform before operations GFE Preventative Maintenance Checks and Services (PMCS).
2. Prepare operator GFE forms/records.
3. Operate the vehicle's Driver Vision Enhancer (DVE) device (as required).
4. Operate the vehicle's Blue Force Tracker (BFT) (as required).
5. Operate the vehicle's crew intercom communications equipment (as required).
6. Operate the vehicle's radio communications equipment (as required).
7. Operate the vehicle's Counter Radio Controlled Improvised Explosive Device Electronic Warfare (CREW) device (as required).
8. Operate the vehicle's Air Digger device (as required).
9. Operate the vehicle's Tactical Operations Center Network (TOCNET) Inter-Communication System (as required).
10. Operate the vehicle's mounted sensor system (GYROCAM/VOSS) (as required).
11. Operate the Mine Roller System (MRS) (as required).
12. Perform during operations GFE PMCS.
13. Perform post operations GFE PMCS.
14. Complete operator GFE forms/records.

**REFERENCES:**

1. Appropriate Technical Manuals
2. TM 10001620 Operator's Manual for Cougar, Mine Resistant Ambush Protected (MRAP) 4X4
3. TM 10001624 Operator's Manual for Cougar, Mine Resistant Ambush Protected (MRAP) 6X6
4. TM 11217A-OI/1 Operator's Manual for Buffalo Mine Protected Clearance Vehicle, MK1&MK2
5. TM X-XXX-XXX-XX (Draft) Operator's Manual for Interim Vehicle Mounted Mine Detection (IVMMD) MK II System
6. User Guide Husky, MK III Vehicle Mounted Mine Detector (VMMD) Operator's Field User's Guide

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**1371-MOBL-2028:** Operate a Combat Rubber Reconnaissance Craft (CRRC)

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 12 months

**GRADES:** PVT, PFC, LCPL, CPL, SGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given a combat rubber reconnaissance craft (CRRC), a littoral environment, appropriate tools, supplies and equipment, personal protective equipment (PPE), and under approved operating conditions.



**STANDARD:** To perform confined space and open water maneuvers without damage to equipment or injury to personnel, in accordance with TM 09665A-13&P/1-1 Operation and Maintenance of the Combat Rubber Reconnaissance Craft.

**PERFORMANCE STEPS:**

1. Inspect launch area.
2. Conduct pre-operations checks and services.
3. Perform confined space maneuvers.
4. Perform open water maneuvers.
5. Conduct post operations checks and services.

**REFERENCES:**

1. Appropriate Technical Manuals
2. TM 09665A-13&P/1-1 Operation and Maintenance of the Combat Rubber Reconnaissance Craft
3. TM 09665A-13&P/1-2 Operation and Maintenance of the Combat Rubber Reconnaissance Craft
4. TM 09665B/10717A Small Craft Propulsion System, CRRC

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**

Facility Code 17922 Floating Bridge Site

**EQUIPMENT:** (1) CRRC SL-3 Complete

**OTHER SUPPORT REQUIREMENTS:** Pre-operations checklist, Post operations checklist.

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**1371-MOBL-2035:** Operate a robot

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 3 months

**GRADES:** PVT, PFC, LCPL, CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given an operating environment, suspected explosive hazards, a combat engineer robot, personal protective equipment and references.

**STANDARD:** To perform remote operations without injury to personnel or damage to equipment, per the operator's manual.

**PERFORMANCE STEPS:**

1. Identify hazard(s).
2. Prepare robot for operation.
3. Operate the robot
4. Conduct robotic reconnaissance.
5. Retrieve the robot.
6. Conduct post-op PMCS.

**REFERENCES:**

1. Appropriate Manufacturer's Assembly Manual/Instructions
2. Appropriate Technical Manuals
3. FM 3-06 Urban Operations
4. MCRP 3-17.2D Explosive Hazard Operations

5. MCRP 3-17.7L Explosives and Demolitions
6. MCWP 3-17.4 Engineer Reconnaissance
7. MCWP 3-17.8 Combined Arms Mobility Operations

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**

Facility Code 17413 Field Training Area

**EQUIPMENT:** PacBot 510 w/FASTAC Kit, SUGV 310, SUGV 320

**UNITS/PERSONNEL:** Range OIC, Range Safety Officer

**OTHER SUPPORT REQUIREMENTS:**

Obstacles to represent urban and rural conditions.

Inert explosive hazards or mock-ups.

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**1371-PLAN-2001:** Participate in the Marine Corps Planning Process (MCP)

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** GYSGT, MSGT, MGYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** As a member of an operations planning team in a operating environment, given a higher headquarter's order, commander's guidance, and the reference.

**STANDARD:** Produce plans and orders products which support the accomplishments of the mission and commander's intent in accordance with MCWP 5-1 Marine Corps Planning Process.

**PERFORMANCE STEPS:**

1. Assist in problem framing.
2. Assist in course(s) of action development.
3. Assist in war gaming course(s) of action.
4. Assist in comparison and recommendation of course(s) of action.
5. Assist in development of appropriate staff products, operation plans, orders, annexes, and appendices.
6. Assist in transition by compiling the components of an operations order for distribution to subordinate units.

**REFERENCES:**

1. MSTP PAM 5-0.2 Operational Planning Team Guide
  2. MSTP PAM 5-0.3 MAGTF Planner's Reference Manual
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**1371-PLAN-2002:** Plan a base camp

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 12 months

**GRADES:** GYSGT, MSGT, MGYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a tactical situation, a map, an operations order, size and type of unit, and references.

**STANDARD:** To meet or exceed the unit requirements and the commander's intent, while accounting for future expansion, in accordance with MCRP 3-17.7N Base Camps.

**PERFORMANCE STEPS:**

1. Analyze mission.
2. Identify Requests for Information (RFI).
3. Conduct reconnaissance.
4. Determine location.
5. Plan road network.
6. Select facilities required to support the base camp.
7. Determine utility requirements.
8. Determine fuel requirements.
9. Determine drainage requirements.
10. Develop obstacle/barrier plan as required.
11. Develop survivability plan as required.
12. Determine bill of materials (BOM).
13. Determine camp layout.
14. Determine task organization of personnel and equipment.
15. Determine logistical support requirements.
16. Establish a project schedule.
17. Illustrate final design.

**REFERENCES:**

1. GTA 90-01-011 Joint Forward Operations Base (JFOB) Protection Handbook
  2. GTA 90-01-018 Joint Entry Control Point & Escalation of Force Procedures
  3. MCRP 3-17.7A Planning and Design of Roads, Airfields, and Heliports in the Theater of Operations - Road Design
  4. MCRP 3-17.7B Planning and Design of Roads, Airfields, and Heliports in the Theater of Operations - Airfield and Heliport Design
  5. MCRP 3-17.7F Construction Project Management
  6. MCRP 3-17.7I Earthmoving Operations
  7. MCRP 3-17.7M Construction Estimating
  8. MCRP 3-17.7N Base Camps
  9. MCRP 3-17A Engineer Field Data
  10. MCRP 4-11.1D Field Hygiene and Sanitation
  11. MCWP 3-17 Engineer Operations
  12. MCWP 3-17.5 Combined Arms Obstacle Integration
  13. MCWP 3-17.6 Survivability Operations
  14. MCWP 3-43 Command and Control
  15. MCWP 4-11.5 SeaBee Operations in the MAGTF
  16. MCWP 4-11.6 Bulk Liquid Operations
  17. MCWP 4-11.6 Petroleum and Water Logistics Operations
  18. MCWP 4-25.5 Bulk Liquids Operations
  19. NAVMED P-5010-9 Manual of Naval Preventive Medicine, Chapter 9, Preventive Medicine for Ground Forces
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**1371-REC-2001:** Conduct engineer reconnaissance

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a mission, maps, personnel and equipment, appropriate reconnaissance reporting forms, overlay material, and references.

**STANDARD:** To classify roads, routes, and bridges; evaluate tunnels, fords, and ferry sites; identify obstacles; bypasses; and record relevant engineer information on the appropriate reconnaissance forms and transferred to a map overlay using engineer/tactical symbols.

**PERFORMANCE STEPS:**

1. Analyze mission.
2. Review the map of the route to be taken.
3. Proceed to assigned objective.
4. Calculate route width (minimum and maximum).
5. Determine shoulder condition (if any).
6. Determine surface material.
7. Plot length of passable route.
8. List obstacles.
9. Indicate special weather conditions which may affect the route.
10. Identify constrictions.
11. Determine overhead clearance.
12. Classify road(s).
13. Record cover and concealment.
14. Identify underpasses.
15. Calculate tunnel specifications.
16. Classify bridge(s) (if any).
17. Determine wet gap fording/bridging/ferrying sites.
18. Identify suitable bypasses.
19. Classify the route.
20. Submit reconnaissance report(s) and overlays.

**REFERENCES:**

1. GTA 05-02-012 Coordinated Scale and Protractor
2. GTA 05-07-013 Rapid Field Classification Booklet
3. GTA 5-2-5 Engineer Reconnaissance
4. MCRP 3-17A Engineer Field Data
5. MCRP 3-17B Engineer Forms and Reports
6. MCWP 3-17 Engineering Operations
7. MCWP 3-17.4 Engineer Reconnaissance

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**

Facility Code 17413 Field Training Area

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**1371-RECN-2002:** Conduct demolition reconnaissance

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a mission to conduct a reconnaissance of a target designated for demolition, map of area, compass, measuring tape, appropriate form(s), and references.

**STANDARD:** Complete all blocks of the appropriate form(s) to determine quantity of explosives required to produce the desired effect on the target(s); determine the time, labor, and logistics necessary to accomplish the mission; and capture a sketch of the proposed target(s) in accordance with the MCRP 3-17.7L Explosives and Demolitions.

**PERFORMANCE STEPS:**

1. Analyze mission.
2. Conduct map reconnaissance.
3. Proceed to assigned objective.
4. Estimate explosives and logistics required.
5. Estimate personnel and time required to complete mission.
6. Identify bypass requirements.
7. Sketch side views of target and cross sections of members to be cut.
8. Sketch a plan of the firing circuits and firing points.
9. Submit appropriate form(s).

**REFERENCES:**

1. GTA 05-07-013 Rapid Field Classification Booklet
2. GTA 05-10-033 Demolition Card
3. MCRP 3-17.7L Explosives and Demolitions
4. MCRP 3-17A Engineer Field Data
5. MCRP 3-17B Engineer Forms and Reports
6. MCWP 3-17 Engineering Operations
7. MCWP 3-17.4 Engineer Reconnaissance

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**

Facility Code 17413 Field Training Area

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**1371-SURV-2001:** Design survivability positions

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 12 months

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a force protection requirement and references.

**STANDARD:** To counteract the known effects of enemy direct and indirect fire weapons in accordance with MCWP 3-17.6 Survivability Operations.

**PERFORMANCE STEPS:**

1. Submit Requests for Information (RFI) to S/G-2.
2. Determine types of positions required.
3. Design positions.
4. Determine material requirements.
5. Calculate the time required for construction.
6. Submit designs/work estimates.

**REFERENCES :**

1. GTA 05-08-001 Survivability Positions
  2. GTA 07-06-001 Fighting Position Construction Infantry Leader's Reference Card
  3. GTA 90-01-011 Joint Forward Operations Base (JFOB) Protection Handbook
  4. GTA 90-01-018 Joint Entry Control Point & Escalation of Force Procedures
  5. MCRP 3-17A Engineer Field Data
  6. MCWP 3-17.6 Survivability Operations
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**1371-SURV-2002:** Prepare a survivability plan

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 12 months

**GRADES:** GYSGT, MSGT, MGYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a tactical situation, a map, an operations order, the supported unit's T/O and T/E, and references.

**STANDARD:** That details the scope of engineer effort required to provide a level of force protection commensurate with enemy threat capabilities and the commander's intent and MCWP 3-17 Engineer Operations.

**PERFORMANCE STEPS:**

1. Analyze the mission.
2. Conduct Intelligence Preparation of the Battlespace (IPB).
3. Identify Requests for Information (RFI).
4. Identify location(s) of survivability positions.
5. Identify survivability requirements.
6. Prioritize survivability requirements.
7. Plan for protective obstacle integration.
8. Task organize engineer equipment and personnel.
9. Plan inspections of survivability positions for proper construction techniques.
10. Prepare survivability appendix to the operation order.

**REFERENCES :**

1. GTA 90-01-011 Joint Forward Operations Base (JFOB) Protection Handbook
  2. GTA 90-01-018 Joint Entry Control Point & Escalation of Force Procedures
  3. MCRP 3-17A Engineer Field Data
  4. MCWP 3-1 Ground Combat Operations
  5. MCWP 3-17 Engineer Operations
  6. MCWP 3-17.6 Survivability Operations
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**1371-VERT-2001:** Plan wood frame structure

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** SSGT, GYSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided specifications, writing/sketching materials, a

calculator, and references.

**STANDARD:** To conform to the construction drawings, blueprints, or specifications; and that identifies the type of materials and proper spacing; and support all loads considered in accordance with MCRP 3-17.7C Carpentry.

**PERFORMANCE STEPS:**

1. Review construction drawings, blueprints or specifications.
2. Prepare a materials takeoff sheet.
3. Prepare a bill of materials.
4. Submit required documents.

**REFERENCES:**

1. MCRP 3-17.7C Carpentry
  2. MCRP 3-17.7M Construction Estimating
  3. ModCarp 2008 Modern Carpentry, 11 Edition Wagner/Smith
  4. NAVPERS 0-486-20242-9 Basic Construction Techniques for Houses and Small Buildings
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**1371-VERT-2002:** Layout wood frame structure

**EVALUATION-CODED:** NO

**SUSTAINMENT INTERVAL:** 6 months

**GRADES:** CPL, SGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a construction site, construction blueprints/drawings, design specifications, an engineer carpenter's kit, Class IV, and references.

**STANDARD:** To ensure that building corners are exactly 90 degrees; truss jigs are built to the specified pitch; the sum of stair stringer risers and treads is between 17 and 19 inches; and walls are level and plumb.

**PERFORMANCE STEPS:**

1. Lay out a rectangle.
2. Set batter board posts.
3. Drive corner stakes.
4. Install batter boards to finished heights.
5. Run building lines.
6. Square building lines.
7. Lay out wall components.
8. Lay out truss components.
9. Lay out stair components.

**REFERENCES:**

1. MCRP 3-17.7C Carpentry
2. ModCarp 2008 Modern Carpentry, 11 Edition Wagner/Smith
3. NAVPERS 0-486-20242-9 Basic Construction Techniques for Houses and Small Buildings

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**

Facility Code 17330 Covered Training Area

UNITS/PERSONNEL: 1361 Surveyor