

Training and Evaluation Outline Report

Task Number: 05-3-5142

Task Title: Perform Roadway Crater Repair

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	FM 5-19	COMPOSITE RISK MANAGEMENT	Yes	No
	FM 5-410	MILITARY SOILS ENGINEERING	Yes	No
	FM 5-428	CONCRETE AND MASONRY	Yes	No
	FM 5-430-00-1	PLANNING AND DESIGN OF ROADS, AIRFIELDS, AND HELIPORTS IN THE THEATER OF OPERATIONS - ROAD DESIGN	Yes	No
	FM 5-434	EARTHMOVING OPERATIONS	Yes	No
	FM 5-436	PAVING AND SURFACING OPERATIONS	Yes	Yes

Condition: The element has been directed to repair roadway craters to enhance mobility. The locations of the repairs have been designated. All organic tools, equipment, materials, host nations support (HNS) and other military support are available as appropriate. Some iterations of this task should be performed in MOPP.

Standard: The element repairs the roadway, ensuring the safety of equipment and personnel at all times. The platoon repairs the roadway to established standards and specifications in the directive. The time required to perform this task is increased when conducting it in mission-oriented protective posture (MOPP) 4.

Special Equipment: None

Task Statements

Cue: None

DANGER

N/A

WARNING

N/A

CAUTION

None

Remarks: None

Notes: None

TASK STEPS

1. The element leader conducts troop-leading procedures.

2. The element establishes job site security.

3. The platoon executes road way crater repair operations based on the priorities set by the higher HQ.

Note: The platoon sergeant (PSG) or platoon leader (PL) will control the quality of operations.

4. Removes debris and all damaged road surface from in and around the crater.

a. Compressed asphalt

b. Concrete: All deteriorated or damaged concrete must be removed from the repair area to provide sound concrete for the repair material to bond to.

5. Prepares the crater perimeter for repair.

a. Identify the extent of upheaved area, cut back no less than six inches but as far out as the farthest blast vein / crack.

b. Use concrete saw or pneumatic jackhammer to trim crater edge rectangular with straight, vertical sides so that the surface and base course has a sound, uniformed and vertical edge.

c. On dirt roads cut the hole straight down. Use a shovel to cut the edges of the hole straight, creating firm edges that will be easier to work with.

6. Compacts the crater.

a. Use a vibratory plate compactor or a jumping jack compactor and tamper on small craters.

b. Craters as large or larger then 2'x6'x6' use plate compactor or pneumatic tamping tool.

c. Fill craters with a depth greater than 18 inches with successive six to eight inch layers of suitable construction grade material to the original level of the sub-grade on dirt roads. On concrete and asphalt roads fill to 12-18 inches from existing surface.

7. The element fills the crater with one of the following methods.

a. Concrete road repair.

(1) Craters as large or larger then 2'x6'x6' place steel dowels in horizontally half way between final compaction level and road surface.

(2) Reinforcement, place wire mesh (cut to size on site) or rebar in crater.

(3) Spread and level the concrete to the desired height.

(4) Use a shovel to fill voids. Larger holes use a mechanical vibrator or a hand spading tool to prevent consolidation.

Note: There are several different methods used to place the concrete, i.e. Concrete Mobile, Host Nation (HN) assets civilian concrete truck or mixed on site using a Bobcat attachment.

(5) Screeds the concrete until the concrete is at the correct level.

(6) Floats the concrete.

(a) Hand float concrete.

(b) Bull float areas as large or larger then 2'x6'x6'.

(7) Finishes the concrete

(a) Finishes the surface until it is smooth and level with the surrounding pavement.

(b) Drags a damp soft-bristled broom across the surface after floating, giving the concrete a rough finish.

Note: There are several different methods used to place the Asphalt, i.e. Truck-Mounted Asphalt Distributor, Trailer-Mounted Asphalt Distributor, Model 780T Asphalt Finisher and Host Nation Support (HNS) assets.

b. Asphalt road repair

(1) Sweeps the existing surface clean so that the tack coat can adhere to it.

(2) Applies surface coating, coating is dependent on surface type.

(3) Adds mixture, Asphalt mixture is dependent on available recourses

(4) Level and Compact,

(a) Uses Rakes and shovels to evenly spread bituminous mixes in patch areas to desired height.

(b) Uses hand tamper on small craters, craters as large or larger then 2'x6'x6' roll the surface with a compaction roller.

(5) Finishes the surface, Rolls the surface with a finish roller.

c. Earth road repair.

(1) Levels and Compacts, fills and compacts the crater with successive six to eight inch layers of suitable construction grade material to the original level of the sub grade.

(2) Finishes the surface, Uses hand tamper on small craters, craters as large or larger then 2'x6'x6' rolls the surface with a compaction roller.

(Asterisks indicates a leader performance step.)

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. The element leader conducted troop-leading procedures.			
2. Established job site security.			
3. The platoon executed road way crater repair operations based on the priorities set by the higher HQ.			
4. Removed debris and all damaged road surface from in and around the crater.			
5. Prepared the crater perimeter for all repairs.			
6. Compacted the crater.			
7. Crater was filled by using concrete, asphalt or earth.			

TASK PERFORMANCE / EVALUATION SUMMARY BLOCK							
ITERATION	1	2	3	4	5	M	TOTAL
TOTAL PERFORMANCE MEASURES EVALUATED							
TOTAL PERFORMANCE MEASURES GO							
TRAINING STATUS GO/NO-GO							

ITERATION: 1 2 3 4 5 M

COMMANDER/LEADER ASSESSMENT: T P U

Mission(s) supported: None

MOPP: Sometimes

MOPP Statement: None

NVG: Never

NVG Statement: None

Prerequisite Collective Task(s): None

Supporting Collective Task(s):

Step Number	Task Number	Title	Proponent	Status
1.	07-2-5081	Conduct Troop-leading Procedures (Platoon-Company)	07 - Infantry (Collective)	Obsolete

Supporting Individual Task(s):

Step Number	Task Number	Title	Proponent	Status
5.	052-236-1168	Place Concrete	052 - Engineer (Individual)	Approved
6.	052-210-1219	Determine the Specific Gravity of a Soil	052 - Engineer (Individual)	Approved
6.	052-256-3046	Direct Compaction Operations	052 - Engineer (Individual)	Approved

Supporting Drill Task(s): None

TADSS

Step ID	TADSS ID	Title	Product Type	Quantity
No TADSS specified				

Equipment (LIN)

Step ID	LIN	Nomenclature	Qty
No equipment specified			

Materiel Items (NSN)

Step ID	NSN	LIN	Title	Qty
No equipment specified				

Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT

Safety: In a training environment, leaders must perform a risk assessment in accordance with FM 5-19, Composite Risk Management. Leaders will complete a DA Form 7566 COMPOSITE RISK MANAGEMENT WORKSHEET during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, NBC Protection, FM 3-11.5, CBRN Decontamination. In a training environment, leaders must perform a risk assessment in accordance with FM 5-19, Composite Risk Management. Leaders will complete a DA Form 7566 COMPOSITE RISK MANAGEMENT WORKSHEET during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, NBC Protection, FM 3-11.5, CBRN Decontamination.