METROLINX

Engineering Bulletin

June 12th , 2023

Facilities Engineering Assurance

FEA-001

Amendment Notice: Detectable Tile (Tactile Walking Surface Indicator, "TWSI") Installation Update.

This bulletin applies to and amends the following documents:

- DS-02 Universal Design Standard, version 1.1, dated July 2019
- DS-04 GO Station Architecture Design Standard, version 1.0, dated July 2019

This bulletin introduces an update to the GO Standard Specification and Drawing:

- Architectural Standard Drawings and Specifications, Tactile Tile System Platform Plan, Sections and Details Type 2 (PC-002), Revision 2, dated May 9, 2023

There are ongoing cases where the installation of Tactile Walking Surface Indicator (TWSI) tiles, "Detectable Tiles", on GO rail platforms have caused disruption to GO Transit On Time Performance by requiring closure of a portion of the platform to accommodate construction.

The purpose of this standard is to provide an Architectural Drawing Detail for which the installation method will reduce disruption to revenue service (without having to shut down the platform during TWSI tile installation). A new Detectable Tile Installation Drawing Detail has been added for use in addition to the existing Platform Curb Drawings.

The GO Standard Drawing, PC-002, applies in retrofit situations and in situations where a new installation causes disruption to GO Transit On Time Performance. It is applicable for platform curbs with and without glycol snow melt tubing. There is a resulting cost impact for Project Delivery Teams as the additional installation method is more expensive than current practice. Existing installation methodology remains acceptable provided that GO Transit On Time Performance is not compromised.

On MyLinx the Detail is available for staff to download on the GO Standard Drawings and Specifications and the amendments to the Design Standards are located on Metrolinx Design Standards. The updated Standard is also available for external users to download via the Metrolinx public download site http://www.gosite.ca/engineering_public/.

Amendments to the documents referencing the updated GO Standard Drawing are provided in the following attachments:

- Attachment 1: Tactile Tile System Platform Plan, Sections, and Details Type 2 – PC-002_Rev2
- Attachment 2: DS-02 Universal Design Standard
- Attachment 3: DS-04 GO Station Architectural Design Standard

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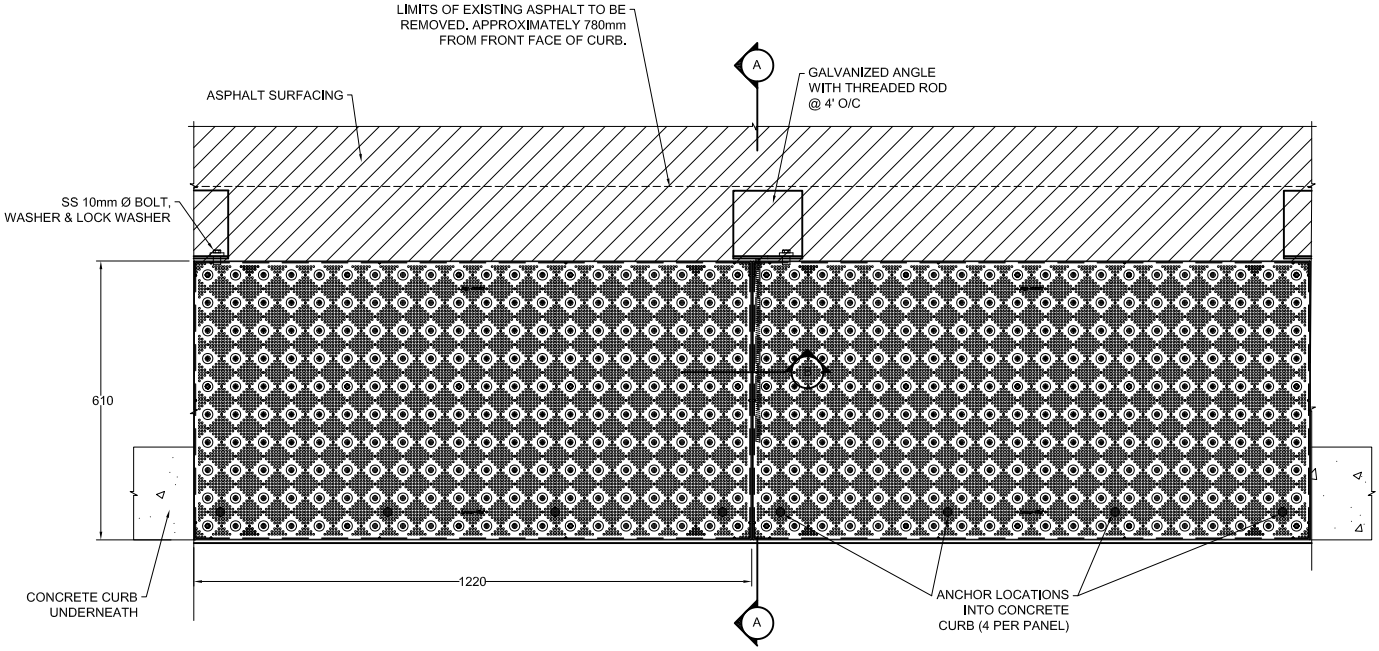
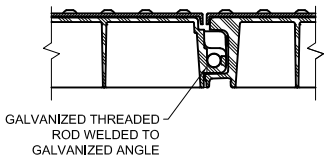
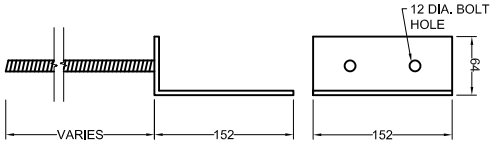


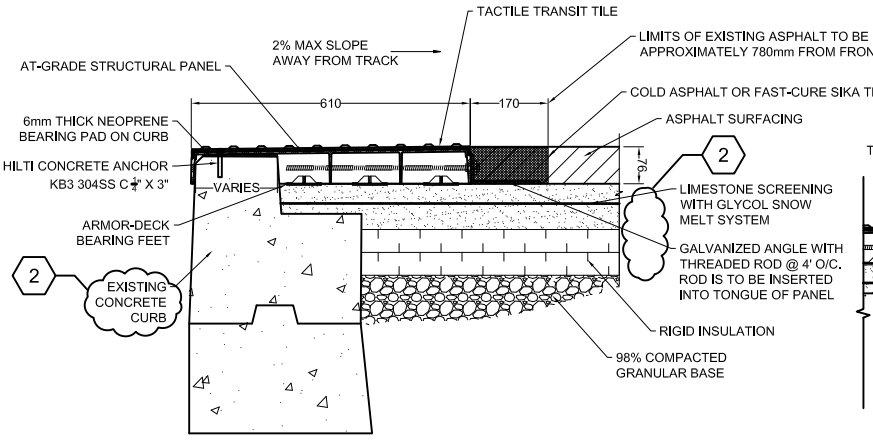
PLAN VIEW



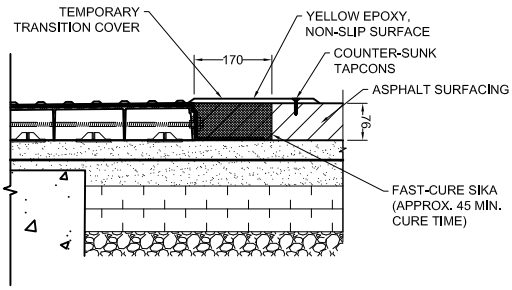
SECTION B-B



ANGLE AND ROD DETAIL



SECTION A-A



TEMPORARY TRANSITION COVER DETAIL

NOTE:

1. THIS DRAWING IS PROVIDED FOR INSTRUCTIONAL DESIGN PURPOSE ONLY BASED ON METROLINX GO TRANSIT DESIGN GUIDELINES AND REQUIREMENTS. THE CONSULTANT SHALL VERIFY FOR LOCAL CODE COMPLIANCE, EXISTING SITE CONDITIONS AND INTER DISCIPLINARY DRAWING COORDINATION. ALL DIMENSIONS AND SPECIFICATIONS SHOULD BE VERIFIED BY CONSULTANT AND/OR CONTRACTOR BEFORE ACTUAL CONSTRUCTION BEGINS.
2. THE TRANSITION GAP BETWEEN REMOVED ASPHALT AND TACTILE TILE TO BE FILLED WITH COLD ASPHALT OR FAST CURE SIKA MORTAR.
3. SCREENING TO BE ADDED OR REMOVED AS NECESSARY TO ENSURE THAT FINISHED INSTALLATION IS FLUSH WITH TOP OF PLATFORM.
4. PLATFORM SERVICE MUST REMAIN OPERATIONAL DURING ALL STAGES OF TACTILE TILE INSTALLATION.
5. "AT-GRADE STRUCTURAL PANEL" REFERS TO STRUCTURAL REINFORCED POLYMER COMPOSITE DECK PANELS TO BE INSTALLED AND SUPPLIED BY CONTRACTOR. CONSULTANT/CONTRACTOR SHALL SUBMIT ALL APPLICABLE MANUFACTURER'S DATE, SHOP DRAWINGS AND GUARANTEE OF THE PRODUCT IN ACCORDANCE WITH SPECIFIED SUBMITTAL PROCEDURES.

NOTE: ALL DIMENSIONS SHOWN ARE IN METERS AND/OR MILLIMETERS UNLESS OTHERWISE NOTED.

Drawn: Dessin:	Checked: Verification:	NEW TACTILE TILE INSTALLATION ON EXISTING RAIL PLATFORM CURB PLAN, SECTIONS, DETAILS
Scale: Echelle: N.T.S	Date: 2023/05/09	

METROLINX

Drawing Number
Dessin Numero

PC–002

REV2

8.3 TACTILE WALKING SURFACE INDICATORS (TWSI)

There are two different TWSI types to be used within the Metrolinx network:

a) Attention indicator (truncated domes) signals a need for caution at a change in elevation, a vehicular route, train platforms, etc.

b) Guiding indicator (elongated flat top bar surface) facilitates wayfinding in open areas and indicates a possible route that may be taken.

c) Attention indicator:

1. An Attention indicator shall consist of truncated domes and shall have the following characteristics:
    i. Be arranged in a square grid;
    ii. Height of truncated domes shall be 4-5mm;
    iii. Top diameter of the domes shall range between 12-25mm;
    iv. Bottom diameter of the dome shall be 10 (+/-1) mm greater than the top diameter; and Table 2: Tactile Attention Indicator – Spacing between domes Note: Systematic research has shown that a top diameter of 12 mm is optimal for detection and discrimination underfoot.
    v. Spacing between the domes (shortest distance between the centres of two adjacent domes, i.e.: 'x') shall comply with Table 2.
2. A minimum of 70LRV points tonal contrast between the TWSI and the surrounding floor surface shall be provided, unless the TWSI is yellow, in which case 50LRV points tonal contrast is permitted.
3. Shall be made of materials that are durable and slip resistant;
4. Shall have any smooth adjacent walking surface for at least 600mm wide;
5. Shall be included across the entire width of the hazard with a depth of 610mm and shall have one side against the edge of the hazard, ~~unless otherwise indicated in this Standard~~; and
6. A tactile attention indicator surface shall be located:
    i. at the top of stairs, to comply with Section 5.6;
    ii. At top of ramps, to comply with Sections 5.3;
    iii. At platforms as per Section 11.2, and shall conform to Precast Concrete Platform Curbs Standard~~Rail Curb and Detectable Tile Drawing~~, GO Mini-platform Standard and Tactile Tile System Platform Detail as applicable~~-~~; and
    iv. At curb ramps, to comply with Section 4.6.

2.10.5 FLOORS

Table 21: Floor Finishes and Design Requirements

Element	Requirements

Tactile Attention Surface Indicators (TWSI)	• TWSI shall be designed to conform to Universal Design Standard requirements for configuration and location.
	• The installation of TWSI must not disrupt revenue service and shall ensure platform operations remain open.
	• For new installation refer to Precast Concrete Platform Curbs Standard.
	• For retrofit application:
	  • Tile shall be cut at dual substrate. Seal and install as per manufacturer's instructions;
	  • Sealant at joint between cut tiles to match colour of tile;
	  • Tile applied to platform surface only; and
	  • Wall cap tiles are not permitted.
	• In situations where retrofit or new installation cause disruption to revenue service or platform operations:
	  • Refer to Tactile Tile System Platform Detail;
	  • Remove asphalt to a distance of 780mm from front face of curb;
	  • Install structural tactile panel to sit on the concrete curb and compacted screening substrate, as per manufacturer instructions; and
	  • Fill asphalt transition gap between tactile panel and asphalt platform.–