

INSTALLATION INSTRUCTIONS

Municipal Roadway (40 MPH and under) Manhole Cover Installation Details

FIBRELITE
PART OF OPW A DOVER COMPANY

HEALTH AND SAFETY



Safety
Gloves



Eye
Protection



Dust Mask



Ear
Protection



Dry

Refer to the
Health and Safety
Data Sheets for
further details



A

Follow all appropriate health and safety requirements and use appropriate PPE.

B

When cutting fiberglass skirts, use cutting tools that are designed for use on fiberglass or composites. Failure to use appropriate cutting tools or blades may damage the fiberglass frame or skirt.

REQUIRED TOOLS



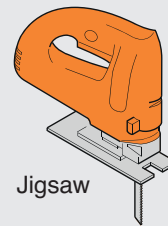
Concrete
Saw



White Lithium
Spray Grease



FL7A
Lifting
Handle



Jigsaw



Concrete Mortar
or Epoxy Grout

DO NOT THROW, ROLL OR DROP THE COVERS



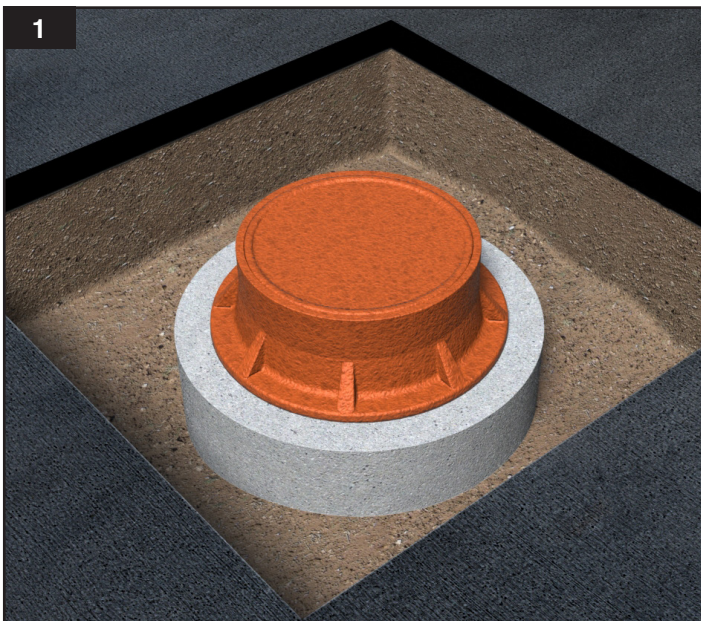
ROLLING COVERS ON THEIR EDGE WILL DAMAGE GASKETS AND POTENTIALLY THE COVER ITSELF

SUCH DAMAGE WILL NOT BE COVERED UNDER WARRANTY

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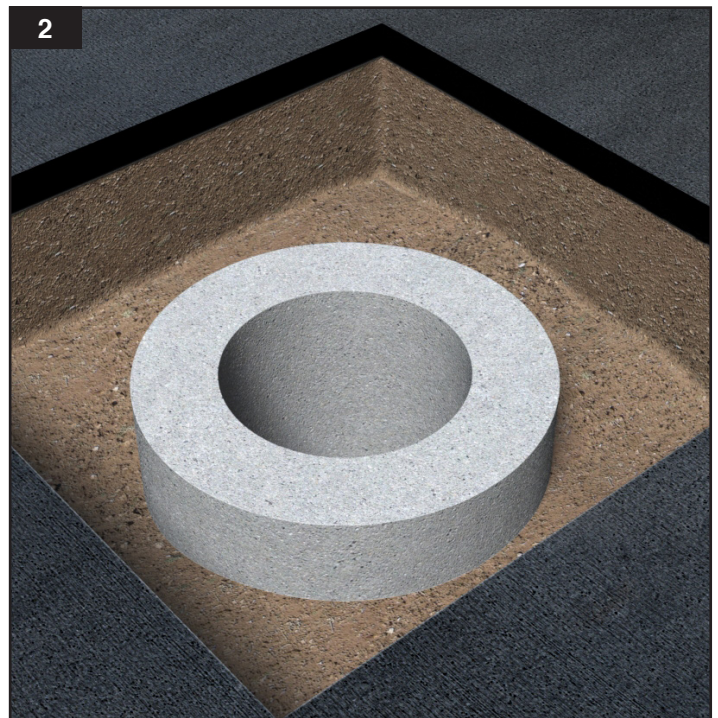
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SITE PREPARATION



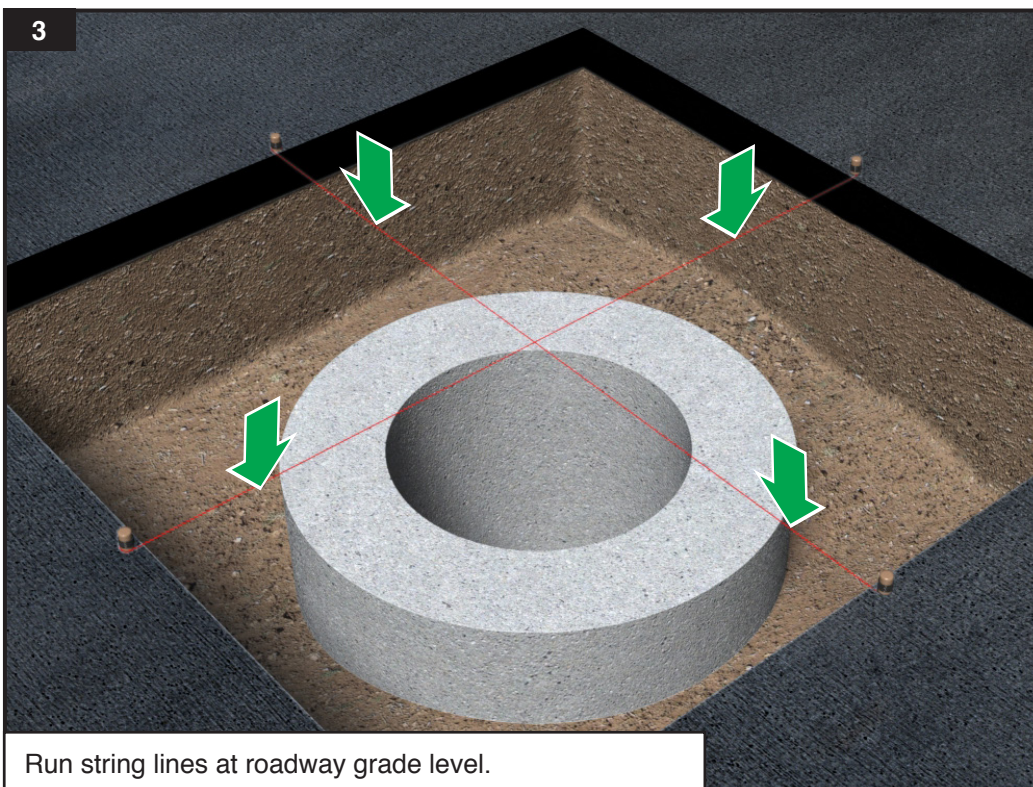
1
Contractor excavates the roadway to create a square opening around the existing cast iron frame. Depth should be 18" or down to the surface of existing concrete utility vault.

F65 = 5' x 5'
F95 = 6' x 6'



2
Remove existing cast iron frame and any brickwork used to connect cast iron frame to existing concrete utility vault.

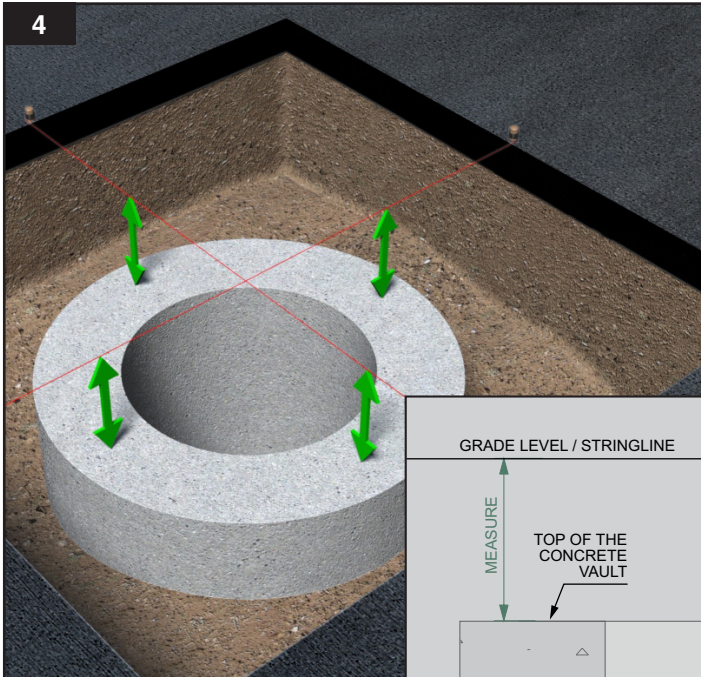
ACHIEVING THE CORRECT HEIGHT



3
Run string lines at roadway grade level.

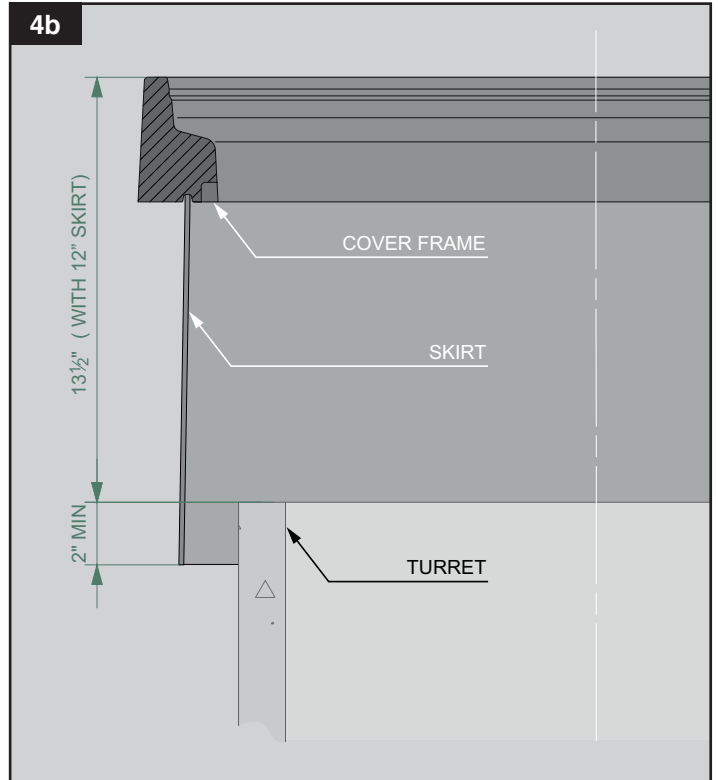
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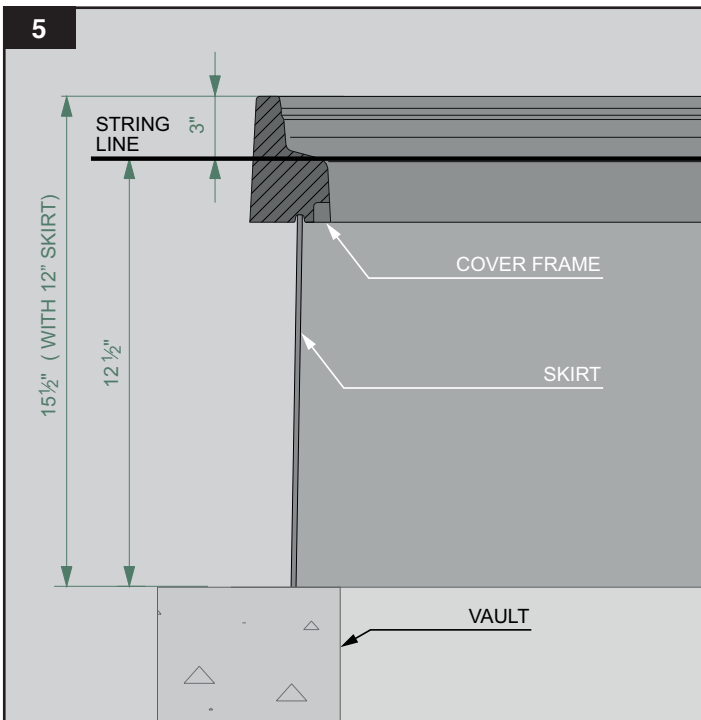


NOTE: The skirt should not be set on bricks or equivalent

Measure from the string line down to the flat section on top of the vault or round concrete riser section to ensure that the distance is not more than 15 1/2" deep. Contact OPW Fibrelite representatives at 919-209-2404 if the measurement exceeds 15 1/2".



If the O.D. of the round concrete riser is less than the I.D. of the frame skirt, the skirt should sit a minimum of 2" below the top of the vault riser.



EXAMPLE

The overall height of the frame and attached skirt is 15 1/2". If the distance between the string line and the top of the concrete riser is less than 15 1/2", then the skirt will need to be trimmed. For example (as shown above), if the distance is 12 1/2", then 3" will need to be removed from the base of the skirt.

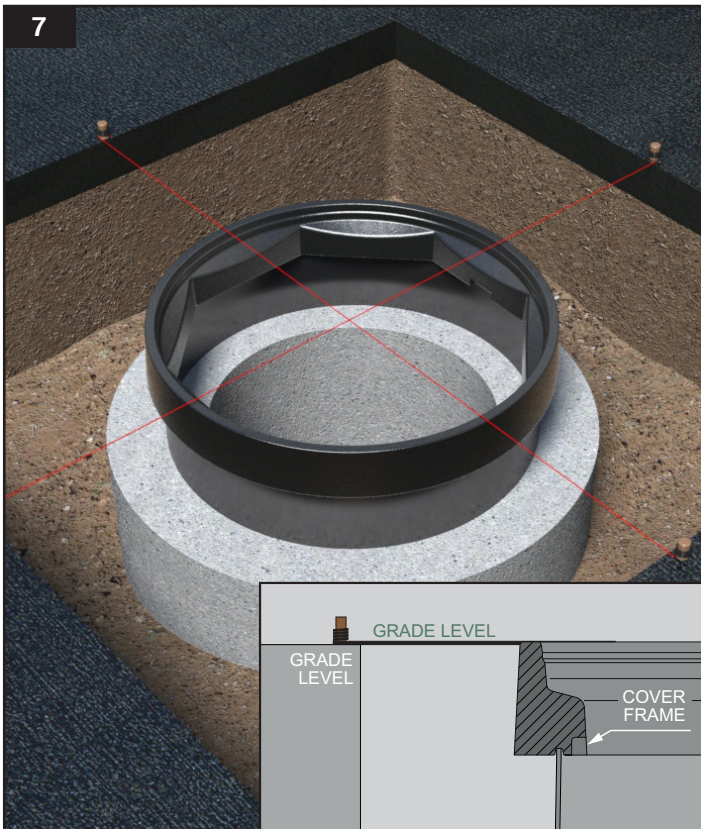


Carefully trim the skirt as required using appropriate cutting tools and saw blades designed to cut composite materials.

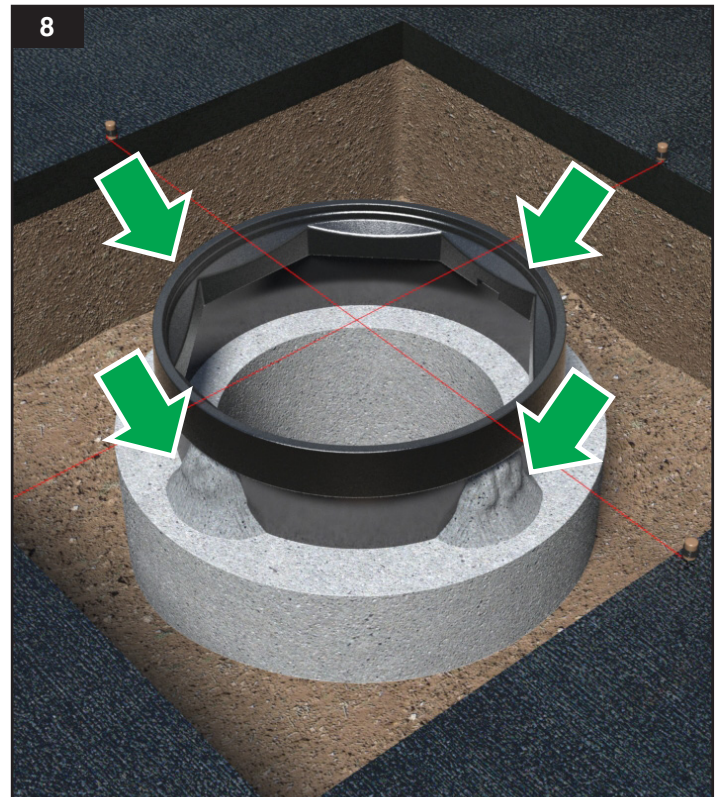
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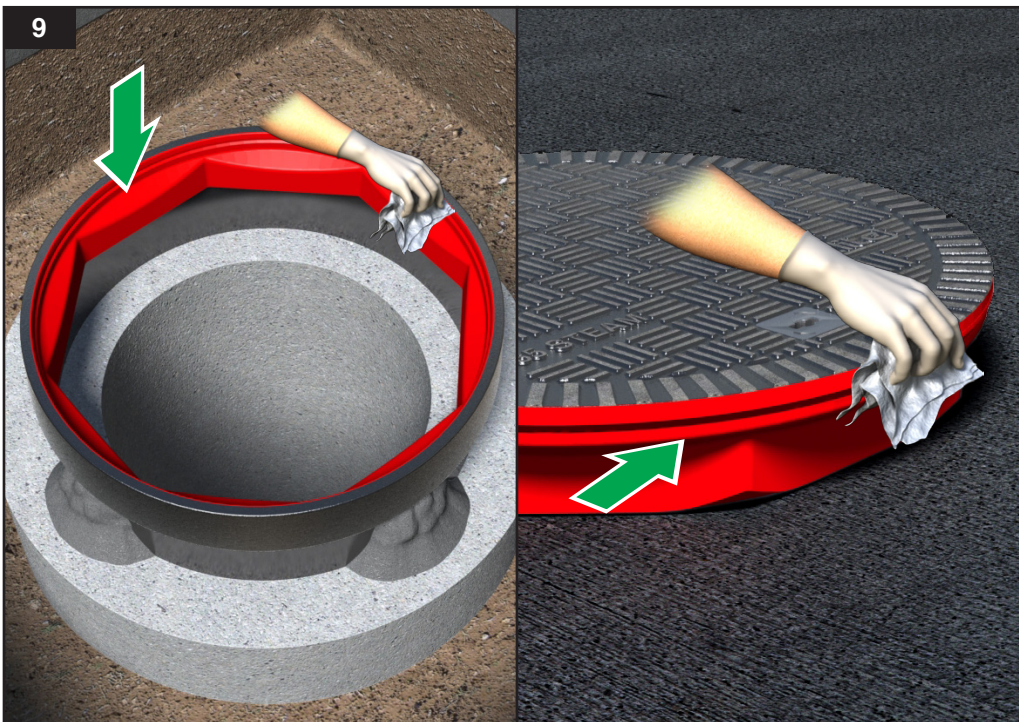
CONCRETING



Set frame and skirt onto the vault top surface and shim as required so the frame is level with string lines.



Fixture the frame and skirt into place by using 4 shovelfuls of either fast acting concrete mortar or epoxy grout.



Once the frame is firmly attached to the concrete, clean the frame and cover's mating surface using white lithium spray grease and clean rags.



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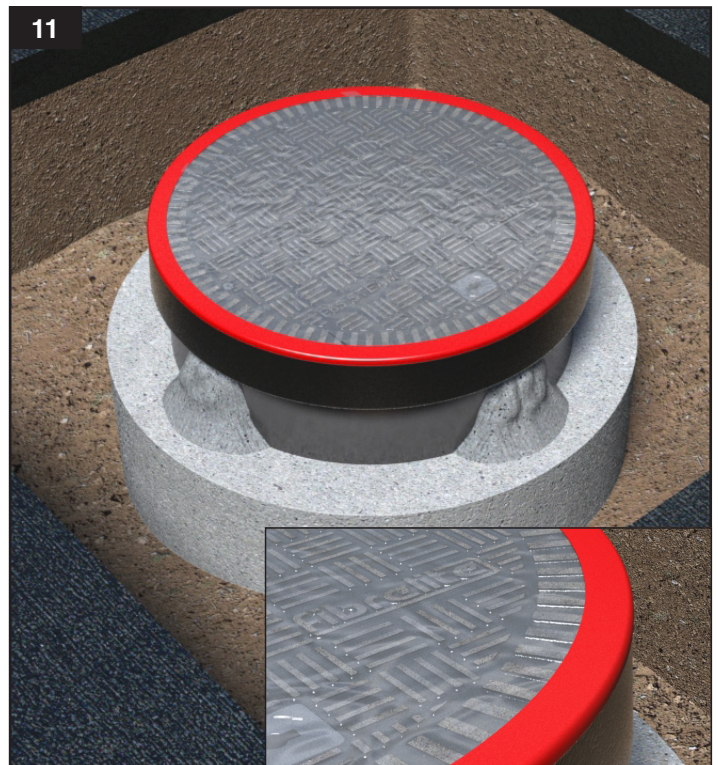
10

UNDERSIDE

EDGE OF FRAME

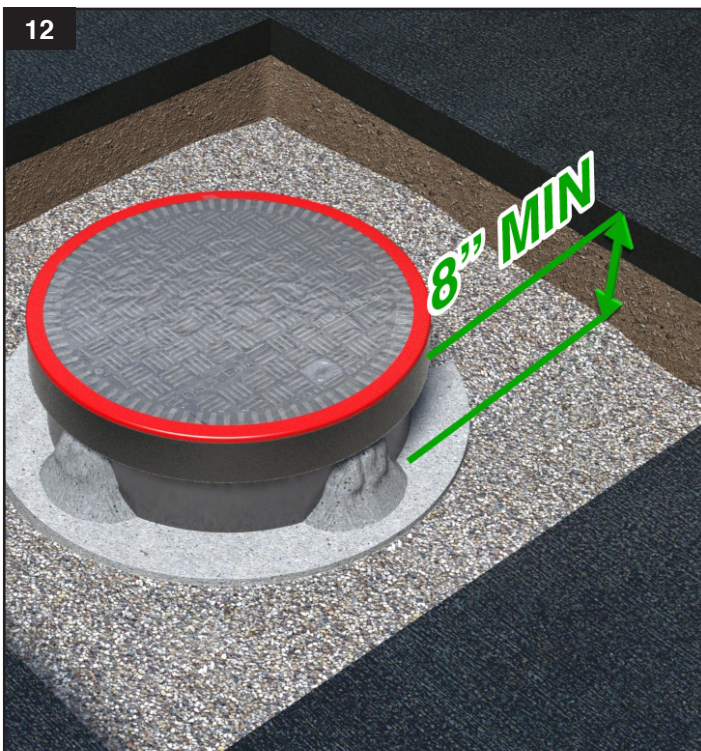


Place the cover into the frame so that it seats. The locks should be in the "Open" position.



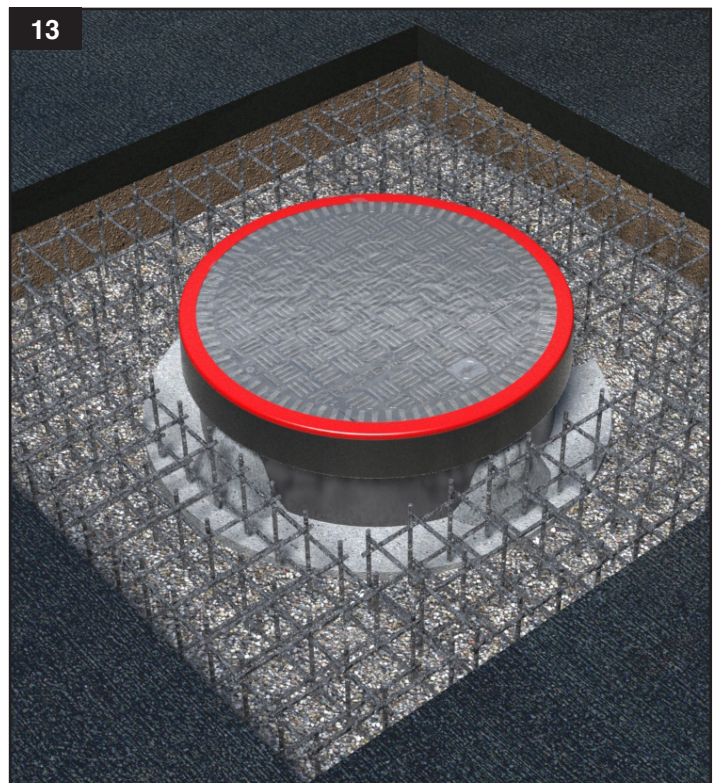
11

Cover the top of the manhole cover with a round sheet of plastic and tape it to the outer edge of the composite frame. This will protect the surface of the cover and frame from concrete during the installation process.



12

Fill with pea gravel up to a minimum of 8" from the top of the pea gravel to grade level. This will be the thickness of the concrete pad.



13

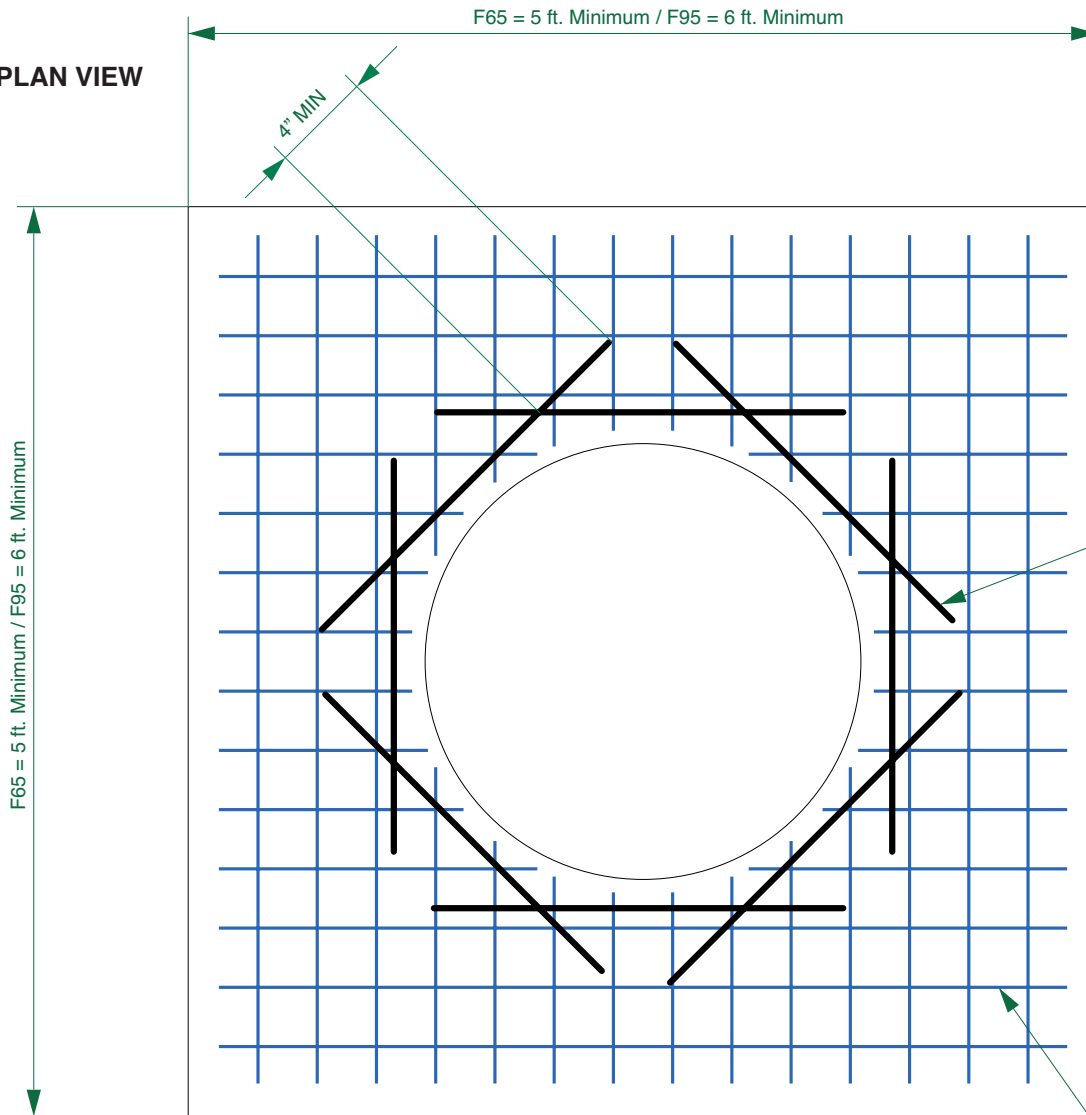
Insert two layers of 6" x 6" W4/W4 wire mesh reinforcement (ASTM 185).

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PLAN VIEW



14a

The concrete pad must be a minimum of 5ft square for the F65 and 6ft square for the F95.

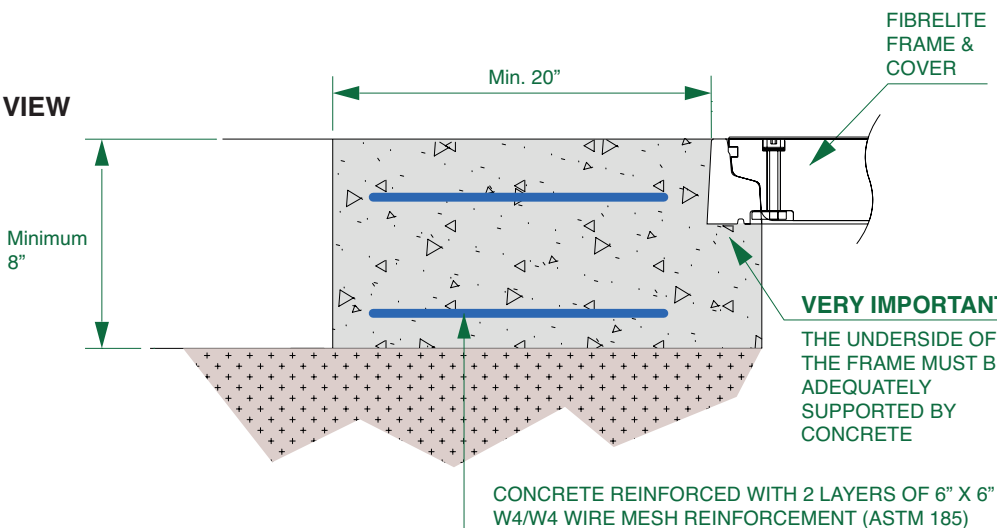
14b

Insert 1/2" Rebar Dowels as shown.

1/2" REBAR DOWELS TO BE PLACED AS SHOWN

CONCRETE REINFORCED WITH 2 LAYERS OF 6" X 6" W4/W4 WIRE MESH REINFORCEMENT (ASTM 185)

SIDE VIEW



14c

The concrete pad must be a minimum 8" deep.

14d

There must be a minimum length of 20" from the outside of the frame to the end of the concrete pad.

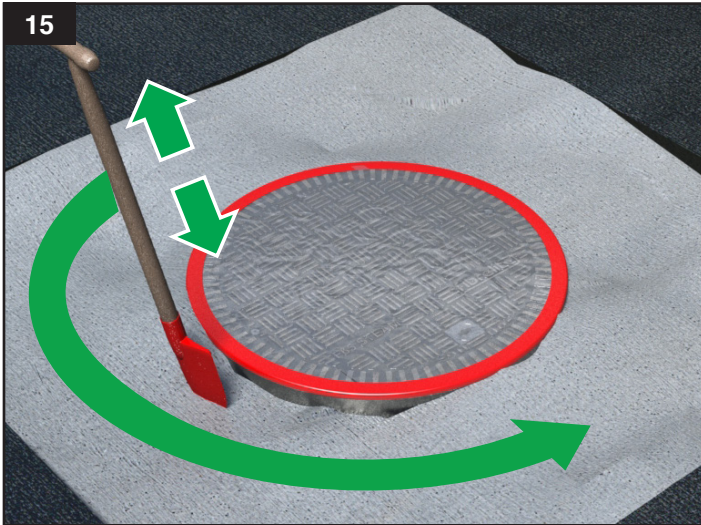
VERY IMPORTANT
THE UNDERSIDE OF THE FRAME MUST BE ADEQUATELY SUPPORTED BY CONCRETE

CONCRETE REINFORCED WITH 2 LAYERS OF 6" X 6" W4/W4 WIRE MESH REINFORCEMENT (ASTM 185)

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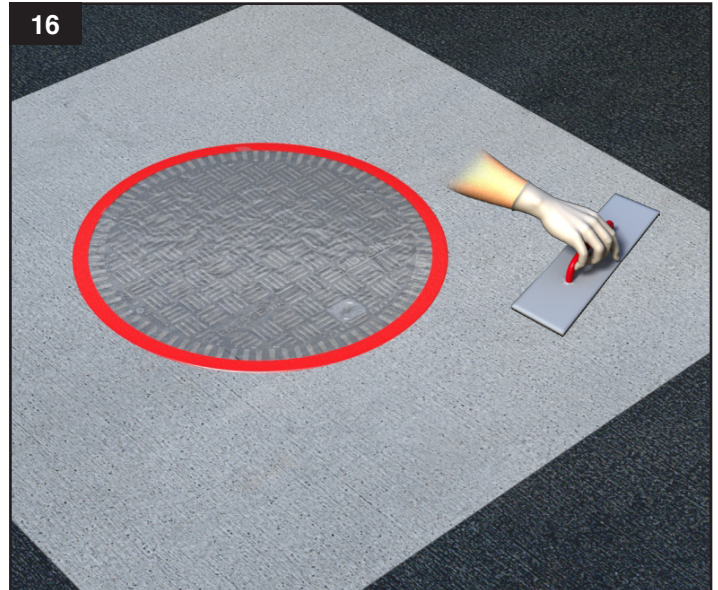
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Concrete Specifications: C40P Air Entrained to 5%

Pour the concrete. Use a spade or shovel to thoroughly agitate the concrete so that it flows under the supporting edges of the frame, especially in colder weather.



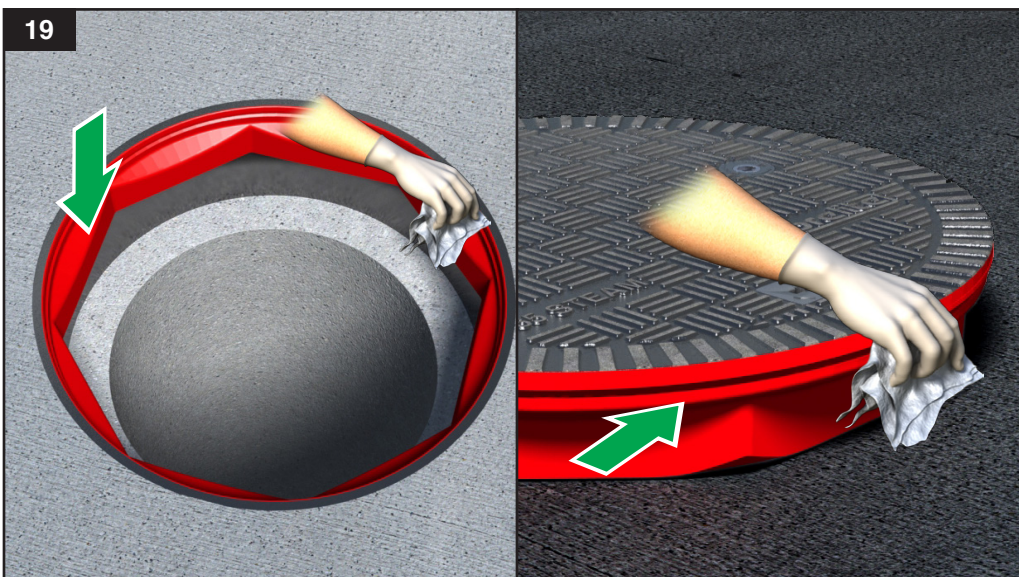
Using a steel trowel, finish the concrete so that the concrete pad is level with the top edge of the composite frame.



Allow the concrete to cure and remove the protective plastic sheet and tape by using a razor knife to cut it away.



Remove the cover using the FL7A lifting handle.



Clean the frame and cover's mating surface using white lithium spray grease and clean rags.



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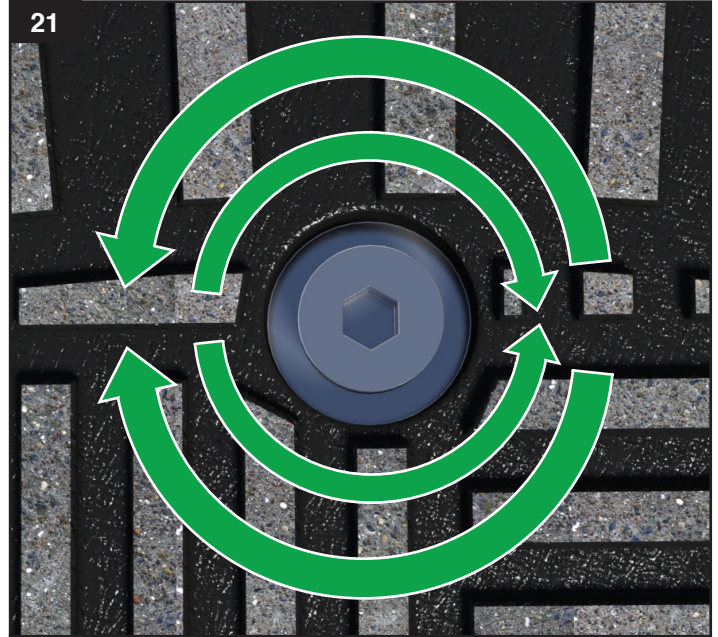
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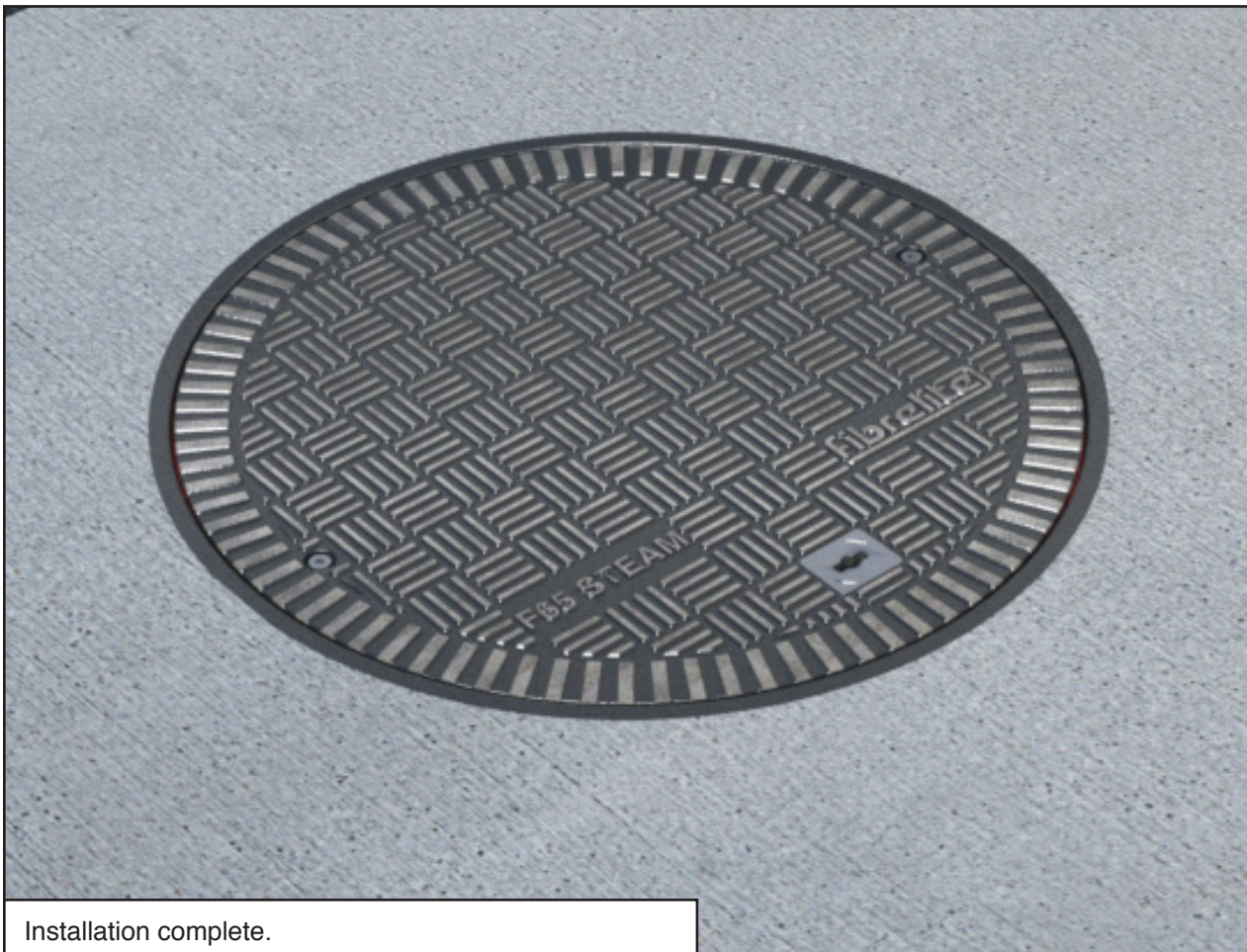


Replace the cover into the frame and ensure that it is securely seated.

21



Operate the locks to ensure that they are working correctly. Turn the locks into the closed position and attempt to remove the cover from the frame using the FL7A lifting handle. The cover should not be able to be removed.



Installation complete.