

The City of Westlake
Department Of Engineering

CONCRETE DAM FOR FLOOR DRAIN
STEP BY STEP INSTRUCTIONS

TOOLS REQUIRED

RUBBER GLOVES



5 GALLON BUCKET



UTILITY KNIFE



PERMANENT MARKER



MIXING STICK FOR MORTAR



TROWEL



MATERIAL LIST

40# BAG OF MORTAR MIX



COMPLETED PRODUCT



STORES
INGERSOLL HARDWARE 27531 DETROIT ROAD WESTLAKE, OHIO 44145
HOME DEPOT VARIOUS LOCATIONS
LOWES VARIOUS LOCATIONS

MORTAR YIELDS		
DAM DIMENSIONS		40 LBS. BAGS
HEIGHT	WIDTH	
5"	3"	1
8"	3"	2
11"- 12"	4"	3

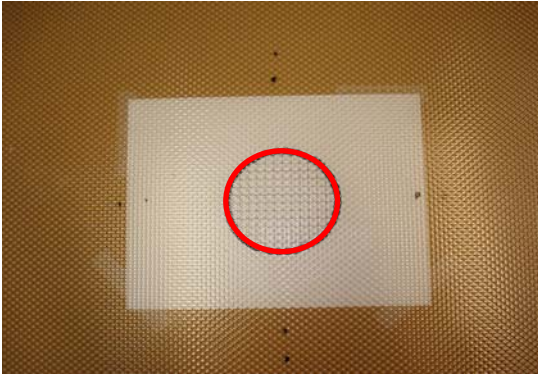
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DAY 1
STEP 1

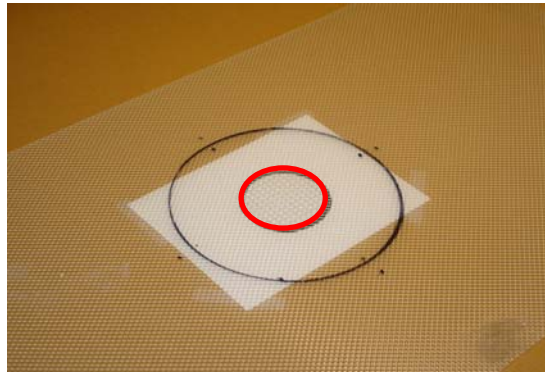
CLEAN THE ENTIRE SURFACE AROUND THE FLOOR DRAIN WITH A TROLL, SOAP AND WATER TO INSURE A GOOD BOND.

STEP 2

(THE **RED** CIRCLE IN THE PHOTOGRAPH WILL REPRESENT THE FLOOR DRAIN FOR THE INSTRUCTIONAL MOCK-UP)



USE THE 5 GALLON BUCKET AS A TEMPLATE FOR THE OUTER CIRCLE OF THE MORTAR DAM. CENTER THE BUCKET OVER THE FLOOR DRAIN AND MARK. THEN USE A SMALLER BUCKET TO MARK THE INNER CIRCLE, WHICH IS ABOUT 3" SMALLER IN RADIUS.



STEP 3

CUT THE MORTAR MIX BAG FOR EASY DUMPING INTO THE 5 GALLON BUCKET. PLACE PLASTIC BAG (OPTIONAL) IN BUCKET FOR EASY CLEANING. DUMP MORTAR MIX BAG IN DRY BUCKET, APPROXIMATELY 1/3 TO 1/2 OF THE BAG.



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STEP 4

SLOWLY ADD WATER TO MORTAR MIX. REFER TO INSTRUCTIONS ON BAG. THE DESIRED MIX SHALL BE TIGHT AND NOT WATERY. THEREFORE ADD SMALL AMOUNTS OF WATER TO OBTAIN DESIRED WORKABILITY.



STEP 5

MIX THE WATER AND DRY MORTAR MIX. THE DESIRED CONSISTENCY SHALL BE SIMILAR TO DRIED SANDY CLAY WHEN ROLLED IN YOUR HAND.



STEP 6

PLACE THE MIXED MORTAR ALONG THE INNER CIRCLE BEING CAREFUL NOT TO COVER THE FLOOR DRAIN



MOST FLOOR DRAINS HAVE A PLASTIC 3/4" PIPE THAT IS CONNECTED TO THE FURNACE. THIS IS THE CONDENSATE DRAIN FOR THE AIR CONDITIONER.

YOU HAVE TWO OPTIONS FOR THIS;

- 1 BUILD THE DAM AROUND THE PIPE AND MAKE SURE TO GET THE MORTAR UNDER THE PIPE, AS WELL, TO OBTAIN A FULL SEAL AROUND THE PIPE. (MOCK-UP SHOWED THIS)
- 2 REWORK THE PIPE SO THAT IT DRAINS IN FROM THE TOP OF THE DAM.

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STEP 7

CONTINUE TO INSTALL THE **FIRST** LAYER OF THE DAM COMPLETELY AROUND THE FLOOR DRAIN APPROXIMATELY 2" - 3" HIGH. MAKE SURE TO GET A COMPLETE SEAL AROUND THE ENTIRE DIAMETER OF THE CONDENSATE DRAIN



STEP 8

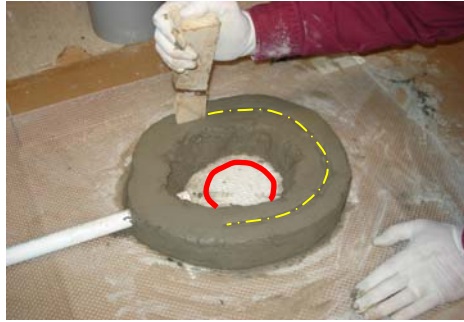
CONTINUE TO SHAPE THE DAM USING YOUR HANDS AND THE TROWEL. DO NOT ADD ANY MORE WATER (TOO MUCH WATER WILL CAUSE THE DAM TO SLUMP AND WILL NOT STAY STANDING).



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STEP 9

ONCE THE DESIRED WIDTH AND HEIGHT HAS BEEN ACHIEVED FOR THE FIRST LAYER
INSTALL A KEY-WAY WITH A PIECE OF WOOD, YOU CAN USE THE MIXING STICK.



ALLOW THE FIRST LAYER TO DRY OVERNIGHT.

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DAY 2
STEP 10

REPEAT STEP 3



STEP 11

MOISTEN THE TOP OF THE DAM WITH A SMALL AMOUNT OF WATER TO ASSURE THE PROPER BONDING CAPABILITY. CONTINUE WITH THE BUILDING OF THE DAM BY ADDING TO THE TOP OF THE DAM CONSTRUCTED THE DAY BEFORE.



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STEP 12

CONTINUE ADDING MORTAR TO THE DESIRED HEIGHT FOLLOWING THE PREDETERMINED WIDTH



STEP 13

WHEN THE ACHIEVED HEIGHT HAS BEEN MET, SMOOTH THE SIDES AND TOP WITH YOUR HANDS AND THE TROWEL. **AVOID** ADDING WATER TO MAKE IT SMOOTH.



STEP 14

THIS MOCK-UP WILL PRODUCE A DAM APPROXIMATELY 5"- 6" IN HEIGHT. IF ADDITIONAL HEIGHT IS REQUIRED REPEAT STEPS 9 THRU 13 AGAIN.

STEP 15

THE FINISHED PRODUCT AND THE FINISHED PRODUCT AFTER A DAY OF CURE TIME.

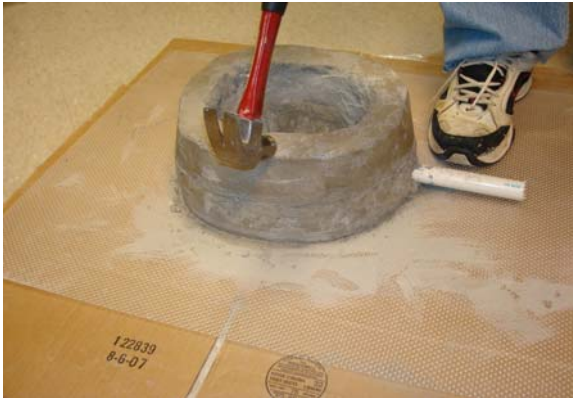


THE INSTALLATION IS COMPLETE AND IF THE SANITARY SEWER SURCHARGES THRU THE FLOOR DRAIN AGAIN, THE WATER WILL BE RESTRICTED TO WITHIN THE DAM WHEN THE WATER SEEKS THE SURCHARGE ELEVATION. CLEAN WITH BLEACH AFTER THE WATER RECEDES.

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STEP 16

IF THERE IS A NEED TO ALLOW WATER TO DRAIN FROM THE OUTSIDE OF THE DAM, THE DAM CAN BE BROKEN WITH A HOUSEHOLD HAMMER WITH LITTLE EFFORT.



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ADDITIONAL NOTES

THIS IS TO BE USED AS A GUIDE AND THIS MOCK-UP INSTALLATION WAS 5"- 6" HIGH BY 3" WIDE. THE HEIGHT OF THE DAM WILL BE DICTATED BY THE HIGHEST WATER LEVEL IN THE BASEMENT PLUS A FACTOR OF SAFETY.

THIS PROCEDURE SHALL BE USED ONLY TO SAFEGUARD A HOME FROM SANITARY SEWER SURCHARGE UP THROUGH THE FLOOR DRAINS. SOME HOMES THE FLOOR DRAIN MAY BE CONNECTED TO THE STORM SEWER, IN WHICH THIS PROCEDURE WILL NOT PROTECT THE HOME.

THE CITY OF WESTLAKE ASSUMES NO LIABILITY FOR ANY PROPERTY DAMAGE OR LOSS, OR INJURY THAT MAY OCCUR AS A RESULT OF THE MISUSE OF THE DESCRIBED PROCEDURES.

IF YOU HAVE ANY QUESTIONS OR COMMENTS PLEASE FEEL FREE TO CONTACT THE DEPARTMENT OF ENGINEERING AT;
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E-MAIL: engdept@cityofwestlake.org