

Tile Floor Heating:
System Selection & Layout Planning

What We're Covering Today

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The WarmlyYours Advantage

SmartPlans™, 24/7 support, and the No Nonsense™ Warranty

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Coverage Strategy & Clearance Rules

Defining the heat goal, NEC "No-Heat" zones, perimeter strategy & thermostat location planning

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System Selection: Mat, Rolls vs. Cable

Easy Mats, Flex Rolls, Custom Mats, or Cable. choosing the right delivery.

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Mastering the Layout: Transitions & Tricky Rooms

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Live Q&A

Open floor for project-specific troubleshooting and sizing calculations.

The WarmlyYours Advantage

Experience the unparalleled benefits of partnering with WarmlyYours for your radiant heating projects.



Custom SmartPlans™

Send us your sketch, and we'll provide a custom, to-scale installation plan showing exact routing. No guesswork, with a rapid 1-day turnaround.



24/7 Tech Support

Troubleshoot right from the job site with our expert team. We're available even early mornings and late weekends to assist you.



No Nonsense™ Warranty

Our comprehensive warranty covers the heating element, floor covering, and labor costs to replace it if there's a manufacturing defect.

THE BIG IDEA

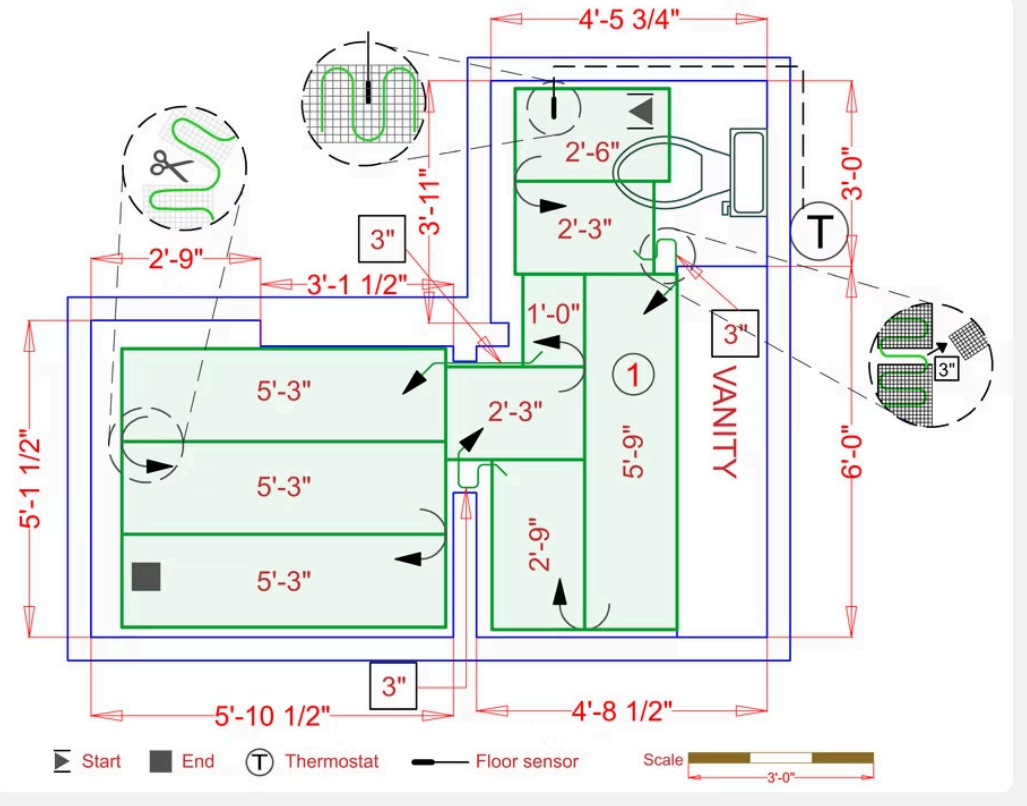
The Big Idea: Selection + Layout Drive Performance

90%

of heat complaints aren't system failures — they're PLANNING failures.

Most complaints come down to coverage gaps and spacing decisions made in the moment. The fix isn't a better system — it's a BETTER PLAN.

Plan first. Never design in the thinset.



COVERAGE STRATEGY

CLEARANCE RULES

Coverage Strategy & Clearance Rules

> Defining the heat goal and NEC "No-Heat" zones.



COVERAGE STRATEGY

Step 1: Define the Heat Goal

Effective floor heating starts with identifying where warmth is most needed. Focus on areas where foot traffic is high and direct contact with the floor is common.

Identify Comfort Zones

- Target **High-Traffic Areas**: vanity, sink, entry path, and shower entries.
- Implement **Targeted Coverage**: avoid heating under fixed cabinets, tubs, or furniture where the warmth won't be felt, saving energy and cost.
- Radiant floor systems don't have to be just a supplemental luxury. With proper room insulation and correct sizing, floor heating can efficiently serve as the **sole heat source for the entire space**.

Room-by-Room Priorities

- **Bathroom:** focus on vanity, shower entry, and toilet area.
- **Kitchen:** prioritize in front of the sink and main prep areas.
- **Entryways:** cover the front door landing zone where cold air is most noticeable.
- **Mudrooms:** support the spots where shoes come off and people pause.

Think in Zones, Not Rooms

- Break large rooms into functional zones based on how the space is actually used.
- Consider occupant movement patterns so heat is placed where people stand, not where they only pass through.
- Prioritize stationary areas, since comfort matters most when someone is lingering in one place.

Comfort vs. Full Coverage

- **Full coverage** maximizes warmth and creates more uniform floor temperatures.
- **Partial coverage** reduces cost while still targeting the areas that matter most.
- **PRO tip:** aim for **80%+ coverage** in bathrooms for best results.

PRO Tip: Heating Element only heats 1.5" radius. Plan spacing accordingly to avoid cold spots between cable runs.

COVERAGE STRATEGY

Step 2: Mark No-Heat Zones

Precise planning of "no-heat" zones is critical to prevent system damage, ensure safe operation, and comply with building codes.

Fixed Fixtures

Never install heating elements directly under permanent fixtures such as kitchen cabinet bases, vanities, or refrigerators. Trapped heat can damage the system or floor, and it violates NEC code.

Toilet Footprint

Maintain a minimum clearance of 4" from the toilet's wax ring. Heating the flange can cause the wax seal to melt, leading to leaks and potential water damage.

Structural Joints

Under no circumstances should heating cables or mats cross a structural expansion joint. The heating system must stop on one side and restart on the other to accommodate building movement.

Penetrations & Floor Vents

- **3-inch Buffer:** Maintain 3" clearance around plumbing drains or conduits to prevent nicks during fixture trim-out.
- **HVAC Vents:** Never run elements over or inside registers. Keep the heating element 2" away.
- **Drill Zones:** Identify areas for door stops or glass channels. Ensure no wire in these "mechanical" zones.
- **Coordinate Early:** Account for shower drain footprints before thinset is applied to maintain waterproofing integrity.

⚠️ Always verify local code requirements before finalizing your layout. NEC is the floor, not the ceiling.

DESIGN CONSIDERATIONS

Thermostat Placement: Key Considerations

The thermostat location isn't just about convenience; it's a critical design driver that impacts system layout, performance, and code compliance.

Accessible & Central

Ensure the thermostat is conveniently located and accurately reflects the temperature of the primary heated zone for optimal comfort and control.

Electrical Source Dictates Layout

The proximity of a viable electrical circuit significantly influences the heating system's layout, often requiring strategic planning for optimal wire routing.

Cold Lead Length Constraint

Heating systems come with standard cold lead lengths (typically 12-15 feet). This constraint is critical in determining optimal placement of the heating element and thermostat junction box.

Design Driver

The chosen thermostat location directly dictates product placement and influences the overall design strategy, ensuring efficient and effective radiant heat coverage.





SYSTEM SELECTION

Mat, Rolls vs. Cable

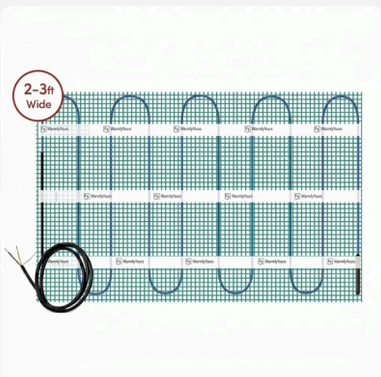
Easy Mats, Flex Rolls, Custom Mats, or Cable. Choosing the right delivery.

SYSTEM SELECTION

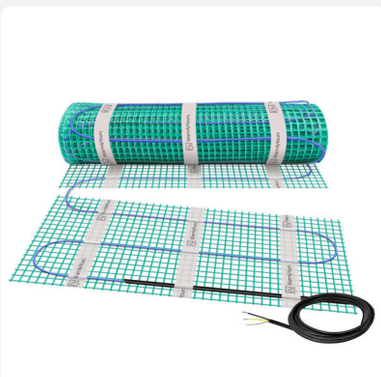
Mat & Roll Formats: Tailored Solutions

WarmlyYours offers two professional-grade mat formats, each optimized for different project requirements and room geometries, providing flexibility and precision for every installation.

Targeted Spot Heating



Large Field Coverage



TempZone™ Easy Mats

Designed for specific high-traffic zones like vanities, kitchen sinks, or toilet areas.

- **Drop-In Ready:** No cutting or turns required.
- **Small Footprints:** Fixed sizes for precise 15W comfort.
- **Speed:** Install in under 5 minutes per mat.

TempZone™ Flex Rolls

The standard for full-floor coverage in rectangular master baths or open living spaces.

- **Cut & Turn:** Mesh-backed rolls for scalable layout.
- **Continuous Run:** Minimize cold leads and splices.
- **Predictable:** Factory spacing ensures even heat.

PRO Core Technology: Both formats utilize the same 3" spacing and ultra-thin TempZone™ heating cable. The choice is purely driven by your **SmartPlan™** heated area geometry.

SYSTEM SELECTION

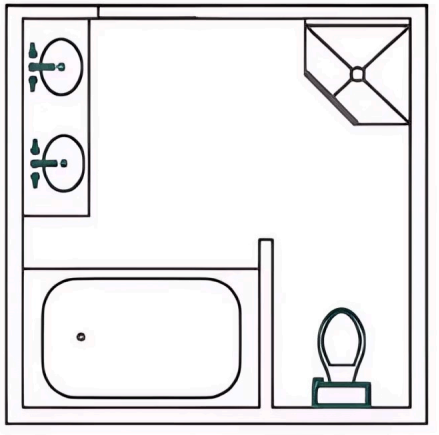
Custom Mats

White-Glove Precision

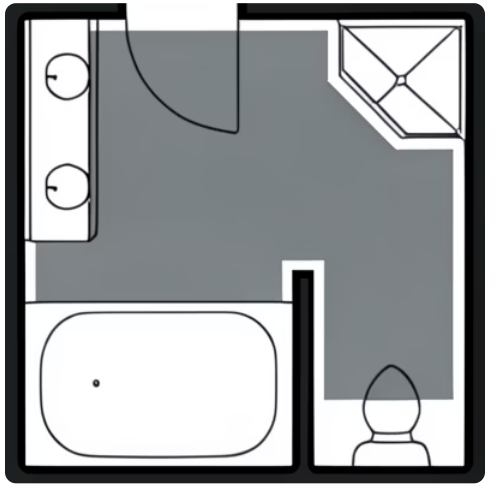
WarmlyYours **Custom Mats** are precision-built to your **SmartPlan**™. They're the right choice for complex rooms when the PRO needs a perfect fit with zero on-site modification.

- **Plans must be exact** — down to the inch.
- **Thermostat placement is non-negotiable.**
- **Zero field modifications allowed.**

Create Floor Plan



Determine Heat Area



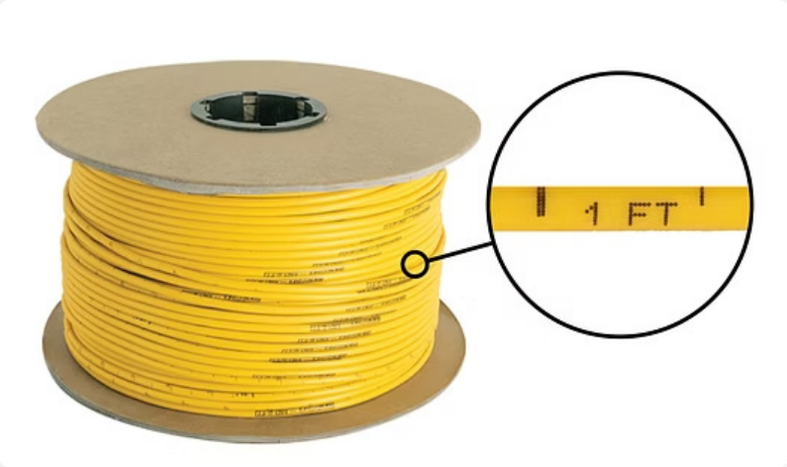
TempZone Custom Mat



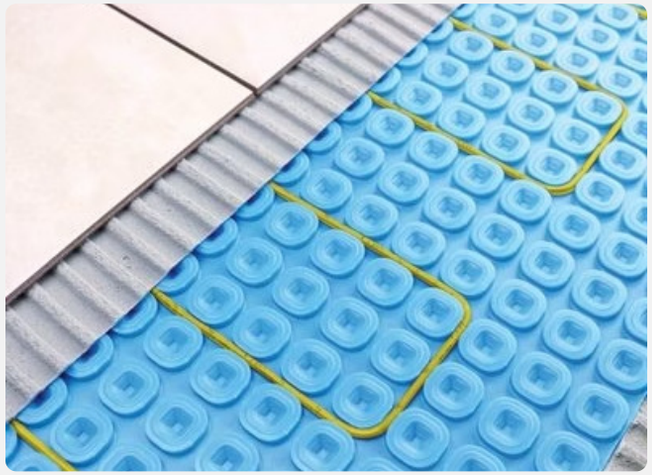
SYSTEM SELECTION PRO EXCLUSIVE

Ruler Cable: Precision Layout & Output

WarmlyYours Ruler Cable is engineered to provide unparalleled precision in installation and superior heat output, streamlining your projects and enhancing client satisfaction.







Built-in Hash Marks

Integrated 1/2", 1", and 1 ft markings eliminate the need for tape measures, significantly reducing layout time and ensuring consistent spacing.

High Heat Output

Achieve 15 W/sq ft performance for rapid warm-up times, especially crucial for challenging installations like concrete slabs or areas with high heat loss.

Two Installation Methods

Grip Strips: Easy to adjust cable distance for custom heat output.

Prodeso Membrane: Lay tile immediately—no waiting for self-leveling concrete to dry

RULER CABLE FEATURES

Hidden Feature 1: Liability Shield

Ruler Cable's advanced construction offers unparalleled protection, safeguarding both the installation and your reputation.



110% Spiral Shielding

A full-length Al-Mylar wrap provides armored protection and near-zero EMF for the client. The generous overlap ensures no "leakage" in the shield, maintaining consistent safety and performance.



Tinned Copper Drain Wire

This specialized drain wire resists corrosion even in highly alkaline thinset and mortar. It ensures instant GFCI tripping if the cable is ever damaged during installation, providing immediate fault detection and safety.

> **The PRO "Why":** Instant fault detection protects your reputation. Most cables have gaps in the shield; Ruler Cable is sealed, grounded, and armored. Tinned copper ensures a 25+ year lifespan, minimizing callbacks and maximizing client satisfaction.

RULER CABLE FEATURES

Hidden Feature 2: The Safety Margin

Ruler Cable's superior ETFE insulation provides an unmatched safety margin, ensuring extreme durability and peace of mind for both installer and client.

ETFE Insulation

150°C Rating

Engineered for extreme durability and chemical resistance in the harshest environments.

Standard Cables

~105°C Rating

Typically use XLPE, which has a lower temperature threshold and reduced resilience.



High Flexibility

Eliminates "coiled memory," allowing the cable to lay flat and route easily, significantly reducing installation time and frustration.



Extreme Safety Margin

The 150°C rating prevents overheating failure and guarantees a 25+ year lifespan, minimizing potential callbacks.



Thinset Resistance

ETFE's robust chemistry resists aggressive thinset additives, preventing degradation and maintaining cable integrity over decades.

RULER CABLE FEATURES

Spacing vs. Heat Output

Ruler Cable's precise spacing options allow PROs to fine-tune heat output for specific project needs, ensuring optimal comfort and energy efficiency.

1	2	3
3" Spacing **~15 W/sq ft** For high-performance applications like concrete slabs or zones with significant heat loss. Delivers faster warm-up times.	**4" Spacing** **~11.1 W/sq ft** The standard spacing, ideal for most moderate comfort heating projects. Balances warmth with energy consumption.	**5" Spacing** **~9 W/sq ft** Lower output option, best suited for well-insulated upper floor rooms where less supplemental heat is required.

Utilize this formula to calculate the total wattage required for your heated area, ensuring precise system design.

PRO Insight: Selecting the correct spacing isn't just about comfort; it's about optimizing system performance and preventing callbacks. Work with your WarmlyYours SmartPlan™ to determine the ideal spacing for each zone.

SYSTEM SELECTION

Mat, Roll vs Cable — Quick Pick

Choosing the optimal heating element depends on various factors, from room geometry to desired heat output. This framework helps PROs quickly identify the best system format for each unique project scenario.

System Format	Ideal Project Scenario	PRO Benefit
Easy Mats	Targeted spot heating (Vanities, toilets, small areas)	Fastest install, no cutting or turns
Flex Rolls	Large, open rectangular fields	Predictable "Cut & Turn" simplicity
Custom Mats	High-value, complex room geometries	Zero on-site mods, exact SmartPlan fit
Ruler Cable (PRO Exclusive)	Angles, obstacles, high-output (15W) targets	Surgical precision & output control

Refer to your project's SmartPlan for detailed guidance on element placement and optimal coverage.

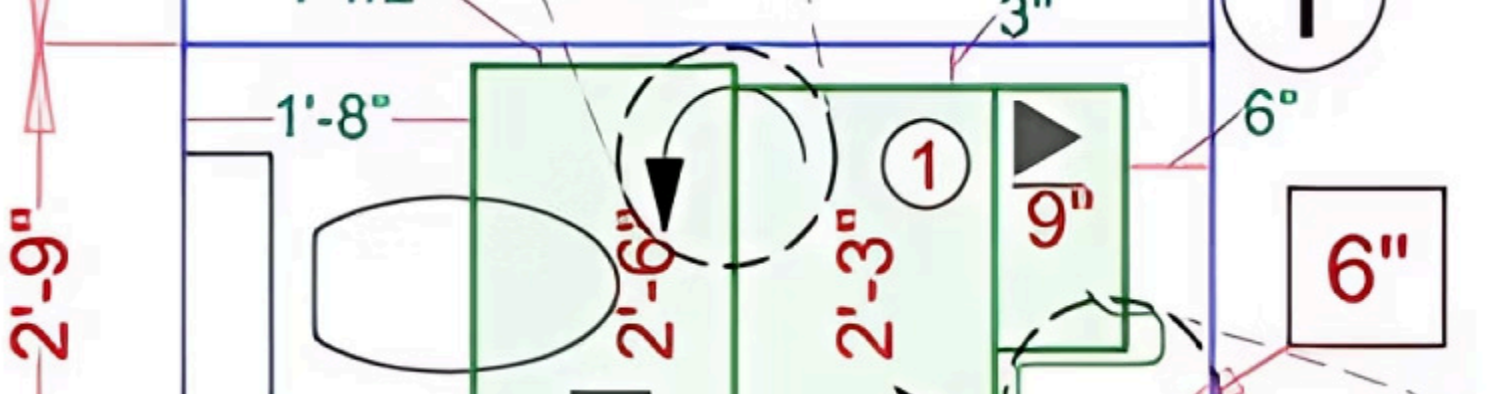
PRO Tip: Every connection is a potential failure point. Keep it simple — fewer connections = fewer callbacks.

MASTERING THE LAYOUT

Transitions & Tricky Rooms

Obstacles, factory splices, and design options





MASTERING THE LAYOUT

Universal Layout Rules

Adhering to these fundamental principles will ensure a flawless installation, optimal performance, and minimize costly rework.

Prioritize Zones

Focus on vanities, sinks, and paths first. Maximize comfort where it's felt most, ensuring client satisfaction.

Consistent Spacing

Avoid bunching near obstacles. Uniformity is crucial for even heat distribution.

Voltage Check

CRITICAL: Confirm 120V vs 240V matches the product label **before** mixing thin-set to prevent irreparable mistakes.

Don't Force Tail

If you have 10% excess cable, redesign the layout. Never cut or alter the heating wire, as this invalidates the warranty.

Lead Protection

Plan cold lead routing early. Avoid pinch points or sharp turns that can damage leads during subsequent trades or installation.

Expansion Joints

Never cross a structural expansion joint.

DESIGN OPTIONS

Design Options: We Do It for You vs. DIY Tools

WarmlyYours offers flexible design assistance, whether you prefer our expert team to handle the layout or wish to utilize our intuitive DIY online tools.

WarmlyYours Layout Support

Expert Confirmation

Our team confirms the optimal system and accessories for your specific application, ensuring peak performance and efficiency.

Backed by Experience

Leverage over 26 years of industry expertise and insights from more than 600,000 completed designs, ensuring a flawless layout every time.

Our PRO technical support team is always available to assist with complex projects or provide guidance throughout the design process.

DIY Tool (Instant Quote + Layout)

Online Design Tool

Our user-friendly online tool allows you to instantly generate a quote and create your own floor heating layout with ease.

Immediate Results

Get real-time cost estimates and visual layouts, helping you quickly plan and budget for your heating project.

Access the Online Design Tool Here

PRO Tip: For projects with complex geometries or unique requirements, our **"We Do It for You"** service can save significant time and ensure accuracy, leveraging our extensive experience.

DIY TOOLS

Floor Plan Finder: Compare Mat vs. Cable + Costs

Our interactive Floor Plan Finder allows PROs to quickly visualize and compare different heating solutions and their associated costs, streamlining the quoting and decision-making process for your clients.

PRO Insight: Leveraging the Floor Plan Finder not only saves you time in design and quoting but also empowers your clients with clear visual and financial comparisons, boosting their confidence in your recommendations.

Visual Layouts

See side-by-side floor plan renderings for both mat and cable systems, allowing for direct comparison of coverage and placement.

Product Cost Analysis

Instantly generate estimated product costs for both heating options, helping you present clear pricing to your clients.

Operating Cost Projections

Gain insights into estimated energy consumption and long-term operating costs, a valuable selling point for clients focused on efficiency.

Access the tool here: warmlyyours.com/en-US/floor-heating-floor-plans





LIVE Q&A

Now let's open it up for your questions.

> How long does radiant floor heating take to warm up?

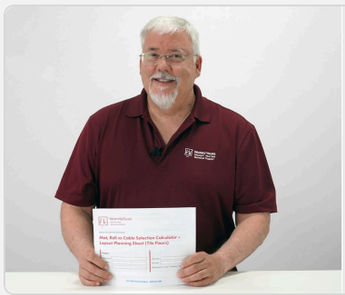
CLOSE + SUPPORT

Resources Coming Your Way

Via email:

- ✅ PDF of today's slides
- ✅ (printable)
- ✅ PRO Reward coupon
- ✅ Recording of this webinar

Watch Scott's Monthly PRO How-To



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Pro-Level Radiant Floor Heating Plan...

Learn to plan radiant floor heating like a pro. Master system selection, cable spacing, an...

Next Webinar in the Series

June 2026 PRO Webinar:

Advanced Snow Melt Applications: Walkways, Stairs & Patios
Wed, June 24 — 1:00pm CST

Register now

24/7 PRO Technical Support

Need help on a job? Call us:

- 📞 **800-875-5285**
- 📧 **techsupport@warmlyyours.com**

We'd rather help you plan the install than troubleshoot a problem later. Don't hesitate to call.