

# TufTile®

ADA DETECTABLE WARNING PRODUCTS

## GALVANIZED STEEL 16 GAUGE WET-SET



[TufTile.com](http://TufTile.com)

☎ 1-888-960-8897

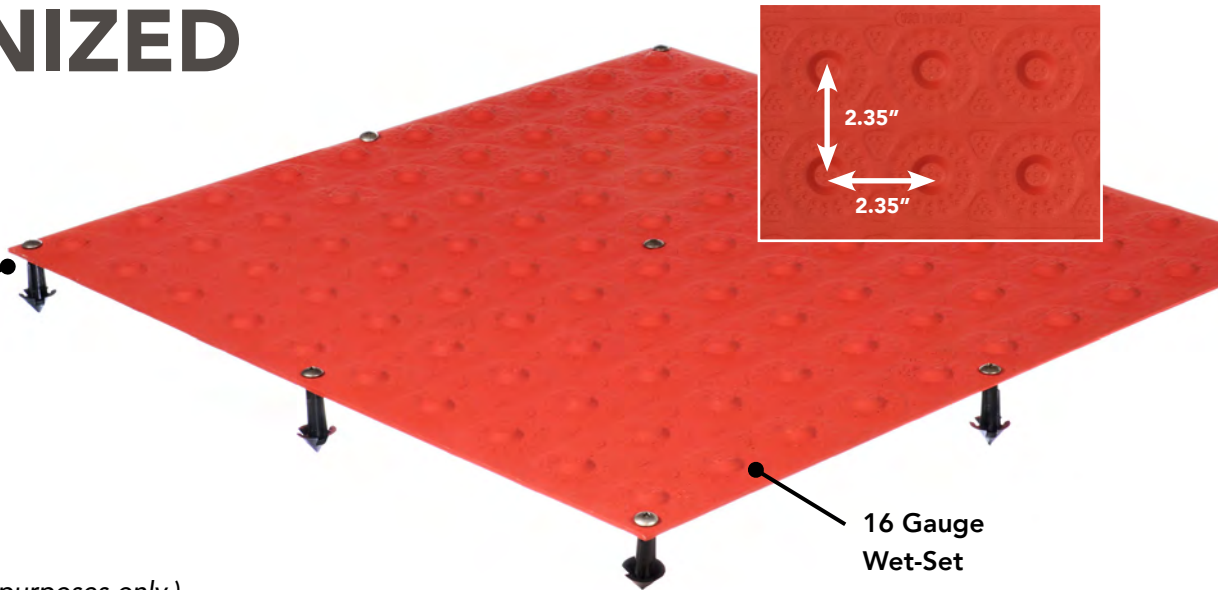
📍 905 Telser Road, Lake Zurich, IL 60047

## GALVANIZED STEEL



Unique design allows aggregate to consolidate around anchor.

*(Rendering for illustration purposes only.)*



16 Gauge  
Wet-Set

## The Latest Innovation in ADA Detectable Warning Tiles

### **GALVANIZED BENEFITS**

Half the weight of cast iron for faster and easier installation and greater shipping efficiencies.

### **PREMIUM PERFORMANCE**

Long-term durability for heavy pedestrian traffic, high-abuse areas, and snow removal.

### **SUPERIOR COLOR & PROTECTION**

In-house powder coating system with superior UV and slip-resistant finish.

### **10-YEAR WARRANTY**

For full warranty information visit [www.tuftile.com](http://www.tuftile.com).

### **PRODUCT ASSORTMENT**

Available in seven standard sizes and 20 radius capabilities 9R-70R. Single tile installations for 4' and 5' wide curb ramps. Available in wet-set and surface-applied.

### **STOCK ITEM**

Able to meet any standard size and color order.

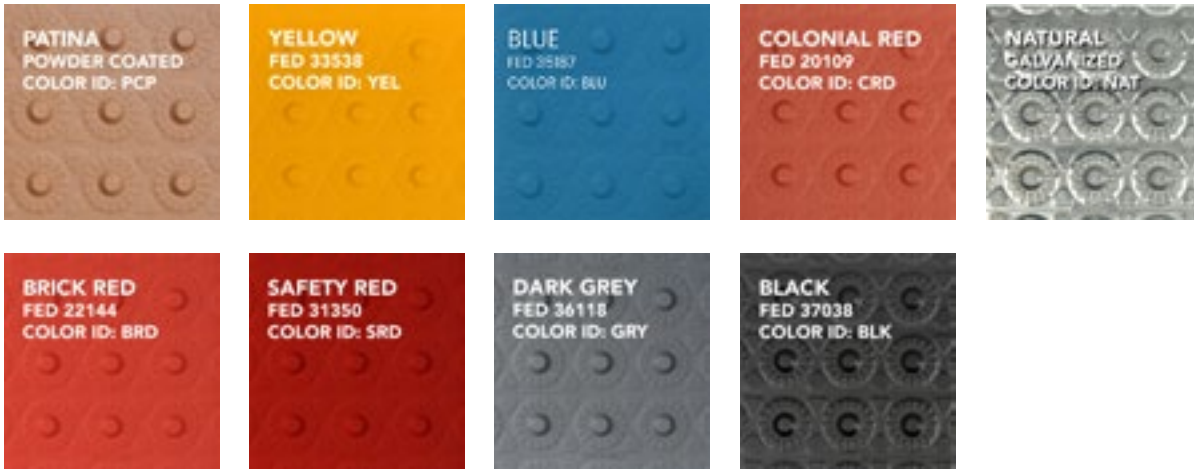
### **ADA COMPLIANT**

Complies with ADA Accessibility Guidelines (ADAAG) for Public Rights-Of-Way (July 26, 2011).

Meets Buy America Act 23 C.F.R. § 635.410.



## Colors Available



## Packaging Specifications

### 16-Gauge Galvanized Steel Wet-Set

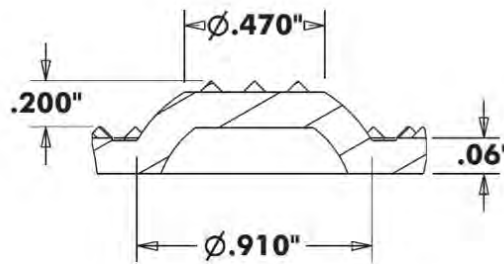
| Tile Size | Tile Weight/lbs. | Units/Pallet | Pallet Weight/lbs.* | Wedge Size | Wedge Weight/lbs. |
|-----------|------------------|--------------|---------------------|------------|-------------------|
| 1'x1'     | 2.5              | 48           | 147                 | 15R Wedge  | 1.5               |
| 2'x1'     | 5.5              | 48           | 293                 | 20R Wedge  | 1.25              |
| 2'x2'     | 10               | 48           | 528                 | 25R Wedge  | 1                 |
| 2'x3'     | 19               | 24           | 397                 | 30R Wedge  | 1                 |
| 2'x4'     | 24.5             | 24           | 528                 |            |                   |
| 2'x5'     | 29.5             | 24           | 656                 |            |                   |
| 3'x1'     | 7.5              | 48           | 385                 |            |                   |

\* Note: Pallet weight will vary if top-loaded with wedges

## PHYSICAL CHARACTERISTICS GALVANIZED STEEL

### Dome Geometry

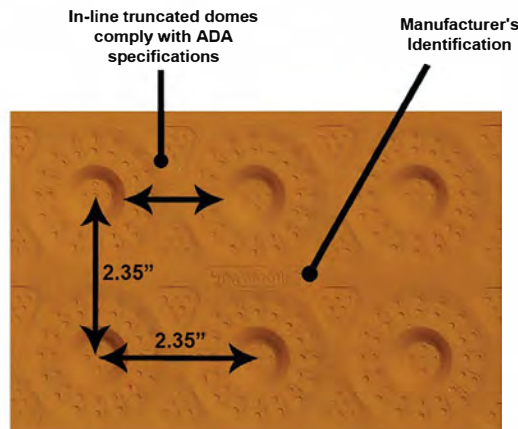
ADA (R305.1.1) specifies truncated domes shall have a base diameter of 0.9" minimum, a top diameter of 50%-65% of the base diameter minimum, and height of 0.2".



SECTION A-A

### Dome Spacing

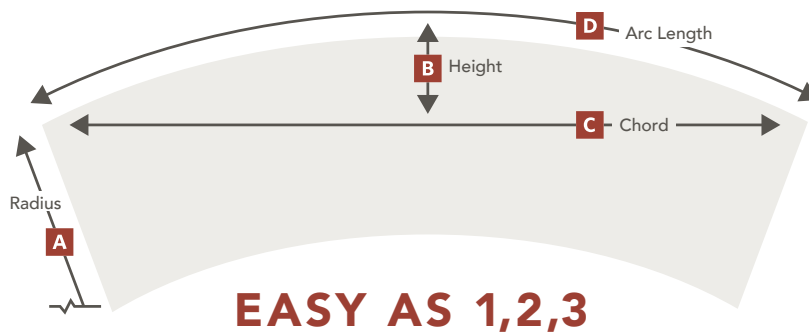
ADA (R305.1.2) specifies truncated domes shall have a center-center of 1.6" to 2.4".



| Galvanized Steel Test Data |                                          |                                         |
|----------------------------|------------------------------------------|-----------------------------------------|
| Galvanization              | G90 Guardrail Grade                      | G90                                     |
| ASTM C 501                 | Abrasion Resistance                      | 0.005                                   |
| FDOT FM 3 - C 1028         | Slip Resistance                          | Dry - 0.90, Wet - 0.81                  |
| ASTMA A 370                | Tensile Strength                         | 49,770 psi                              |
| ASTM D 695                 | Compressive Properties                   | 55,170 psi                              |
| ASTM D 5420                | Impact Resistance                        | No Cracking, No Delamination            |
| ASTM E 84-18 ANSI/UL723    | Test for Surface Burning Characteristics | CFS - 0.00, FSI - 0, CSD - 5.8, SDI - 5 |

# EasyArc®

RADIUS CALCULATOR



1

CHOOSE YOUR MATERIAL AND  
UNIT OF MEASUREMENT

2

ENTER THE RADIUS [A]  
OR HEIGHT [B]

3

ENTER THE CHORD [C]  
OR ARC LENGTH [D]

The EasyArc® Radius Calculator quickly identifies the radius size closest to your project plans and creates a drawing and list of the materials and quantities needed. Tiles and wedges are arranged side-by-side to form up to 20 radius configurations ranging from 9R to 70R.

The radius calculator provides an estimate and actual coverage may be affected by several factors, such as ramp dimensions, radius value, or project modifications.

## USING EASYARC

Select unit of measure and material. Enter R-value and Chord length then click the 'Calculate' button to create the estimate for your radius installation. (If R-value is unknown, enter the chord length and height. Arc length may be used as an alternative to the chord in previous step.) The recommended tile size, wedge size and their respective quantities are displayed.

The values 'arc length', 'segment length', 'arc overrun' and 'variance' are informational only.

Arc length is calculated when the chord length is given. Segment length is known by adding the top edge lengths of 1 selected tile and wedge. Arc overrun is the remainder when the arc length is different than the sum of the tiles and wedges. Variance occurs when the radius calculated is different than the radius made from the suggested components. The variance amount is the distance between those two values. For additional assistance contact customer service at 1-888-860-8897.



TufTile.com

1-888-960-8897

905 Telser Road, Lake Zurich, IL 60047

## BUY AMERICA ACT CERTIFICATION

By law, America manufactured products must be used in all Federal Transportation projects and all state and local government projects that use Federal Transportation funds.

The Buy America provision of the law explicitly requires steel, cast iron, and polymer-based products manufactured in United States mills, foundries, and other production facilities are used in Federal Transportation infrastructure projects. Under the various "Buy America" definitions, the following are those that we comply with:

- American Recovery and Reinvestment Act of 2009, Section 1605 – Buy America Act
- Infrastructure Investment and Jobs Act (IIJA; P.L. 117-58) November 2021
- Federal Highway Administration, 23 U.S.C. § 313 – Buy America; 23 C.F.R. § 635.410
- Federal Transit Administration, 49 U.S.C. § 5323(j)(1); 49 C.F.R. Part 661
- Federal Aviation Administration, 49 U.S.C. §50101

TufTile galvanized steel, cast iron, and polymer detectable warning tiles and radius-wedges are manufactured in the United States from United States made materials in accordance with Buy America, 23 C.F.R § 635.410 requirements.

A handwritten signature in cursive script that reads "Ted Meyers".

Ted Meyers  
President



# GALVANIZED STEEL SAFETY DATA SHEET (SDS)



## SECTION I: MATERIAL IDENTIFICATION

**PRODUCT NAME:** Galvanized Steel  
**CHEMICAL FAMILY:** Iron, Manganese, Chromium, Silicon, Nickel, Vanadium, Zinc  
**MANUFACTURER:** Steel Dynamics, Inc., Butler, IN 46721  
**CONTACT ADDRESS:** TufTile® 905 Telser Rd., Lake Zurich, IL 60047  
**PHONE:** (888) 960-8897

## SECTION II: COMPOSITION/INFORMATION ON INGREDIENTS

**Hazardous Components:** None in solid form  
**Composition:** Iron (Fe), Manganese (Mn), Chromium (Cr), Silicon (Si), Nickel (Ni), Vanadium (V), Zinc (Zn)  
**Melting Temperature:** 2750 Degrees Fahrenheit

## SECTION III: PHYSICAL CHARACTERISTICS

**Emergency Overview:** This material is NOT HAZARDOUS by OSHA  
**Appearance and Odor:** Solid Mass, No Odor  
**Specific Gravity:** 7.80 g/cc  
**Freezing Point:** N/A  
**Solubility in Water:** N/A  
**% Volatile by Volume:** N/A  
**Boiling Point:** ND  
**pH:** N/A

## SECTION IV: FIRE AND EXPLOSION INFORMATION

**Flammability:** Non-flammable, non-combustible  
**Means of Extinction:** N/A  
**Special Procedures:** None  
**Explosion Data:** None Known  
**Sensitivity of Mechanical impact:** None  
**Hazardous Combustion:** None Known  
**Auto ignition Temp:** N/A  
**Sensitivity to Static:** N/A

## SECTION V: HEALTH HAZARD DATA

**Permissible Exposure:** N/A for product (See Section II above)

## SECTION VI: REACTIVITY DATA

**Chemical Stability:** Steel products are stable under normal storage and handling conditions.  
**Reactivity:** Not Determined (ND) for product in a solid form.

## SECTION VII: SPILL OR LEAK PROCEDURES

**Spill:** None (Solid Mass Product)  
**Waste Disposal:** Recycle or Recover if possible

## SECTION VIII: PROTECTIVE EQUIPMENT TO BE USED:

**Protective Gloves:** Wear protective gloves / protective clothing  
**Eye Protection:** Wear safety glasses with side shields when cutting tiles

## SECTION IX: LEGAL DISCLAIMER

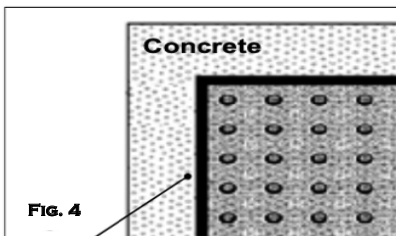
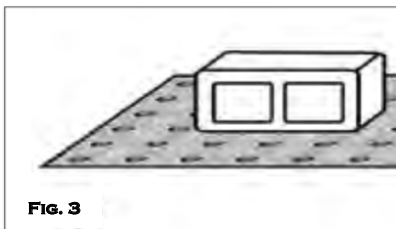
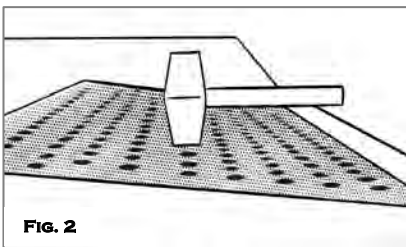
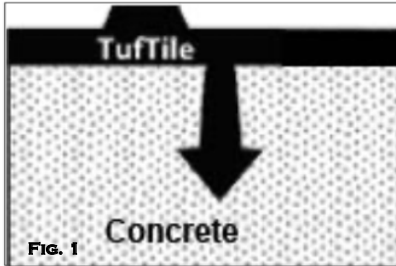
The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.



## 16 GAUGE GALVANIZED STEEL WET-SET (REPLACEABLE) INSTALLATION INSTRUCTIONS

Read installation instructions thoroughly before you begin.

For Federal compliance documents [click here](#).

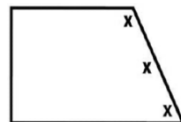


1/8" Deep  
Troweled Edge

1. Be sure that concrete is compliant with ADA guidelines and engineer's specifications to ensure that proper installation can be achieved.
2. Slowly press tile into concrete starting at one side and continue placement until the bottom is flush with the surface. **(Fig 1)**  
**IMPORTANT: Do not stand on tile during installation.**
3. Using a rubber mallet, tap the entire surface of the tile to ensure consolidation around the anchors. **(Fig. 2)**  
**NOTE: Installing tiles after moisture is gone from the top will help control floating.** If needed, weight may be added. **(Fig. 3)**
4. **IMPORTANT: Using an edging tool, go around entire perimeter of the tile to allow for expansion. (Fig. 4)**



5. Finish concrete to required specifications. **NOTE: Do not stand or walk on tile until concrete is fully cured.**
6. Clean any excess concrete slurry that may have consolidated inside perimeter edge and on the top surface.



**NOTE: If a tile is cut, new 1/4" holes need to be drilled and anchors reinstalled along the edge.**

Installation is now complete.

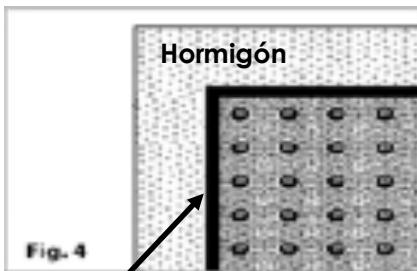
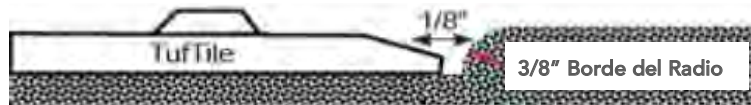
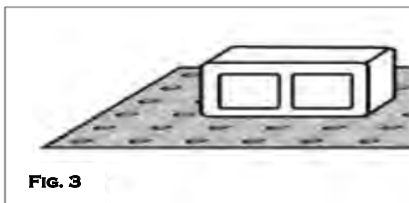
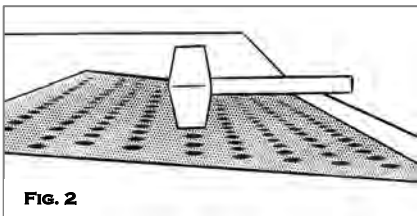
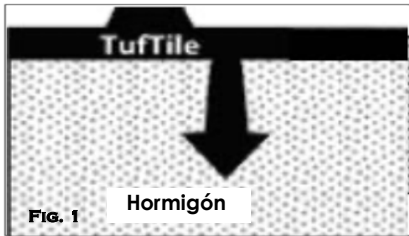
[Click here](#) for more information including an installation video tutorial.

Contact us at 888-960-8897 with questions.

## ACERO GALVANIZADO CALIBRE 16 APLICACIÓN HÚMEDA (REEMPLAZABLE) INSTRUCCIONES DE INSTALACIÓN

Lea por completo las instrucciones de instalación antes de empezar.

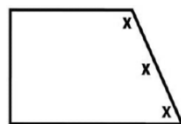
[Haga clic aquí](#) para los documentos de cumplimiento federal.



1/8" Borde con llana profunda

1. Asegure que el hormigón cumpla con las especificaciones del ADA y del ingeniero para lograr la instalación correcta.
2. Despacio y con cuidado ubique la baldosa en el hormigón empezando por un lado y continuando hasta que la baldosa entera sea uniforme con la superficie. (Fig. 1) **IMPORTANTE: No se pare encima de la baldosa durante la instalación.**
3. Usando un mazo de goma, pulse toda la superficie de la baldosa, asegurando la consolidación alrededor de los anclajes. (Fig. 2) **NOTA: La instalación de baldosas después de que la humedad se haya evaporado de la parte más superficial ayudará a controlar que flote. Si es necesario se puede agregar un peso. (Fig. 3)**
4. **IMPORTANTE: Con una herramienta de corte haga un borde alrededor del perímetro entero para permitir su expansión. (Fig. 4)**

5. Termine el hormigón según las especificaciones. **NOTA: No se pare ni camine sobre la baldosa hasta que el hormigón esté completamente curado.**
6. Limpie cualquier exceso de lechada de hormigón que pueda haberse consolidado dentro del perímetro del borde y sobre la superficie.



**NOTA: Si se corta una baldosa hay que hacer hoyos nuevos de 1/4" e insertar más anclajes a lo largo del borde.**

La instalación ya está completa.

[Haga clic aquí](#) para más información incluyendo un video tutorial de la instalación. Llámenos al 888-960-8897 con sus preguntas.

# 12" X 12" X 16 GA (REPLACEABLE)

GALVANIZED STEEL DETECTABLE WARNING TILE

2.350 DOME SPACING

**TufTile®**

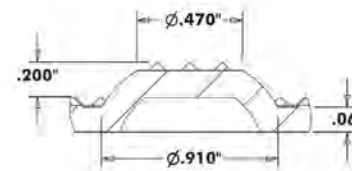
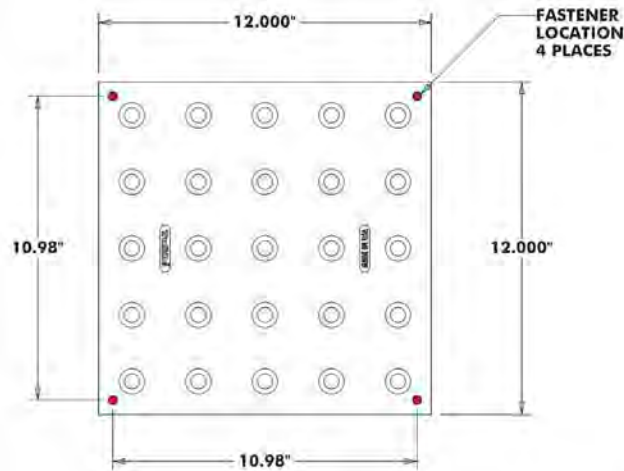
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| TOLERANCE | +/- 0.050       |  | SCALE | REV | DATE |

## NOTES:

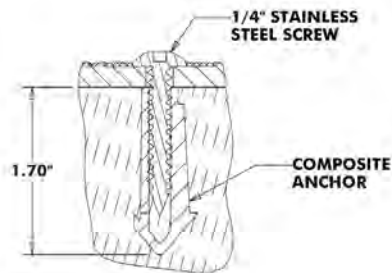
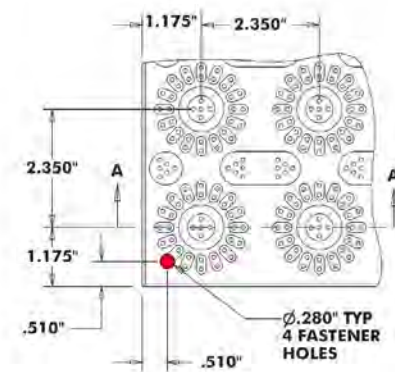
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"XX" SA DESIGNATES SURFACE APPLIED

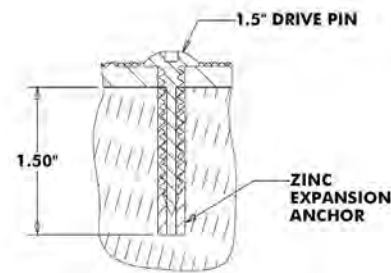
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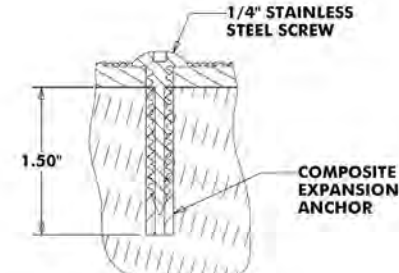
SECTION A-A



WET SET ANCHOR DETAIL  
(FRESH CONCRETE)



EXPANSION ANCHOR DETAIL  
(HARDENED CONCRETE)



EXPANSION ANCHOR DETAIL  
(ASPHALT)



TufTile.com

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905 Telser Road, Lake Zurich, IL 60047

# 24" X 12" X 16 GA (REPLACEABLE)

GALVANIZED STEEL DETECTABLE WARNING TILE

2.350 DOME SPACING

**TufTile®**

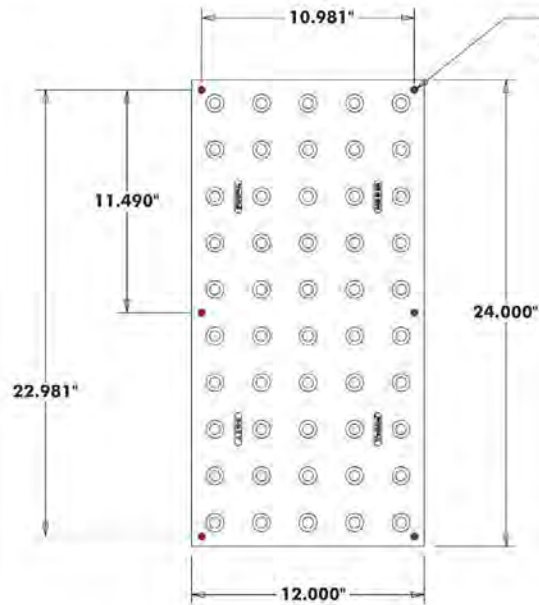
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## NOTES:

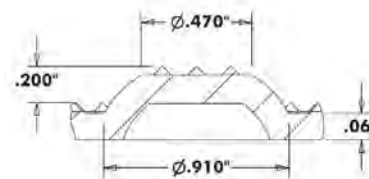
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"XX" SA DESIGNATES SURFACE APPLIED

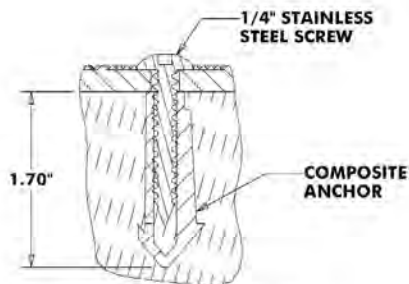
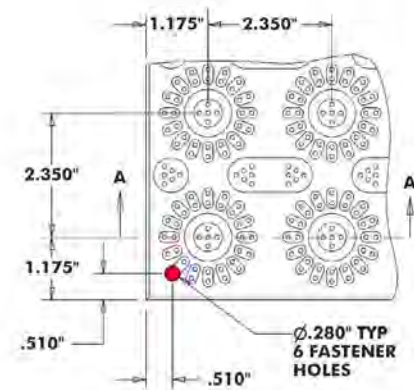
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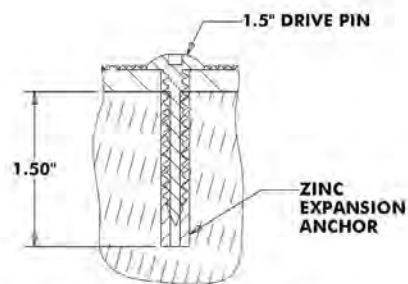
FASTENER  
LOCATION  
6 PLACES



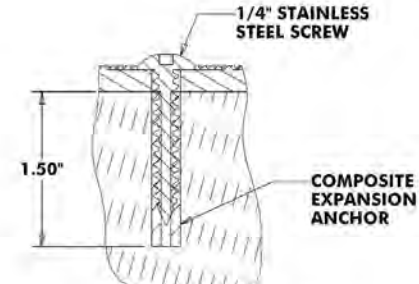
SECTION A-A



WET SET ANCHOR DETAIL  
(FRESH CONCRETE)



EXPANSION ANCHOR DETAIL  
(HARDENED CONCRETE)



EXPANSION ANCHOR DETAIL  
(ASPHALT)



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# 24" X 24" X 16 GA (REPLACEABLE)

GALVANIZED STEEL DETECTABLE WARNING TILE

2.350 DOME SPACING

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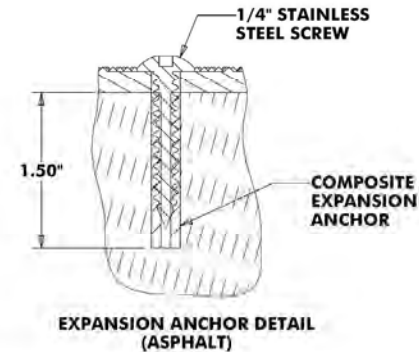
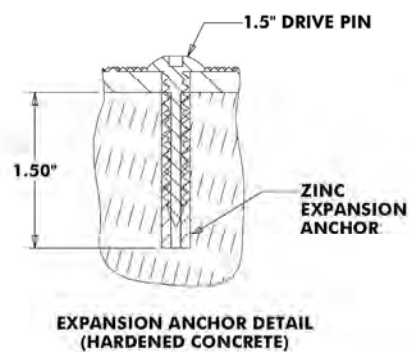
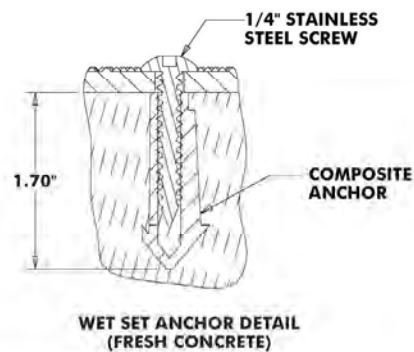
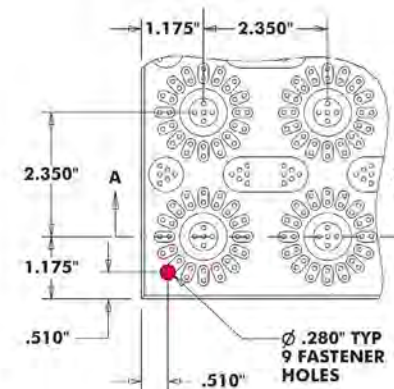
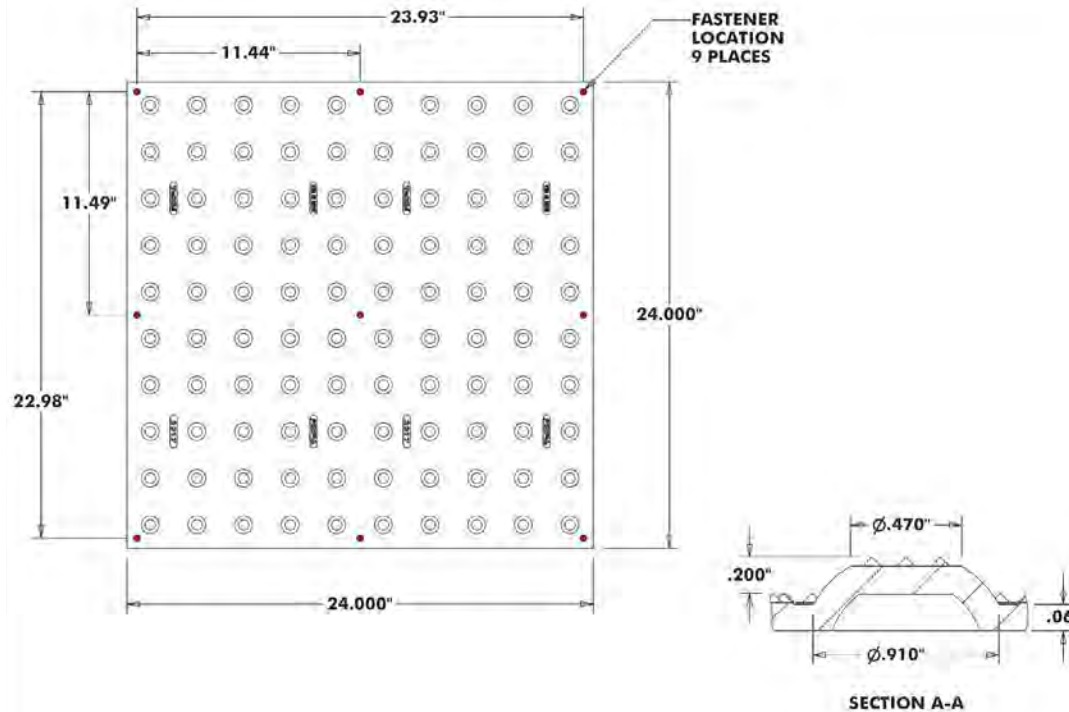
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| TOLERANCE | +/- 0.050       | SCALE   | REV | DATE     |

## NOTES:

"XX" WS DESIGNATES WET SET

"XX" SA DESIGNATES SURFACE APPLIED

"XXX" DESIGNATES COLOR



TufTile.com

1-888-960-8897

905 Telser Road, Lake Zurich, IL 60047

# 24" X 36" X 16 GA (REPLACEABLE)

GALVANIZED STEEL DETECTABLE WARNING TILE

2.350 DOME SPACING

**TufTile®**

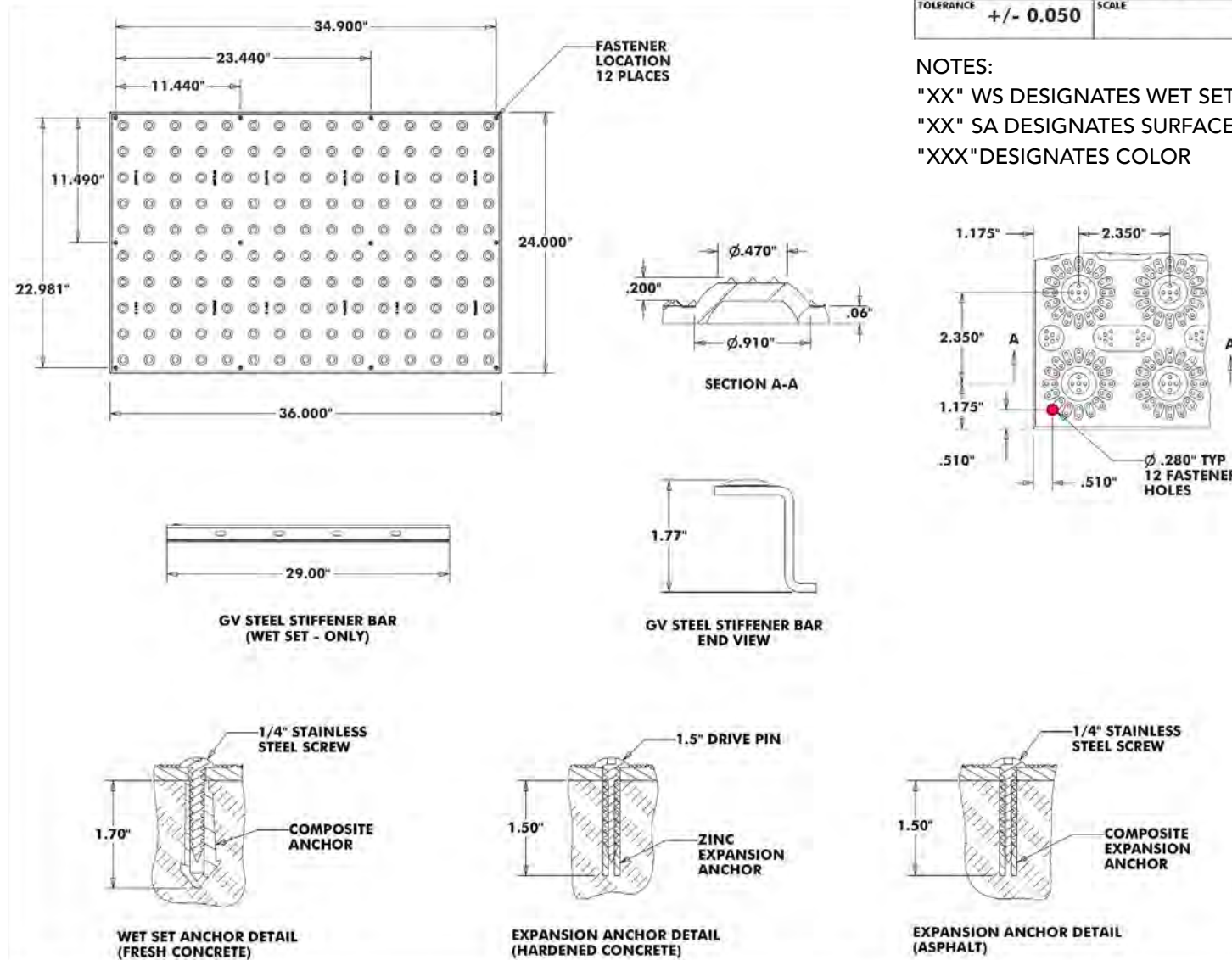
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| TOLERANCE | +/- 0.050       | SCALE |    | REV  | 2        |
|           |                 |       |    | DATE | 4-2-21   |

## NOTES:

"XX" WS DESIGNATES WET SET

"XX" SA DESIGNATES SURFACE APPLIED

"XXX" DESIGNATES COLOR



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905 Telser Road, Lake Zurich, IL 60047

# 24" X 48" X 16 GA (REPLACEABLE)

GALVANIZED STEEL DETECTABLE WARNING TILE

2.350 DOME SPACING

**TufTile®**

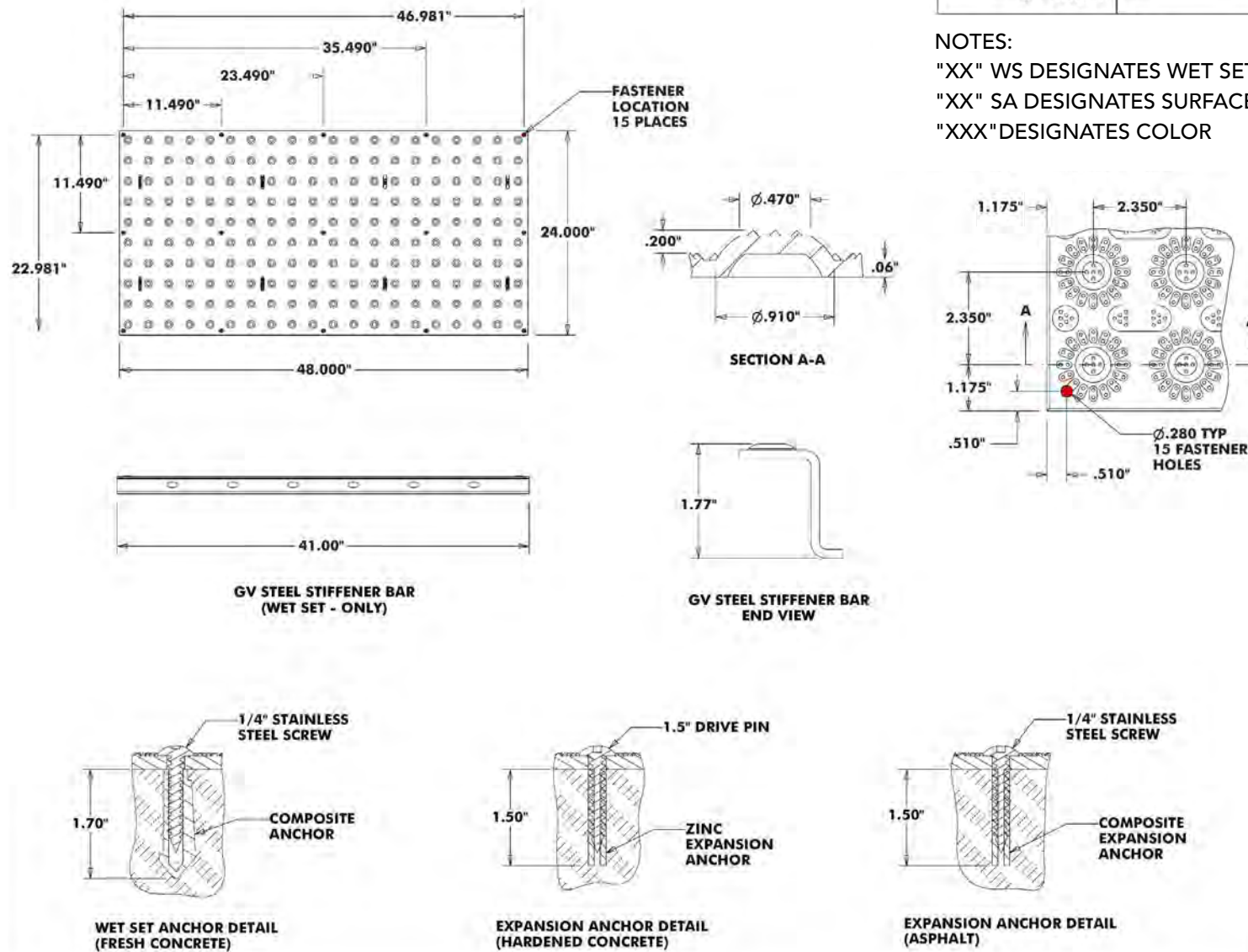
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|           |                        |       |           | DATE | <b>4-2-21</b>   |

## NOTES:

"XX" WS DESIGNATES WET SET

"XX" SA DESIGNATES SURFACE APPLIED

"XXX" DESIGNATES COLOR



TufTile.com

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905 Telser Road, Lake Zurich, IL 60047

# 24" X 60" X 16 GA (REPLACEABLE)

GALVANIZED STEEL DETECTABLE WARNING TILE

2.350 DOME SPACING

# TufTile®

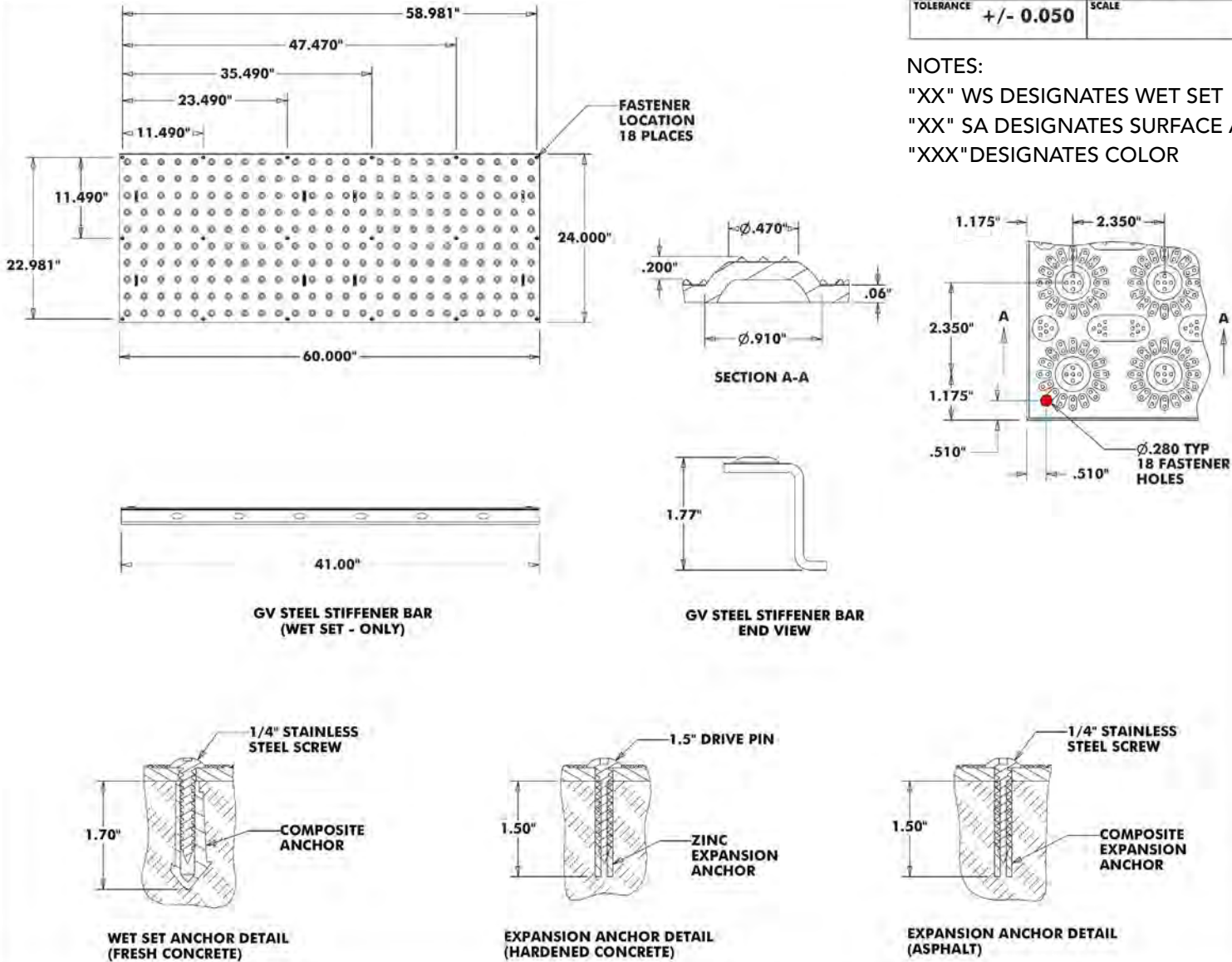
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|           |                        |       |           | DATE | <b>4-2-21</b>   |

## NOTES:

"XX" WS DESIGNATES WET SET

"XX" SA DESIGNATES SURFACE APPLIED

"XXX" DESIGNATES COLOR



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905 Telser Road, Lake Zurich, IL 60047

# 36" X 12" X 16 GA (REPLACEABLE)

GALVANIZED STEEL DETECTABLE WARNING TILE

2.350 DOME SPACING

**TufTile®**

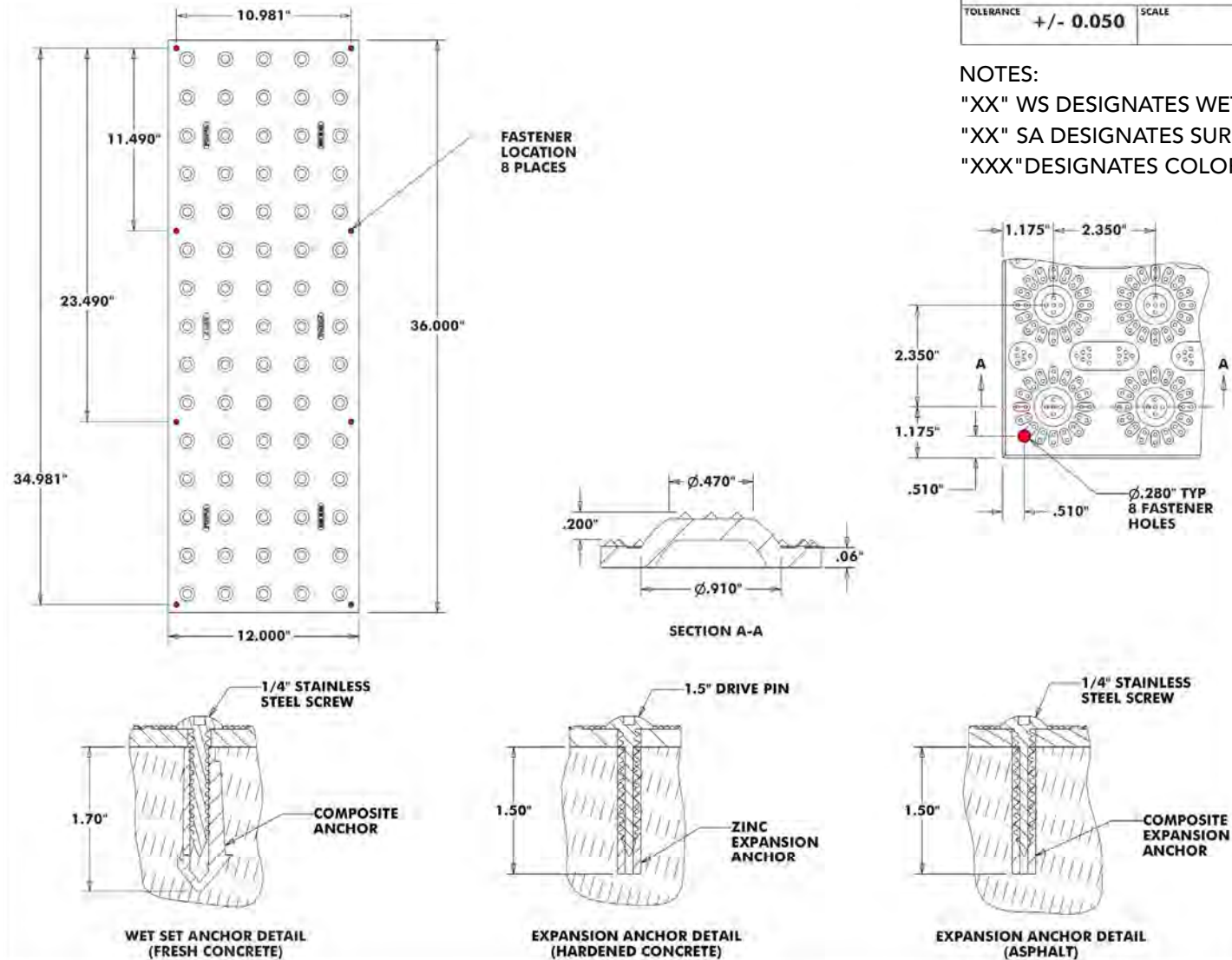
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|-----------|-----------------|---------|-----|----------|
| DRW NO    | GV361216-XX-XXX | REVISED | GM  | 12-30-20 |
| TOLERANCE | +/- 0.050       | SCALE   | REV | DATE     |

## NOTES:

"XX" WS DESIGNATES WET SET

"XX" SA DESIGNATES SURFACE APPLIED

"XXX" DESIGNATES COLOR



TufTile.com

1-888-960-8897

905 Telser Road, Lake Zurich, IL 60047

# 15R X 16 GA WEDGE (REPLACEABLE)

GALVANIZED STEEL DETECTABLE WARNING

RADIUS—WEDGE TILE

**TufTile®**

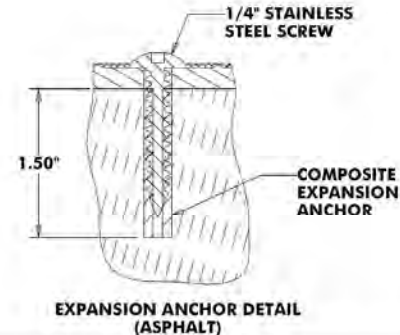
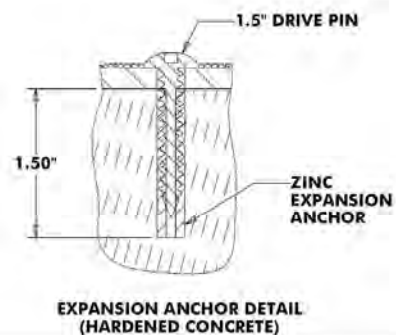
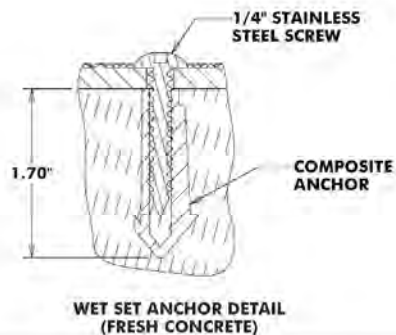
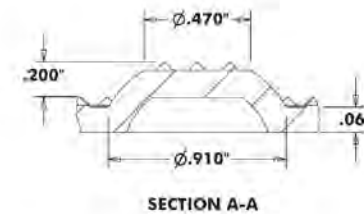
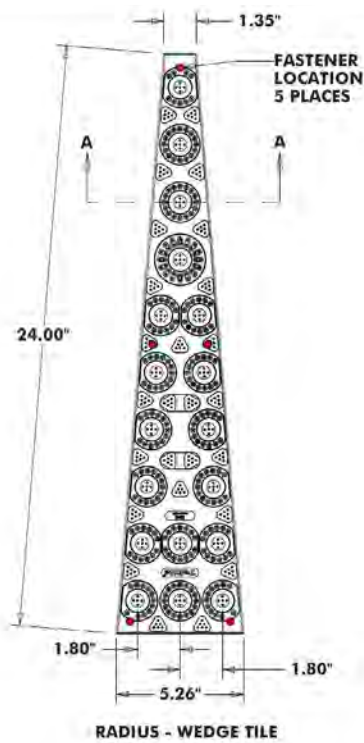
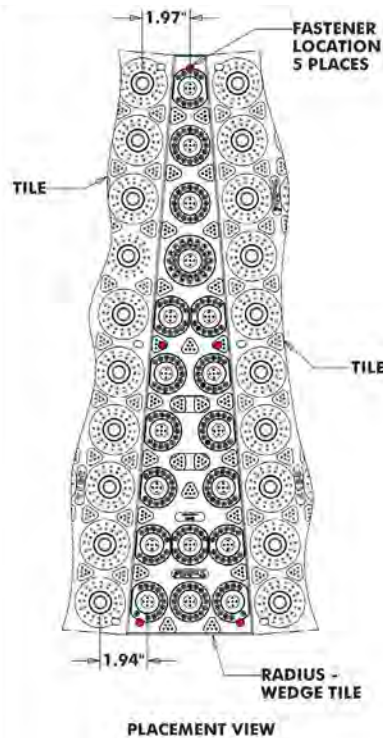
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| DRW NO    | GV15R16-XX-XXX | DRAWN | GM  | DATE | 12-30-20 |
| TOLERANCE | +/- 0.050      | SCALE | REV | DATE |          |

## NOTES:

"XX" WS DESIGNATES WET SET

"XX" SA DESIGNATES SURFACE APPLIED

"XXX" DESIGNATES COLOR



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# 20R X 16 GA WEDGE (REPLACEABLE)

GALVANIZED STEEL DETECTABLE WARNING

RADIUS—WEDGE TILE

# TufTile®

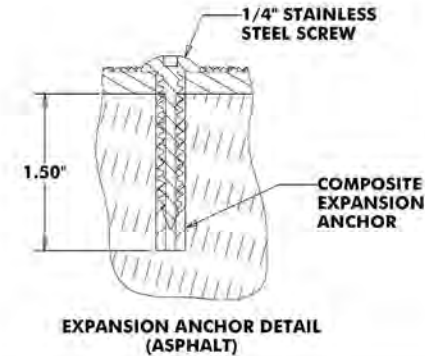
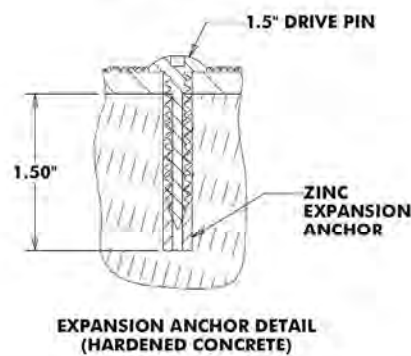
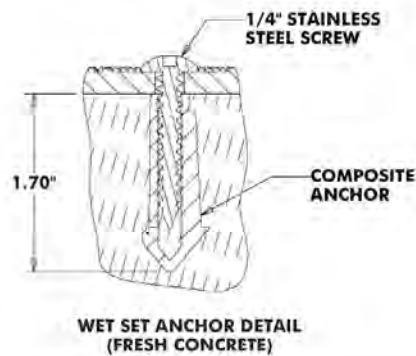
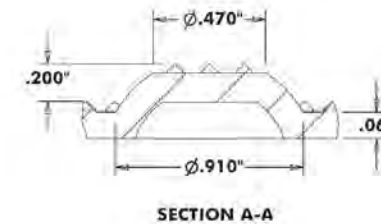
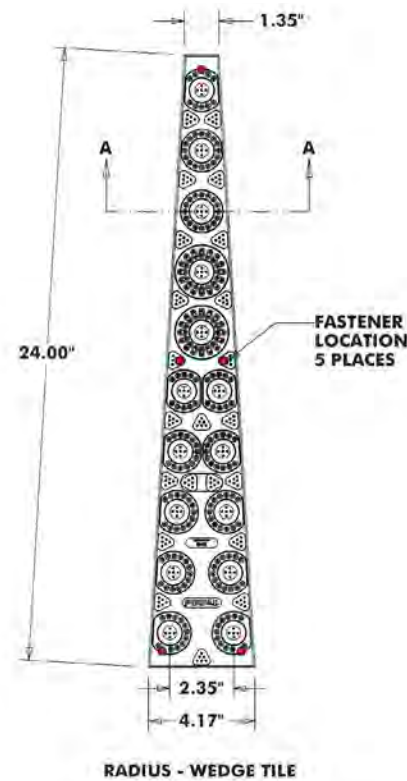
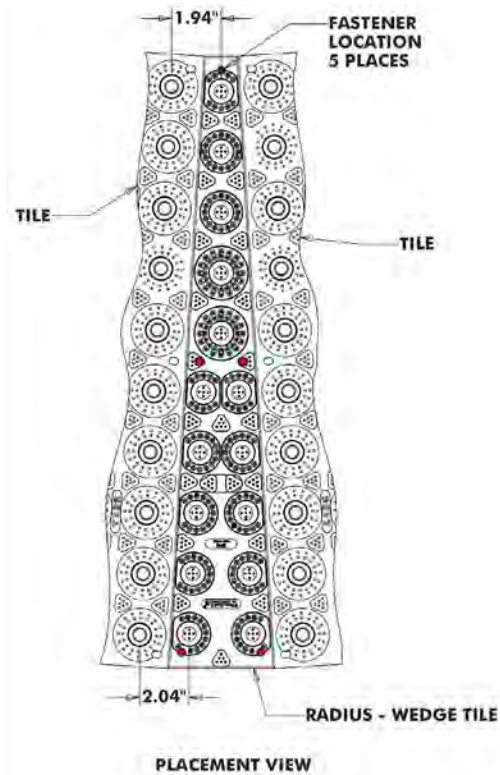
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| DRW NO    | GV20R16-XX-XXX | DRAWN | GM  | DATE | 12-30-20 |
| TOLERANCE | +/- 0.050      | SCALE | REV | DATE |          |

## NOTES:

"XX" WS DESIGNATES WET SET

"XX" SA DESIGNATES SURFACE APPLIED

"XXX" DESIGNATES COLOR



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# 25R X 16 GA WEDGE (REPLACEABLE)

GALVANIZED STEEL DETECTABLE WARNING

RADIUS—WEDGE TILE

**TufTile®**

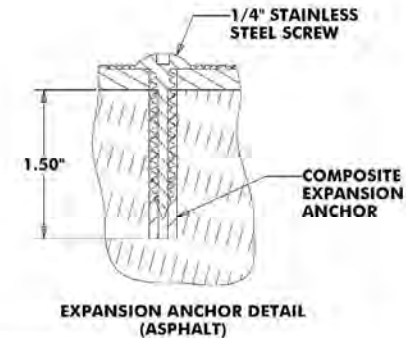
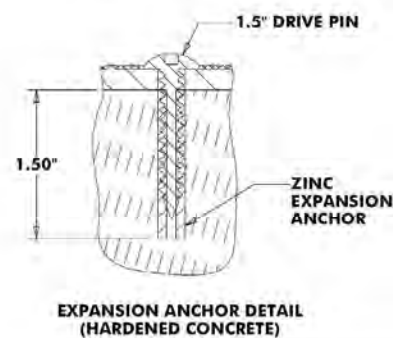
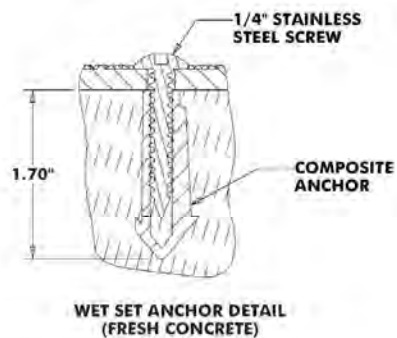
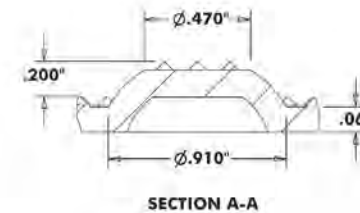
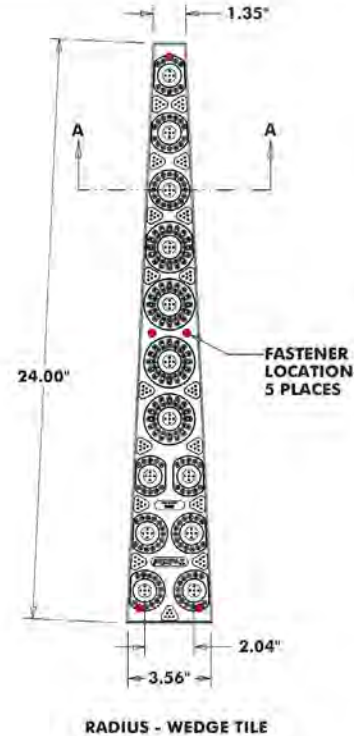
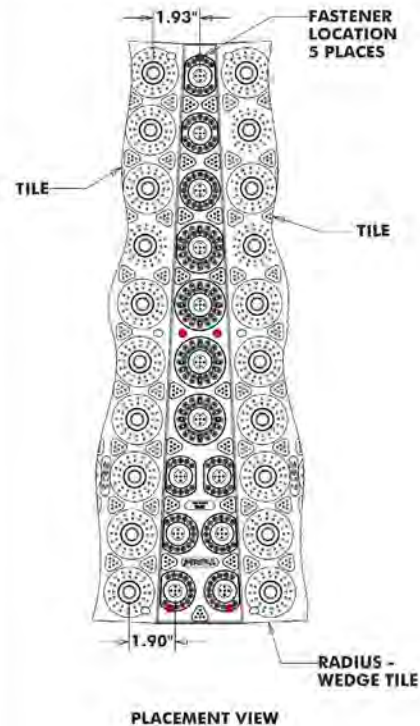
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| DRW NO    | GV25R16-XX-XXX | DRAWN | GM  | DATE | 12-30-20 |
| TOLERANCE | +/- 0.050      | SCALE | REV | DATE |          |

## NOTES:

"XX" WS DESIGNATES WET SET

"XX" SA DESIGNATES SURFACE APPLIED

"XXX" DESIGNATES COLOR



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905 Telser Road, Lake Zurich, IL 60047

# 30R X 16 GA WEDGE (REPLACEABLE)

GALVANIZED STEEL DETECTABLE WARNING

RADIUS—WEDGE TILE

**TufTile®**

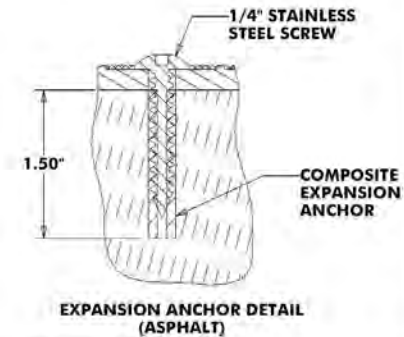
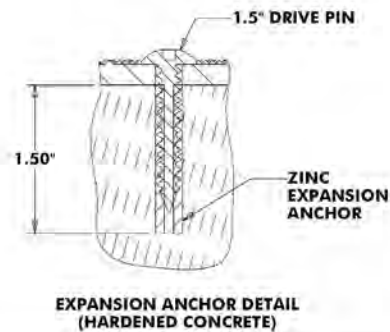
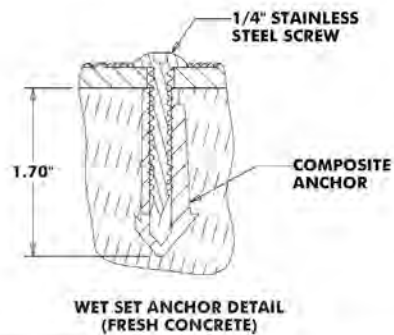
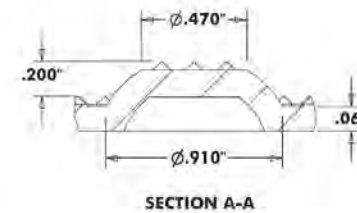
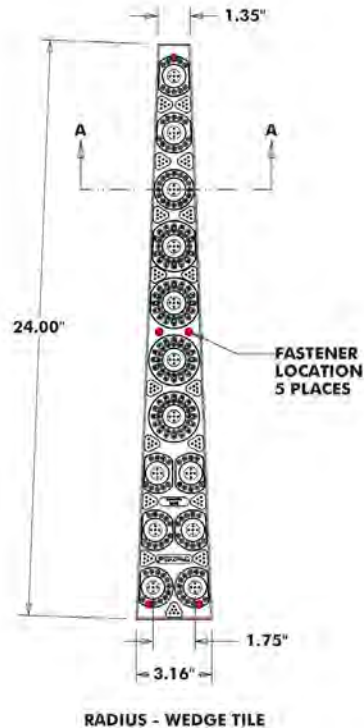
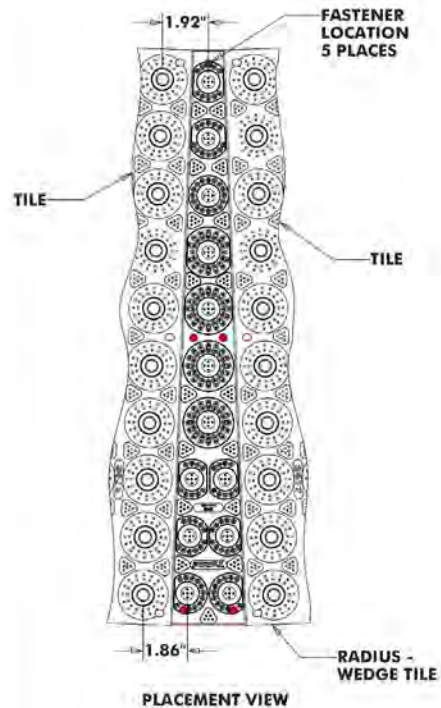
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| DRW NO    | GV30R16-XX-XXX | DRAWN | GM  | DATE | 12-30-20 |
| TOLERANCE | +/- 0.050      | SCALE | REV | DATE |          |

## NOTES:

"XX" WS DESIGNATES WET SET

"XX" SA DESIGNATES SURFACE APPLIED

"XXX" DESIGNATES COLOR



TufTile.com

1-888-960-8897

905 Telser Road, Lake Zurich, IL 60047

## **GALVANIZED STEEL 10-YEAR LIMITED WARRANTY**

TufTile, Inc. values your business, and the TufTile, Inc. tactile galvanized steel tile (the “product”) you purchased comes with a limited warranty that the product will be free from defects for a period of ten years from date of installation subject to ordinary wear and tear. Further, TufTile warrants the product will not rust for 10 years. Failure to comply with recommended applications and installation of the product voids this warranty. Customer misuse including negligence, physical abuse and defects resulting from improper installation or resulting from outside forces (including, but not limited to, snow plows causing damage) are not covered by this warranty. Modifying galvanized tiles by way of cutting the tile may expose the cut edge area to rust. Modified tiles however, will remain structurally sound and cutting tiles will not impact the lifespan of the tile. Also, the rust at the exposed edge of the tile will not migrate under the powder coat finish. For modified (cut) tiles, TufTile’s no-rust warranty remains in effect except at the tile edge. Local building codes may require minimum tactile tile performance specifications, and TufTile, Inc. does not warrant product installations that violate building codes. While within the limited warranty period, if the product is not in good working order for its intended purposes, a replacement product shall be made available to the purchaser of the product. Purchaser’s remedy is limited to replacement of the product and no consequential or incidental damages and costs (including, but not limited to, lost profits, labor or transportation costs in connection with the removal, replacement and installation of the product) are recoverable or within the coverage of this limited warranty. Any representations made in connection with the sale of this product that differ from the terms of this limited warranty are not covered and should be brought to the attention of TufTile, Inc. immediately. No claim for replacement of a defective product will be honored without TufTile, Inc.’s reservation of its right to inspect the product for the claimed defect and its determination that the replacement of the product is covered by this warranty. The term of this limited warranty shall commence on the date of installation. Proof of purchase shall be required to be eligible for this warranty and to establish the commencement date of this limited warranty. No warranty replacement of the product is provided unless the purchaser’s written replacement claim is submitted to TufTile, Inc. before the expiration of ten years from the date of installation of the product.

TO THE MAXIMUM EXTENT APPLICABLE AND ALLOWABLE UNDER LAW, THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE FACE OF THE TUFTILE INC. LIMITED WARRANTY, AND TUFTILE INC. DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, REGARDING THE PRODUCT, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT. TO THE MAXIMUM EXTENT ALLOWABLE BY FEDERAL AND STATE LAW, THIS WARRANTY SUPPLEMENTS OR SUPERSEDES FEDERAL AND STATE CONSUMER GOODS WARRANTY PRO

## FEDERAL LAW & DETECTABLE WARNING SURFACES

The Americans with Disabilities Act (ADA) (42 U.S.C. 12101 et seq.) is a federal civil rights law that prohibits discrimination against individuals with disabilities. The regulations issued by the Department of Justice include accessibility standards for the design, construction, and alteration of facilities. One of those requirements requires installation of detectable warning surfaces as described in these sections of the ADA Accessibility Guidelines (ADAAG) for Public Rights-Of-Way (July 26, 2011). To view the entire proposed guidelines document, go to [www.access-board.gov](http://www.access-board.gov).

### R305.1.1 Dome Size

The truncated domes shall have a base diameter of 23 mm (0.9 in) minimum and 36 mm (1.4 in) maximum, a top diameter of 50 percent of the base diameter minimum and 65 percent of the base diameter maximum, and a height of 5 mm (0.2 in).

### R305.1.2 Dome Spacing

The truncated domes shall have a center-to-center spacing of 41 mm (1.6 in) minimum and 61 mm (2.4 in) maximum, and a base-to-base spacing of 17 mm (0.65 in) minimum, measured between the most adjacent domes.

### R305.1.3 Contrast

Detectable warning surfaces shall contrast visually with adjacent gutter, street or highway, or pedestrian access route surface, either light-on-dark or dark-on-light.

### R305.1.4 Size

Detectable warning surfaces shall extend 610 mm (2.0 ft) minimum in the direction of pedestrian travel. At curb ramps and blended transitions, detectable warning surfaces shall extend the full width of the ramp run (excluding any flared sides), blended transition, or turning space. At pedestrian at-grade rail crossings not located within a street or highway, detectable warnings shall extend the full width of the crossing. At boarding platforms for buses and rail vehicles, detectable warning surfaces shall extend the full length of the public use areas of the platform. At boarding and alighting areas at sidewalk or street level transit stops for rail vehicles, detectable warning surfaces shall extend the full length of the transit stop.

### R305.2 Placement

The placement of detectable warning surfaces shall comply with R305.2.

## R305.2.1 Perpendicular Curb Ramps

On perpendicular curb ramps, detectable warning surfaces shall be placed as follows:

1. Where the ends of the bottom grade break are in front of the back of curb, detectable warning surfaces shall be placed at the back of curb.
2. Where the ends of the bottom grade break are behind the back of curb and the distance from either end of the bottom grade brake to the back of curb is 1.5 m (5.0 ft) or less, detectable warning surfaces shall be placed on the ramp run within one dome spacing of the bottom grade break.
3. Where the ends of the bottom grade break are behind the back of curb and the distance from either end of the bottom grade brake to the back of curb is more than 1.5 m (5.0 ft), detectable warning surfaces shall be placed on the lower landing at the back of curb.

## R305.2.2 Parallel Curb Ramps

On parallel curb ramps, detectable warning surfaces shall be placed on the turning space at the flush transition between the street and sidewalk.

## R305.2.3 Blended Transitions

On blended transitions, detectable warning surfaces shall be placed at the back of curb. Where raised pedestrian street crossings, depressed corners, or other level pedestrian street crossings are provided, detectable warning surfaces shall be placed at the flush transition between the street and the sidewalk.

## R305.2.4 Pedestrian Refuge Islands

At cut-through pedestrian refuge islands, detectable warning surfaces shall be placed at the edges of the pedestrian island and shall be separated by a 610 mm (2.0 ft) minimum length of surface without detectable warnings.

## R305.2.5 Pedestrian At-Grade Rail Crossings

At pedestrian at-grade rail crossings not located within a street or highway, detectable warning surfaces shall be placed on each side of the rail crossing. The edge of the detectable warning surface nearest the rail crossing shall be 1.8 m (6.0 ft) minimum and 4.6 m (15.0 ft) maximum from the centerline of the nearest rail. Where pedestrian gates are provided, detectable warning surfaces shall be placed on the side of the gates opposite the rail.

## R305.2.6 Boarding Platforms

At boarding platforms for buses and rail vehicles, detectable warning surfaces shall be placed at the boarding edge of the platform.

## R305.2.7 Boarding and Alighting Areas

At boarding and alighting areas at sidewalk or street level transit stops for rail vehicles, detectable warning surfaces shall be placed at the side of the boarding and alighting area facing the rail vehicles.