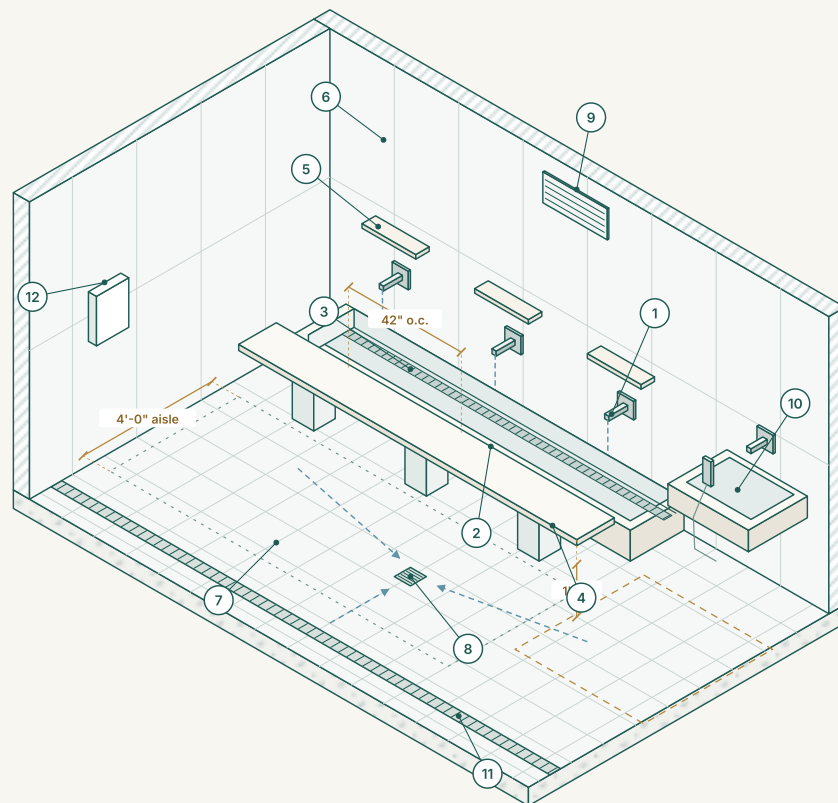


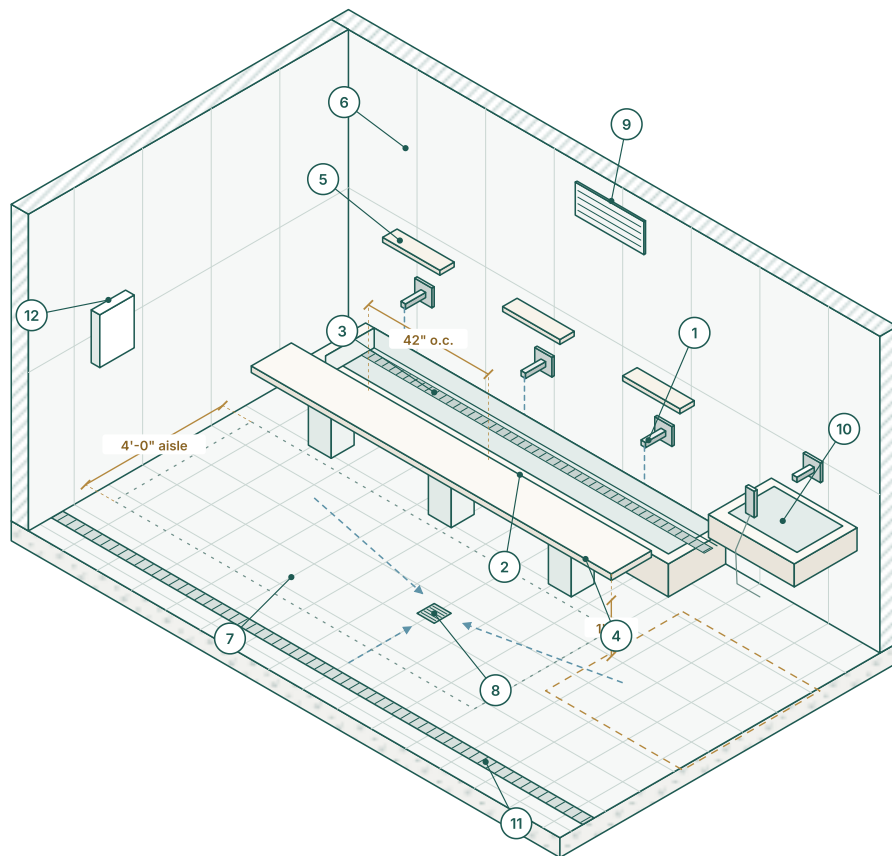


Wudu Area Design Guide

This room decides whether a masjid feels cared for. Most mold, standing water, stained grout and broken faucets start here. Almost all of it is designed in, not worn in.



What a good wudu room has



- | | |
|---|--|
| <p>① Wall-mounted faucet, sensor or metering, fed through a thermostatic mixing valve</p> <p>② Raised basin, curb at 10", floor sloped to drain, no flat spots</p> <p>③ Continuous linear drain at the back of the basin, removable grate</p> <p>④ Fixed seat, solid non-porous slab on narrow pedestals so the floor can be mopped underneath</p> <p>⑤ Shelf for watch, glasses and phone, above the splash line</p> <p>⑥ Waterproofed wall, tiled or slab-clad full height, membrane behind</p> | <p>⑦ Floor sloped $\frac{1}{4}$" per foot (2%) to drains</p> <p>⑧ Floor drain with trap primer so the trap never dries out and smells</p> <p>⑨ Exhaust grille: continuous ventilation with humidity boost</p> <p>⑩ Accessible station: counter-height basin, knee space, hand-held spray for feet, 30"×48" clear floor space</p> <p>⑪ Wet/dry threshold drain so water stops here, not on the prayer-hall carpet</p> <p>⑫ Towels or hand dryer at the dry end of the room</p> |
|---|--|

Why wudu rooms fail

Mold and black grout lines

CAUSE Cement grout soaks up water and soap. The fan only runs with the light, so the room never dries. The membrane has gaps at corners and pipes.

FIX Epoxy grout on every wet surface. Continuous exhaust with a humidity boost. A continuous, flood-tested membrane. In existing rooms, regROUT in epoxy and add a humidity-sensing fan.

Water everywhere

CAUSE Flat floors, or floors sloped the wrong way. One small drain in the wrong place. Feet washed at hand sinks. No threshold before the carpet.

FIX Seated stations with a raised basin. Floors sloped 2% to two or more drains. A threshold drain at the exit, then a dry zone with towels.

Stains and discoloration

CAUSE Hard-water scale and iron in the supply. Marble or limestone etched by soap. Rust from cheap fittings. Acidic cleaners used on stone.

FIX Non-porous porcelain or granite. Stainless 316 or chrome-plated brass fittings. Softened or conditioned water. pH-neutral cleaners only.

Faucets failing, tile cracking around them

CAUSE Home faucets in a commercial room. Pipe holes never sealed into the membrane. Scale clogging the valves. No way to reach a valve without breaking tile.

FIX Commercial metering or sensor faucets. Pipe-seal collars bonded to the membrane. Silicone, not grout, around every cover plate. Inline strainers and an access panel for every valve.

Smell

CAUSE Floor drains that are rarely used dry out and let sewer gas in. Damp grout and still air do the rest.

FIX Trap primers on floor drains. Continuous exhaust. Epoxy grout. Basin drains that are flushed every time a station is used.

Design principles

01 Wet path, then dry path

Shoes off → wudu → dry zone → prayer hall.
Nobody should walk back through the wet room,
and no wet floor should open straight onto carpet.

03 Nothing porous where water lands

No marble, limestone, travertine, wood, painted drywall or cement grout in the splash zone. They stain, etch, swell or grow mildew no matter how they are cleaned.

05 Waterproof first, finish second

Run a continuous membrane behind every wall and under every floor. Seal it at each pipe and drain. Flood-test it for 24 hours before any tile goes down.

07 Service from behind

Valves, sensors, solenoids and mixing valves go in a chase or behind access panels. If fixing a faucet means breaking tile, the faucet will stay broken.

09 Warm water, safely

Winter wudu with cold water empties the room. A thermostatic mixing valve delivers warm water and stops scalding.

02 Seat everyone

Seated stations are safer for elders, splash less, and keep feet out of hand basins. Standing foot-washing at a sink is the single biggest source of water on the floor.

04 Slope everything

Slope floors ¼" per foot (2%) to drains. Slope basin floors to their drain. No flat spots, and no pitch toward a door. Water that sits is water that stains.

06 Ventilate all the time

Exhaust that runs only with the light switch leaves the room wet for hours after each prayer. Run it continuously and boost it on humidity.

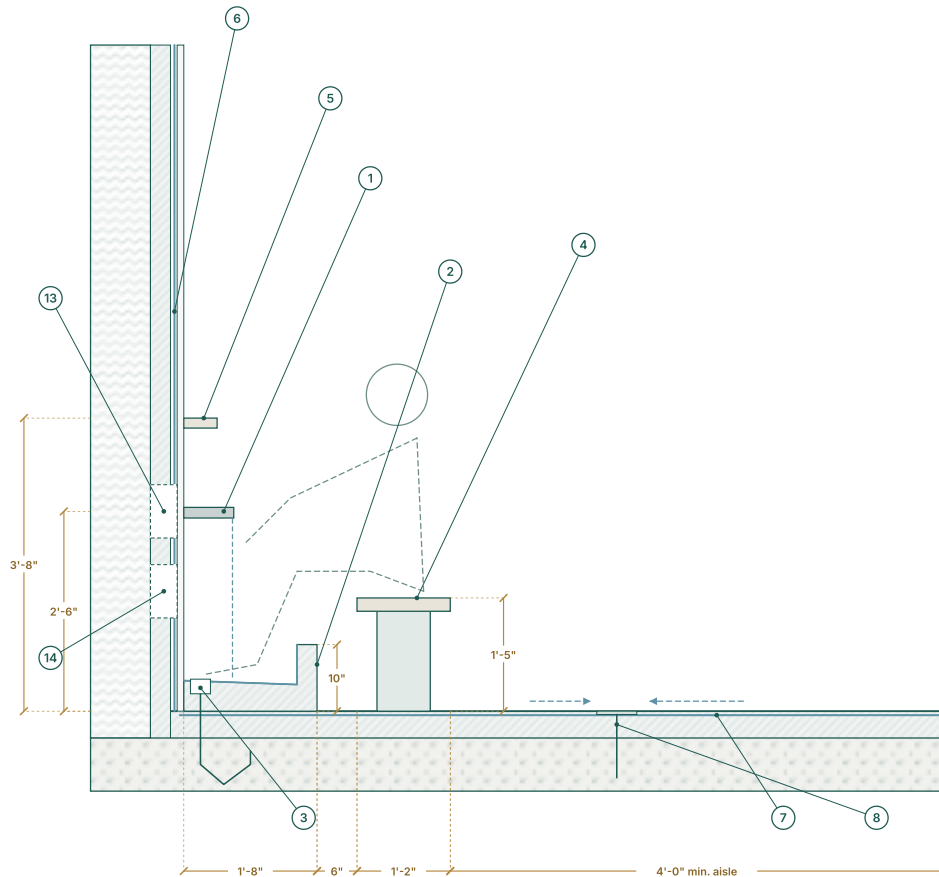
08 Treat the water

Hard water scales aerators, jams cartridges and leaves white crust on dark tile. Test hardness and soften or condition the wudu supply.

10 Plan for washdown

A hose bib, floor drains and a janitor sink next door turn daily cleaning into a 15-minute job.

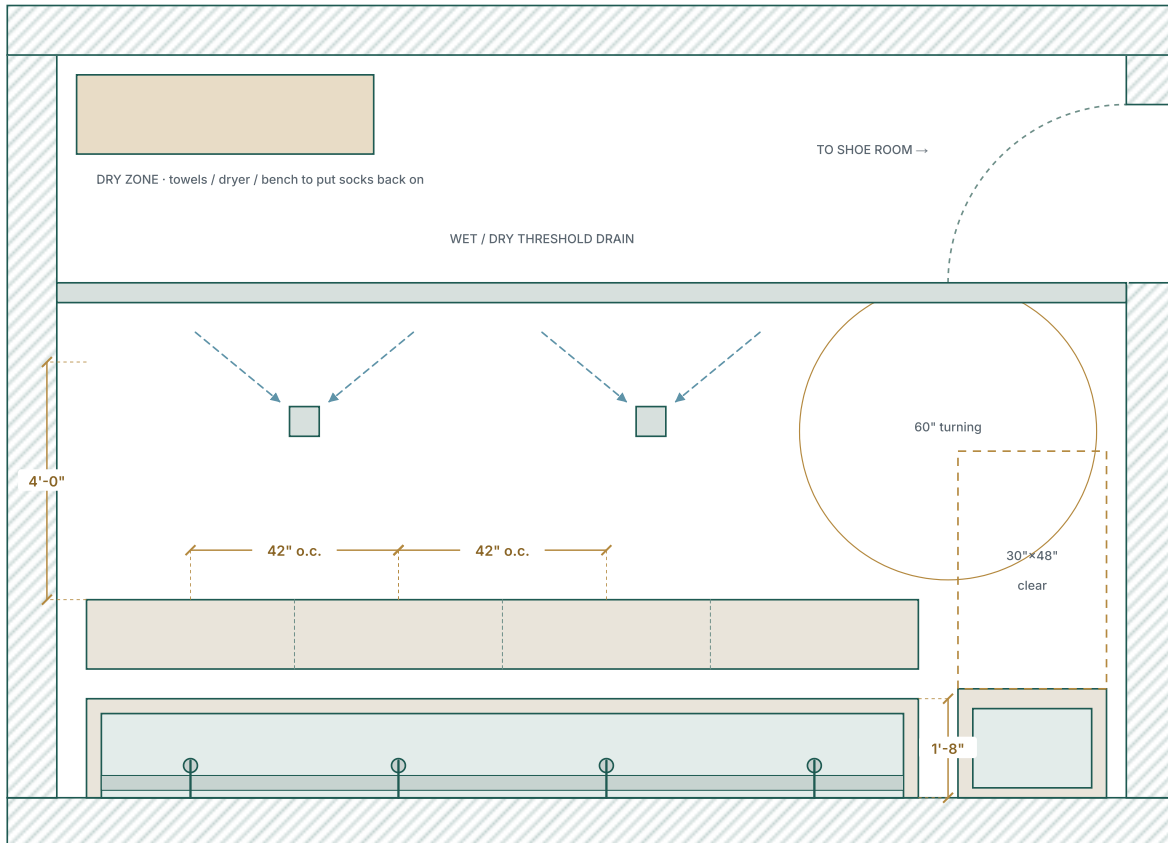
Section through one station



- | | |
|--|---|
| <p>① Faucet spout 7½" off the wall so water lands in the basin, not on the curb</p> <p>② Basin floor slopes to the back, toward the drain; curb at 10" is the foot rest</p> <p>③ Linear drain with a trap below the slab</p> <p>④ Seat at 17": knees clear the curb, feet reach the basin</p> <p>⑤ Shelf above the splash zone</p> | <p>⑥ Membrane runs continuous behind the wall finish, full height</p> <p>⑦ Membrane continuous under the floor finish and lapped up the wall and into the drain</p> <p>⑧ Room floor drain</p> <p>⑬ Valve or sensor box in the wall with an access panel from the other side</p> <p>⑭ Thermostatic mixing valve in an accessible box, not buried behind tile</p> |
|--|---|

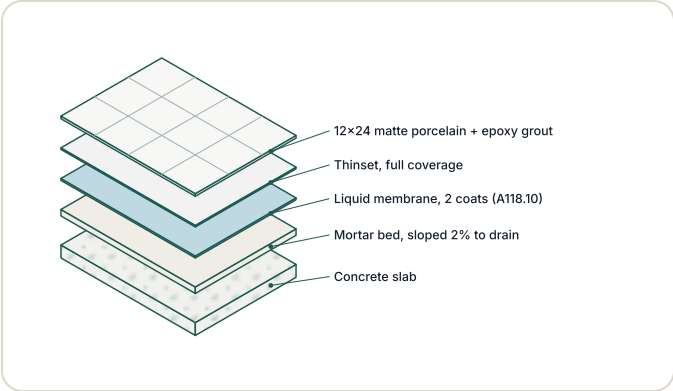
Plan

Stations at 42" on centre (36" minimum), 4'-0" clear aisle behind the seats, one accessible station with a 30"×48" clear floor space, floors sloped to two drains and a threshold drain before the dry zone.



Essential tier

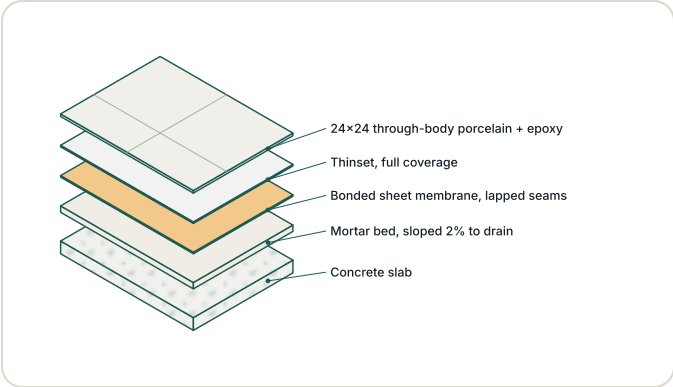
Durable, easy to clean, built from widely available commercial products. The right choice for most community masjids. **\$2,500 – \$4,500 per station** (planning range).



FLOOR FINISH	Unglazed or textured matte porcelain, 12×24 in the room and 2×2 mosaic in the basin so it follows the slope. Wet DCOF 0.42 minimum, aim for 0.55 or higher. Daltile Keystones unglazed mosaic
GROUT	100% solids epoxy grout on the floor, in the basin and on walls to at least 48". Never cement grout in the wet zone. Custom CEG-Lite epoxy grout
WATERPROOFING	Liquid-applied membrane meeting ANSI A118.10, two coats to full thickness, over cement board and the sloped mortar bed. Fabric at every corner. 24-hour flood test. Custom RedGard · Mapei Mapelastic AquaDefense
WALLS	Porcelain tile full height on the wet wall and returns. FRP panels are acceptable on walls outside the splash zone.
BASIN & CURB	Site-built concrete curb and basin, tiled in 2×2 porcelain mosaic, rounded bullnose edges, epoxy grout.
SEAT	Solid phenolic or solid-surface plank, 1" thick, on stainless pedestals. Rounded edges, no wood, no tiled bench tops.
FAUCETS	Wall-mounted metering push faucet in solid brass, vandal-resistant, cycle set to 10–15 seconds. Chicago Faucets · T&S Brass
WATER TEMPERATURE	One point-of-use thermostatic mixing valve (ASSE 1070) per bank of stations, set around 100°F. Watts LFMMV mixing valve
DRAINS	Tiled-in linear drain at the back of the basin; room floor drains with trap primers. Schluter KERDI-LINE-VARIO
VENTILATION	Ducted exhaust fan(s) with humidity sensor, running continuously at low speed and boosting on humidity. Panasonic WhisperGreen fans
CEILING	PVC ceiling panels or cement board with epoxy paint. Never standard acoustic tile or paper-faced drywall. Trusscore PVC panels
LIGHTING	Vapor-tight LED fixtures rated for wet locations (IP65).
WATER TREATMENT	Test hardness. Above 7 grains per gallon, soften or condition the water feeding the wudu room.

Standard tier

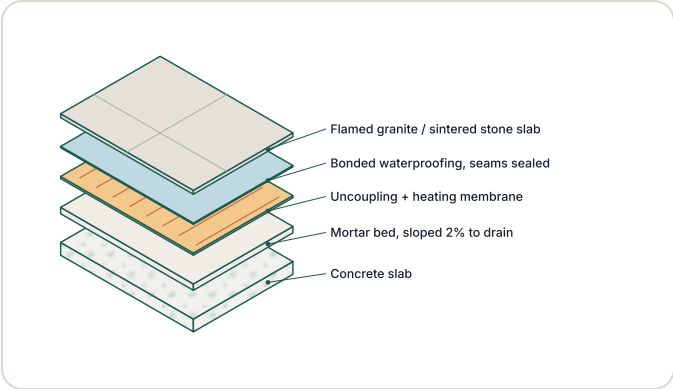
Fewer joints, a bonded sheet membrane, sensor faucets and serious ventilation.
Looks better at year ten than Essential does at year two. **\$5,000 – \$9,000 per station** (planning range).



FLOOR FINISH	Through-body (colour-body) porcelain 12×24 or 24×24, textured finish, wet DCOF 0.55 or higher. 2×2 mosaic of the same series in the basin. Chips do not show. Daltile commercial porcelain
GROUT	Premium epoxy grout on every wet surface, colour chosen one shade darker than the tile. Laticrete SpectraLOCK PRO · Mapei Kerapoxy CQ
WATERPROOFING	Bonded sheet membrane on foam or cement board walls, preformed corners, pipe seals at every penetration. 24-hour flood test. Schluter KERDI
WALLS	Large-format porcelain, 24×48, full height on all walls. Half the grout of 12×24.
BASIN & CURB	Quartz or solid-surface curb cap with eased edges over a waterproofed curb; basin floor in mosaic. Corian solid surface
SEAT	3 cm quartz or ½" solid surface on stainless pedestals, eased edges, slight fall to the front so it drains.
FAUCETS	Commercial wall-mounted sensor faucet, hardwired or battery, with the control box in the wall behind an access panel. Sloan sensor faucets · Zurn AquaSense
WATER TEMPERATURE	Thermostatic mixing valve per bank plus a recirculating hot-water loop, so warm water arrives in seconds. Watts LFMMV mixing valve
DRAINS	Stainless linear drain with removable grate and hair basket in each basin; trap primers on floor drains; threshold drain at the exit. Schluter KERDI-LINE
VENTILATION	Dedicated ducted exhaust sized for about 10–12 air changes per hour, continuous with humidity boost, make-up air drawn from the shoe room. Keep RH under 60%.
CEILING	Aluminium linear ceiling or PVC panels with access hatches over valves and fans.
LIGHTING	IP65 linear LED, around 30 foot-candles, 3500K, plus emergency lighting.
WATER TREATMENT	Softener or salt-free scale conditioning on the wudu supply, with inline strainers before every faucet.

Premium tier

Near-jointless stone, stainless basins and heated floors that dry in minutes. A dehumidified room that never smells damp. **\$10,000 – \$18,000+ per station** (planning range).



FLOOR FINISH	Flamed or bush-hammered granite, or sintered stone with an anti-slip finish, in large slabs. Electric or hydronic floor warming so the floor dries between prayers. Dekton (Cosentino) · Schluter DITRA-HEAT
GROUT	Very few joints. Epoxy grout where joints exist, colour-matched silicone at every change of plane.
WATERPROOFING	Bonded sheet membrane, all seams and penetrations sealed, 72-hour flood test witnessed by the architect.
WALLS	Sintered stone or porcelain slab panels, up to 5×10 ft, so the wet wall has almost no joints. Neolith · Dekton (Cosentino) .
BASIN & CURB	Fabricated 316 stainless trough with an integral sloped bottom and drain, or a honed granite basin cut from solid.
SEAT	Solid honed granite seats or individual stone stools with divider fins between stations.
FAUCETS	Self-powered or hardwired premium sensor faucets, preset temperature, in a full-height service chase behind the wet wall. TOTO commercial faucets
WATER TEMPERATURE	Digital mixing valve with remote monitoring and a recirculating hot-water loop.
DRAINS	Drain integral to the stainless trough; stainless slot drains at the threshold; trap primers throughout.
VENTILATION	Dedicated outdoor air with dehumidification and energy recovery, RH sensors and an alarm. The room should never feel damp.
CEILING	Aluminium baffle or linear metal ceiling with integrated light coves and access panels.
LIGHTING	IP65 cove and linear lighting, dimmable, with emergency lighting.
WATER TREATMENT	Central softening and filtration, leak detection with automatic shut-off on the wudu supply.

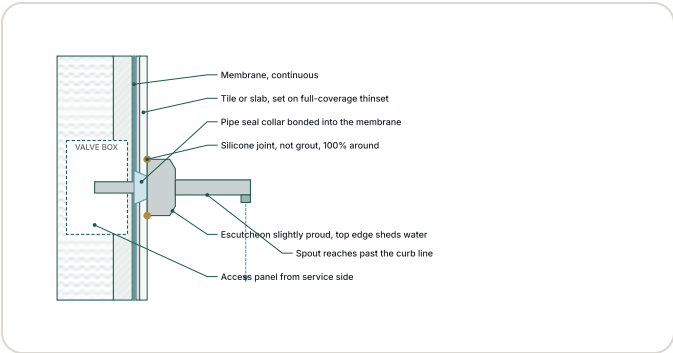
All three tiers

	ESSENTIAL	STANDARD	PREMIUM
FLOOR FINISH	Unglazed or textured matte porcelain, 12×24 in the room and 2×2 mosaic in the basin so it follows the slope. Wet DCOF 0.42 minimum, aim for 0.55 or higher.	Through-body (colour-body) porcelain 12×24 or 24×24, textured finish, wet DCOF 0.55 or higher. 2×2 mosaic of the same series in the basin. Chips do not show.	Flamed or bush-hammered granite, or sintered stone with an anti-slip finish, in large slabs. Electric or hydronic floor warming so the floor dries between prayers.
GROUT	100% solids epoxy grout on the floor, in the basin and on walls to at least 48". Never cement grout in the wet zone.	Premium epoxy grout on every wet surface, colour chosen one shade darker than the tile.	Very few joints. Epoxy grout where joints exist, colour-matched silicone at every change of plane.
WATERPROOFING	Liquid-applied membrane meeting ANSI A118.10, two coats to full thickness, over cement board and the sloped mortar bed. Fabric at every corner. 24-hour flood test.	Bonded sheet membrane on foam or cement board walls, preformed corners, pipe seals at every penetration. 24-hour flood test.	Bonded sheet membrane, all seams and penetrations sealed, 72-hour flood test witnessed by the architect.
WALLS	Porcelain tile full height on the wet wall and returns. FRP panels are acceptable on walls outside the splash zone.	Large-format porcelain, 24×48, full height on all walls. Half the grout of 12×24.	Sintered stone or porcelain slab panels, up to 5×10 ft, so the wet wall has almost no joints.
BASIN & CURB	Site-built concrete curb and basin, tiled in 2×2 porcelain mosaic, rounded bullnose edges, epoxy grout.	Quartz or solid-surface curb cap with eased edges over a waterproofed curb; basin floor in mosaic.	Fabricated 316 stainless trough with an integral sloped bottom and drain, or a honed granite basin cut from solid.
SEAT	Solid phenolic or solid-surface plank, 1" thick, on stainless pedestals. Rounded edges, no wood, no tiled bench tops.	3 cm quartz or ½" solid surface on stainless pedestals, eased edges, slight fall to the front so it drains.	Solid honed granite seats or individual stone stools with divider fins between stations.
FAUCETS	Wall-mounted metering push faucet in solid brass, vandal-resistant, cycle set to 10–15 seconds.	Commercial wall-mounted sensor faucet, hardwired or battery, with the control box in the wall behind an access panel.	Self-powered or hardwired premium sensor faucets, preset temperature, in a full-height service chase behind the wet wall.

All three tiers

	ESSENTIAL	STANDARD	PREMIUM
WATER TEMPERATURE	One point-of-use thermostatic mixing valve (ASSE 1070) per bank of stations, set around 100°F.	Thermostatic mixing valve per bank plus a recirculating hot-water loop, so warm water arrives in seconds.	Digital mixing valve with remote monitoring and a recirculating hot-water loop.
DRAINS	Tiled-in linear drain at the back of the basin; room floor drains with trap primers.	Stainless linear drain with removable grate and hair basket in each basin; trap primers on floor drains; threshold drain at the exit.	Drain integral to the stainless trough; stainless slot drains at the threshold; trap primers throughout.
VENTILATION	Ducted exhaust fan(s) with humidity sensor, running continuously at low speed and boosting on humidity.	Dedicated ducted exhaust sized for about 10–12 air changes per hour, continuous with humidity boost, make-up air drawn from the shoe room. Keep RH under 60%.	Dedicated outdoor air with dehumidification and energy recovery, RH sensors and an alarm. The room should never feel damp.
CEILING	PVC ceiling panels or cement board with epoxy paint. Never standard acoustic tile or paper-faced drywall.	Aluminium linear ceiling or PVC panels with access hatches over valves and fans.	Aluminium baffle or linear metal ceiling with integrated light coves and access panels.
LIGHTING	Vapor-tight LED fixtures rated for wet locations (IP65).	IP65 linear LED, around 30 foot-candles, 3500K, plus emergency lighting.	IP65 cove and linear lighting, dimmable, with emergency lighting.
WATER TREATMENT	Test hardness. Above 7 grains per gallon, soften or condition the water feeding the wudu room.	Softener or salt-free scale conditioning on the wudu supply, with inline strainers before every faucet.	Central softening and filtration, leak detection with automatic shut-off on the wudu supply.
PLANNING COST	\$2,500 – \$4,500 per station	\$5,000 – \$9,000 per station	\$10,000 – \$18,000+ per station

Faucet penetration



Never use in a wudu area

- **Marble, limestone, travertine** Soft, porous, etched by soap. Stains permanently.
- **Polished or glazed glossy floor tile** Slippery when wet. A fall risk for elders.
- **Cement grout in the wet zone** Absorbs water, turns black, cracks.
- **Painted or paper-faced drywall** Grows mold behind the paint.
- **Wood seats, benches or trims** Swells, rots, splinters.
- **Residential faucets** Not built for hundreds of cycles a day.
- **Acoustic ceiling tile** Sags and grows mildew in humid air.
- **One small centre drain** Water never reaches it from the corners.

Maintenance schedule

DAILY	Squeegee floors toward drains after Fajr, Dhuhr and Isha; refill towels; wipe shelves.
WEEKLY	Lift and clean drain grates and hair baskets; wash floors with a pH-neutral cleaner.
MONTHLY	Check every faucet runs, shuts off and delivers warm water; clean aerators; test trap primers.
QUARTERLY	Inspect grout and silicone joints; replace any silicone that has lifted or discoloured.
YEARLY	Service mixing valves and softener; clean exhaust fans and ducts; descale fittings.

Checklist

- ☐ Stations sized for Jumu'ah peak, separate rooms for men and women, one accessible station in each
 - ☐ Route runs shoe room → wudu → dry zone → prayer hall, never back through the wet room
 - ☐ Seat 17", curb 10", spout 30" with 42" spacing confirmed on the drawings
 - ☐ Floors sloped 2% to at least two drains; threshold drain at the exit; trap primers specified
 - ☐ Continuous waterproofing membrane on all walls and floors, pipe seals at every penetration
 - ☐ Flood test (24 h minimum) witnessed and recorded before tile
 - ☐ Epoxy grout specified for every wet surface; no marble, limestone, travertine or wood
 - ☐ Slip-resistant floor, wet DCOF 0.42 minimum (0.55+ preferred), documented on the submittal
 - ☐ Commercial faucets with access panels to every valve, sensor box and mixing valve
 - ☐ Thermostatic mixing valve (ASSE 1070) and warm water within seconds
 - ☐ Continuous exhaust with humidity boost, RH under 60%; no acoustic ceiling tile
 - ☐ Water hardness tested; softening or conditioning on the wudu supply where needed
 - ☐ Hose bib, janitor sink and squeegees planned for daily washdown
-

About this guide. Written and drawn by Abdullah Gerasimov, Licensed Texas architect, Texas Board of Architectural Examiners #31455, Temelar – Commercial Architecture. It is general design guidance, not a construction document. Plumbing, accessibility, ventilation and waterproofing requirements vary by jurisdiction: confirm every dimension, product and detail with your local code official and a licensed architect or engineer before construction. Products are named as examples of the right type, not endorsements; cost ranges are rough 2026 U.S. planning figures.

Need help? ag@temelar.com · 713-391-4533 · themasjidmanual.com