



Exterior/Interior Waterproofing Specifications

Outlined below are the typical parameters for basement and crawlspace repairs. Your Lakeview Representative will advise you of these, and other details involved with your foundation repair project.

Lakeview Exterior Waterproofing

Excavation

Lakeview to waterproof ____ lineal feet of your foundation. We will excavate the soil surrounding your foundation to a depth of ____ ft, (depths may vary depending on the elevation of your property). The excavation cavity is typically 2 1/2ft to 3ft wide and for safety purposes will be shored to ensure the soil does not collapse inward. Excavated soil will be placed on tarps in the following locations: _____. On completion of the waterproofing installation the native soil will be backfilled into the excavation cavity and tamped down to the original grade level. **NOTE:** Some settlement may occur in the weeks following your project's completion. **Lakeview** offers a complimentary re-grade of the excavated backfill 90 days following your project completion date. Ask your **Lakeview** representative for details.

Wall Restoration

Lakeview to clean and inspect foundation walls for any voids or structural cracks. The defective areas are chiseled out and repaired with non-shrink hydraulic cement that expands when applied to gaps.

Aquabloc 730-28

Lakeview to trowel-apply Aquabloc 730-28 liquid rubber, which represents the main waterproofing component for your foundation. Aquabloc 730-28 is simply the best product available for sealing your foundation from ground water seepage, with specialized properties that allow it to expand if further settlement occurs. Two coats of Aquabloc 730-28 will be applied with a Aquabloc 730-28 polyester Reinforcing Sheet installed in between coats for a superior bond.

DELTA MS Drainage Board

Lakeview to install Delta MS filtered drainage board. Delta MS is a rugged, dimpled plastic membrane that is anchored to the foundation with the top edge fastened with a termination bar. Delta MS protects

the Aquabloc 730-28 sealant against damage from backfilling and creates a gap between the soil and the foundation wall for groundwater to pass directly to the weeping tile system.

Weeping Tile System

Lakeview to install a filtered 4" weeping tile pipe and clear 3/4" gravel drainage bed. NOTE: The **Lakeview** Lifetime (50 Year) Warranty applies ONLY if the proposed weeping tile system is connected to a sump or has a clear connection to a municipal drain.

Connecting to a Sump

Lakeview to connect the exterior weeping tile via a 4" PVC pipe under or through the footing to a sump well in the interior of the building. This will ensure proper drainage for the proposed exterior waterproofing. NOTE: **Lakeview** recommends that a battery back up pump be installed with every sump system.

Connecting to Municipal Drains

Lakeview to connect the exterior weeping tile to the municipal drain system. This will ensure proper drainage for the proposed exterior waterproofing. NOTE: Regarding tying into pre-existing pipe connections to municipal drains: **Lakeview** will ensure that the connection to the municipal drain is clear at the time of installation. However, **Lakeview** assumes no liability and does not warranty any pre-existing pipe connections from clogging in the future.

Window Wells

Lakeview to install a new galvanized steel window well on the _____ wall measuring _____" W x _____" D x _____" P. Includes 4" vertical drain connection to the weeping tile. **Lakeview** to excavate to the footing, waterproof the area directly under and at least 1 lineal foot to either side of the window well with Aquabloc 730-28 liquid rubber and Delta MS filtered drainage membrane and replace weeping tile. NOTE: **Lakeview** assumes no liability and does not warranty any pre-existing weeping tile from clogging in the future. (repeat as needed).

Vertical Drainage

Lakeview to install 4" vertical drainage connection to the weeping tile for _____ window wells. Includes removal and reinstallation of existing window well, **OR**, Includes removal, disposal and replacement of existing window well with a galvanized steel window well on the _____ wall measuring _____" W x _____" D x _____" P. **Lakeview** to excavate to the footing, waterproof the area directly under and at least 1 lineal foot to either side of the window well with Aquabloc 730-28 liquid rubber and Delta MS filtered drainage membrane and replace weeping tile. NOTE: **Lakeview** assumes no liability and does not warranty any pre-existing weeping tile from clogging in the future. (repeat as needed).

Weeping Tile Cleanouts

Lakeview to install 4" vertical drainage connection to the weeping tile with a 'Y' joint. NOTE: 'Y' joint connections will only allow inspection cameras to travel in one direction. Additional cleanouts may be required. NOTE: **Lakeview** Weeping Tiles Cleanouts are intended for inspecting and cleaning or maintaining the weeping tile system only. The **Lakeview** Lifetime Warranty will be waived if the

Weeping Tile Cleanouts are used for any other purpose such as draining eavestroughs or other water sources.

Sump Discharge Pipes

Lakeview to install _____ lineal feet of 1 1/2" ABS discharge pipe exiting the _____ wall of the building. **Lakeview** to install, (OR Customer declined), a FreezePro fitting and route _____ lineal feet of 4" PVC discharge pipe to _____.

Concrete

- **Lakeview** OR Customer to Remove

_ **Lakeview** OR Customer to Replace

Hot Asphalt

- **Lakeview** OR Customer to Remove

_ **Lakeview** OR Customer to Replace

Cold Asphalt

- **Lakeview** OR Customer to Remove

_ **Lakeview** OR Customer to Replace

Patio Slabs

- **Lakeview** OR Customer to Remove

_ **Lakeview** OR Customer to Replace

Deck

- **Lakeview** OR Customer to Remove

_ **Lakeview** OR Customer to Replace

Gravel Bed

- **Lakeview** OR Customer to Remove

_ **Lakeview** OR Customer to Replace

Shrubs

- **Lakeview** OR Customer to Remove

_ **Lakeview** OR Customer to Replace

Trees

- **Lakeview** OR Customer to Remove

_ **Lakeview** OR Customer to Replace

Fence

- **Lakeview** OR Customer to Remove
- _ **Lakeview** OR Customer to Replace

Fence Posts

- **Lakeview** OR Customer to Remove
- _ **Lakeview** OR Customer to Replace

A/C Unit

- **Lakeview** OR Customer to Remove
- _ **Lakeview** OR Customer to Replace

Storage Shed

- **Lakeview** OR Customer to Remove
- _ **Lakeview** OR Customer to Replace

Other

- **Lakeview** OR Customer to Remove
- _ **Lakeview** OR Customer to Replace

Waste Disposal Bin

Lakeview to place a steel waste bin on the _____. **Lakeview** assumes no responsibility for damages to the _____ surface resulting from placement or removal of the Waste Disposal Bin.

Lakeview Internal Drainage System Waterproofing

Lakeview to install ____ lineal feet of Internal Drainage System Waterproofing.

Lakeview to clean and inspect foundation walls for any voids or structural cracks. The defective areas are chiseled out and repaired with non-shrink hydraulic cement that expands when applied to gaps.

Concrete Work

Lakeview will remove and replace between 6" to 12" of concrete abutting the walls being waterproofed. NOTE: Additional charges may apply for concrete floor slabs greater than 4" thick.

DELTA MS Drainage Board

Lakeview to install DELTA MS brown **OR** black drainage membrane to ____ ft height. DELTA MS is a rugged, dimpled plastic membrane that is anchored to the foundation walls. DELTA MS prevents

groundwater from entering your basement by allowing it to pass directly to the weeping tile system and gravel bed under the floor.

Connecting to a Sump

Lakeview to connect the interior weeping tile to the sump. This will ensure proper drainage for the proposed interior waterproofing. **NOTE: Lakeview** recommends that a battery back up pump be installed with every sump system.

Connecting to Municipal Drains

Lakeview to connect the interior weeping tile to the municipal drain system. This will ensure proper drainage for the proposed interior waterproofing. **NOTE:** Regarding tying into pre-existing pipe connections to municipal drains: **Lakeview** will ensure that the connection to the municipal drain is clear at the time of installation. However **Lakeview** assumes no liability and does not warranty any pre-existing pipe connections from clogging in the future.

Connecting to the Drywell

Lakeview will install an internal weeping tile system that drains directly to the Drywell, (gravel drainage bed under the floor slab). **NOTE:** This repair is intended for minor seepage only. A connection to a sump or floor drain may be required. The **Lakeview** Lifetime (50 Year) Warranty applies ONLY if the proposed weeping tile system is connected to a sump or has a clear connection to a municipal drain.

Discharge Pipes

Lakeview to install _____ lineal feet of 1 1/2" ABS discharge pipe exiting the _____ wall of the building. **Lakeview** to install, (Customer declined), a FreezePro fitting and route _____ lineal feet of 4" PVC discharge pipe to _____.

Internal Drainage Systems in Crawlspace and Other Restricted Areas

Many homes are of a split level design, or feature crawlspaces versus full basements. The restricted height and access to these areas can limit the type of equipment used and impact the labour needed to complete the installation.

Type of foundation _____

Clearance _____

Concrete floor thickness _____

Total lineal footage _____

Maximum distance to access _____

An additional charge of \$ _____ per lineal foot will apply for internal drainage to be installed in _____.

Lakeview Crawlspace Encapsulation

Crawlspace Encapsulation is the term we apply to accomplishing four major goals in your crawlspace area:

Prevent Water Seepage and Flooding

Many crawlspaces take in groundwater from the foundation walls or under the soil. Similar to an Internal Drainage System, **Lakeview** will excavate and install an internal filtered 3" weeping tile at grade or beside the footing connected to a sump to drain groundwater from your foundation. Typically the weeping tile is connected to a sump. Your LAKEVIEW Representative will consult you on the best sump design and options.

Seal the Interior from the Earth and Outside Air

This is accomplished using two products: 1), once excavation, grading and weeping tile, (if necessary), have been completed, DELTA MS drainage board is laid down on the soil. This flexible, durable liner allows for drainage underneath and creates a solid, clean surface to work on. DELTA MS is also applied over the rigid insulation on the exterior walls to the ceiling joists, (see below), 2) Whitecap Membrane is then installed covering the DELTA MS board, (20mm on the floor and 6mm on the walls). Whitecap acts as a vapour barrier and provides a clean, white, durable surface for your crawlspace floor and walls.

Insulate Against Heat Loss and Air Infiltration

On completing the excavation, drainage system, (if required), grading and laying the DELTA MS on the floor **Lakeview** will install rigid 2" insulation on the exterior foundation walls, (some foundations with irregular surfaces such as stone will require a spray on insulation instead), and apply foam insulation in the rim joist cavities. This will prevent heat loss and reduce air infiltration into your crawlspace.

Condition and Dehumidify the Interior Air

Lakeview will install an Aprilaire Dehumidifier in your crawlspace draining into _____. Your Aprilaire will ensure a healthy relative humidity in your crawlspace, (and your entire home up to approx 4,000 sq ft). LAKEVIEW recommends an Aprilaire RH, (Relative Humidity), setting of 50%.

Existing Crawlspace Access and Excavation

Lakeview 's minimum working clearance, (the height between the floor and ceiling joists) in crawlspaces is 3ft, with minimum hatch or access dimensions of 30"H x 30"W. Your **Lakeview** Representative will discuss options toward creating these working conditions in your crawlspace or confined basement area.

Existing Access Location _____ Dimensions: Height _____" x Width _____"

Maximum Distance from Access Hatch _____ ft

Type of Foundation _____

Type of Floor _____

Existing Mimimum Clearance _____

Existing Average Clearance _____

Dimensions: Length _____ ft x Width _____ ft

Total Lineal Ft of Exterior Walls _____ ft

Total Sq Ft _____

Obstructions: _____, _____, _____, _____

Proposed Access Hatch

Lakeview proposes installation of a new ____ "H x ____ "W Crawlspace Access Hatch located _____ . This will include:

Proposed Excavation

Lakeview proposes removing approx _____ cubic yards of the existing floor and/or fill soil to create an average clearance of approx 3ft from floor to ceiling joists.

Structural Issues

Occasionally crawlspaces require structural work such as post and beam replacement or reinforcing the subfloor. Your **Lakeview** Representative will advise you of your options if structural work is required.

Lakeview Sump Systems

Sealed Sump Wells

Lakeview to install a durable plastic sump well with a sealed lid, (With OR Without perforated walls and surrounding filter cloth), located _____. NOTE: Occasionally plumbing or other obstacles under the floor obstruct the sump well installation at the proposed location. Your **Lakeview** Foreman or Representative will advise you of alternative solutions if this is the case.

Liberty 230 Series 1/3 hp Submersible Sump Pump

Lakeview to install a Liberty 230 Series 1/3 hp submersible pump. Key pump specifications:

Pumping Capacity: 2,100 US Gallons per hour, (discharging to an 8ft height))

Vortex style impeller permits passage of solids without clogging. Made of high temp engineered thermoplastic.

Polypropylene and powder coated aluminum construction.

Stainless steel rotor shaft.

All fasteners – non-corrosive stainless steel.

Oil-filled, hermetically sealed motors with thermal overload protection.

Permanently lubricated upper and lower bearings.

Quick-disconnect 10' standard power cord allows replacement of cord in seconds without breaking seals to motor.

Removable base allows suction down to 1/8"

3 Year Manufacture's Warranty, (from date of purchase), offered on Liberty Sump Pumps.

Battery Back Up Pump Systems

Lakeview to install a Battery Back Up Sump Pump Sytem. Key system specifications:

1/4hp Submersible Battery Powered Sump Pump

Charging Unit with audio alarm

90 Amp, 12V Deep Cycle Marine Battery with sealed plastic case.

TripleGuard Sump Systems

Lakeview to Install a Triple Guard sump system. Key system specifications:

Lakeview to install a durable plastic sump well with a sealed lid, (With OR Without perforated walls and surrounding filter cloth), located _____. NOTE: Occasionally plumbing or other obstacles under the floor obstruct the sump well installation at the proposed location. Your **Lakeview** Foreman or Representative will advise you of alternative solutions if this is the case.

Lakeview to install 2 (Two), Liberty 230 Series 1/3 hp submersible pump. Key pump specifications:

Pumping Capacity: 2,100 US Gallons per hour, (discharging to an 8ft height))

Vortex style impeller permits passage of solids without clogging. Made of high temp engineered thermoplastic.

Polypropylene and powder coated aluminum construction.

Stainless steel rotor shaft.

All fasteners – non-corrosive stainless steel.

Oil-filled, hermetically sealed motors with thermal overload protection.

Permanently lubricated upper and lower bearings.

Quick-disconnect 10' standard power cord allows replacement of cord in seconds without breaking seals to motor.

Removable base allows suction down to 1/8"

3 Year Manufacture's Warranty, (from date of purchase), offered on Liberty Sump Pumps.

LAKEVIEW to install a Battery Back Up Sump Pump Sytem. Key system specifications:

1/4hp Submersible Battery Powered Sump Pump

Charging Unit with audio alarm

90 Amp, 12V Deep Cycle Marine Battery with sealed plastic case.

FreezePro

FreezePro discharge pipe fittings ensure that the sump discharge pipe will continue to flow if the discharge pipe line directed away from the building clogs due to ice or other materials. Lakeview to install a FreezePro PVC fitting on the exterior of the sump discharge pipe. FreezePro fittings transition the 1 1/2" ABS pipe to 3" or 4" PVC pipe which is then buried or routed on grade away from the building. Minimum grade clearance is 16".

Sump Discharge Pipes

Lakeview to install _____ lineal feet of 1 1/2" ABS discharge pipe exiting the _____ wall of the building. LAKEVIEW to install, (Customer declined), a FreezePro fitting and route _____ lineal feet of 4" PVC discharge pipe to _____.

Lakeview Exterior Crack Repair

Excavation

Lakeview to waterproof ____ lineal feet of your foundation. We will excavate the soil surrounding your foundation to a depth of ___ ft, (depths may vary depending on the elevation of your property). The excavation cavity is typically 2 1/2ft to 3ft wide and for safety purposes will be shored to ensure the soil does not collapse inward. Excavated soil will be placed on tarps in the following locations:_____. On completion of the waterproofing installation the native soil will be backfilled into the excavation cavity and tamped down to the original grade level.

Wall Restoration

Lakeview to clean and inspect foundation walls for any voids or structural cracks. The defective areas are chiseled out and repaired with non-shrink hydraulic cement that expands when applied to gaps.

Aquabloc 730-28

Lakeview to trowel-apply Aquabloc 730-28 liquid rubber, which represents the main waterproofing component for your foundation. Aquabloc 730-28 is simply the best product available for sealing your foundation from ground water seepage, with specialized properties that allow it to expand if further settlement occurs. Two coats of Aquabloc 730-28 will be applied with a Aquabloc 730-28 polyester Reinforcing Sheet installed in between coats for a superior bond.

DELTA MS Drainage Board

Lakeview to install DELTA MS filtered drainage board. DELTA MS is a rugged, dimpled plastic membrane that is anchored to the foundation with the top edge fastened with a termination bar. DELTA MS protects the Aquabloc 730-28 sealant against damage from backfilling and creates a gap between the soil and the foundation wall for groundwater to pass directly to the weeping tile system.

Weeping Tile Systems

Lakeview to install a filtered 4" weeping tile pipe and clear 3/4" gravel drainage bed. **NOTE:** The **Lakeview** lifetime (50 Year) Warranty applies ONLY if the proposed weeping tile system is connected to a sump or has a clear connection to a municipal drain.

Connecting to a Sump

Lakeview to connect the exterior weeping tile via a 4" PVC pipe under or through the footing to a sump well in the interior of the building. This will ensure proper drainage for the proposed exterior waterproofing. **NOTE:** **Lakeview** recommends that a battery back up pump be installed with every sump system.

Connecting to Municipal Drains

Lakeview to connect the proposed exterior weeping tile to the municipal drain system. This will ensure proper drainage for the proposed exterior waterproofing. **NOTE:** Regarding tying into pre-existing pipe connections to municipal drains: **Lakeview** will ensure that the connection to the municipal drain is clear at the time of installation. However **Lakeview** assumes no liability and does not warranty any pre-existing pipe connections from clogging in the future.

Lakeview Internal Drainage Crack Repair

Lakeview to install ____ lineal feet of Internal Drainage Crack Repair.

NOTE: Finished walls ie: drywall, framing, flooring and insulation within 2 ft of either side of the crack must be removed for clear access. Customer/ **Lakeview** to remove _____. Customer/ **Lakeview** to replace _____.

Lakeview to clean and inspect foundation walls for any voids or structural cracks. The defective areas are chiseled out and repaired with non-shrink hydraulic cement that expands when applied to gaps.

Concrete Work

Lakeview will remove and replace between 6" to 12" of concrete abutting the walls being waterproofed.

DELTA MS Drainage Board

v to install DELTA MS gray **OR** black drainage membrane to ____ft height. DELTA MS is a rugged, dimpled plastic membrane that is anchored to the foundation walls. DELTA MS prevents groundwater from entering your basement by allowing it to pass directly to the weeping tile system and gravel bed under the floor.

NOTE: This repair is intended for minor seepage only. Additional waterproofing including a connection to a sump or floor drain may be required. The **Lakeview** Lifetime (25 Year) Warranty applies ONLY for Internal and External weeping tile systems that are connected to a sump or have a clear connection to a municipal drain.

Lakeview Crack Injection

Lakeview to inject the crack using a high pressure polyurethane resin.

NOTE: Finished walls ie: drywall, framing, flooring and insulation within 2 ft of either side of the crack must be removed for clear access. Customer/ **Lakeview** to remove _____. Customer/ **Lakeview** to replace _____.

Holes are drilled up the length of the crack about 2- 4 inches away from the crack spaced 6 to 8 inches apart. The drill holes are angled in towards the crack so the hole meets the crack approximately half way through the wall.

1/2 inch steel ports are then inserted and tightened into the holes.

An 18V high pressure gun is used to inject a two part polyurethane mixture into the crack from the bottom up. The crack is left open and the resin is allowed to flow out to reduce air bubbles.

The product will expand up to 20X its original volume and turn from a dark yellow liquid to a light yellow foam. This product can be used in the presence of water and moisture (which will actually accelerate the curing process). It will harden same day, however, the ports must not be touched for at least 3 months to ensure the product is fully cured inside of the wall.

Spillover will be removed and the floor protected with plastic to catch overflow. Please keep in mind that the area will be dusty with drilling, and any valuables in the area should be moved or covered and the furnace/ AC should be turned off during the installation.

The process takes between 1 and 2 hours for a typical crack.

NOTE: This repair is intended for minor seepage only. Additional waterproofing including a connection to a sump or floor drain may be required. The LAKEVIEW Lifetime (50 Year) Warranty applies ONLY for Internal and External weeping tile systems that are connected to a sump or have a clear connection to a municipal drain.

Thank you for choosing Lakeview Developments



Lakeview Developments

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