TRADECRAFT

Retaining wall

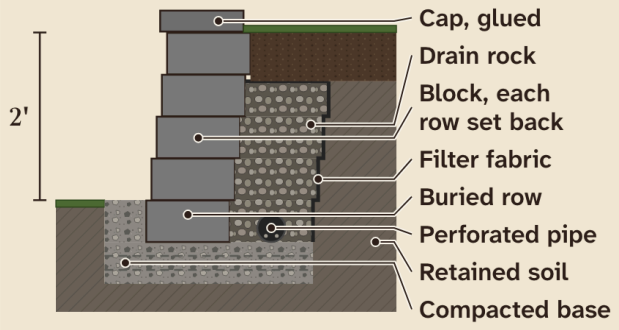
Straight block wall, 20' long, no load within 3' of the top. Colour not chosen yet.

DRAFT V0.3, PENDING INSTALLER REVIEW

THE STEPS ON VIDEO

3 RULES

1 Drain rock and pipe behind: water must get out.



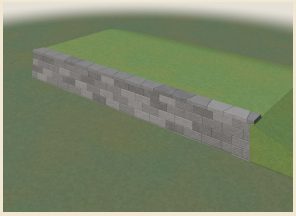
2 First row buried: it holds the foot of the wall.

3 Each row steps back: the wall leans into the hill.

KEY NUMBERS

4'	this job's limit; taller goes to an engineer
3' 6"	Mutual's maximum, buried row included
6"	compacted base, in layers
6"	first row buried
¾"	drain rock size

With clay behind it and no drain rock or pipe, the wall bulges after the first rains. You tear it down and rebuild it, unpaid. This wall, with its 6" buried row, stays under Mutual's maximum.



FINISHED LOOK

20'

ManorStone Tapered Cap 3×18 Split Face 15 whole, 1 cut; 0.2 pallets	16 pieces
ManorStone Straight Side Flat Split Face wall unit 6" × 16" × 12" 58 whole, 15 buried, 4 cut; 1.3 pallets	77 pieces
Concrete block adhesive, ⅜" bead (caulking gun)	10 linear ft
4" perforated drain pipe	20 linear ft

Also order: ¾" washed drain rock 1.5 yd³, ¾" minus base 1.25 yd³, filter fabric 59 ft², Garden soil mix 0.5 yd³

Colour not chosen yet

STOP AND CHECK

Outside this job. Don't build it this way.

- Height > 4'
- Total block > 3' 6": Mutual's maximum
- A load within 3' of the top: driveway, parking, a structure

This job's local rule: Many counties need a permit or an engineer above a set height. They also say where the pipe's water may go and how close to the property line you can build.

Hard-surface limit:

Water goes to:

Permit? yes / no

STEPS

1 Layout and trench

- Stakes and string: 20'
- Trench: 30" wide, 12" deep
- Pick the outlet before you dig

Check: Outlet marked: the pipe drains into the open at the end

2 Base

- 6" of base: crushed rock with fines
- Layers of 2", each one compacted
- A straight board strikes it flat

Check: Base level along the run and front to back

3 First row

- Buried 6" below finished ground
- Block against block, on the string
- Gap between blocks: ¼" max

Check: Every block level both ways

4 Drainage

- 4" pipe, holes down
- Falls 1" to the outlet
- Fabric against the soil, not the block

Check: The pipe falls to the outlet, never flat

5 Rows

- Pull each block: ¾" back per row
- Joints staggered 8", like brick
- Same end: full block, then half

Check: Every joint sits under a block's center

6 Fabric and caps

- Fabric folded, 8" of tight soil
- Caps glued, 1" past the face
- Soil falls ¼" per ft away from the wall

Check: No cap moves under your hand

THE 3 COSTLIEST MISTAKES

✕ Clay against the block, no drain rock or pipe	✕ All the backfill at the end: it settles	✕ Plate hard against the block: pushes rows out
✓ ¾" washed drain rock behind the block	✓ Backfill row by row, 8" max	✓ Plate in passes parallel to the wall

STAY SAFE

- Call 811 before you dig, it's free.
- To cut block, best practice is a wet saw or a saw with a vacuum, plus a mask, because silica dust damages your lungs. In many states the law calls for it; your job sheet shows your state's rule.
- Glasses, gloves and hearing protection. Feet clear of the plate. The saw goes on an outdoor cord with a GFCI.

Sources: Mutual Materials, ManorStone and cap sheet (MM-MS-2025). Retaining-wall knowledge base (KB). The cap overhang is the program's spec, because Mutual's sheet doesn't give one. Where sources differ (setback, pipe fall, backfill layer, compaction zone), the value printed is the one in the program's table; the setback is still to be confirmed with Mutual.

Educational content from the Manos de Oro program. Each Maestro is an independent contractor and manages the risks of their own work.