HardTrack For Precast

Wake, Inc.

Who is Wake?

- Focus on Wireless Concrete Temperature Monitoring and Maturity for over 36 Years
- Long-Term, senior and in-house experts
- Total Solution, Hardware, Software & On-going Support
  - HardTrack does all the calculations
- Internationally Implemented

Wake, Inc.

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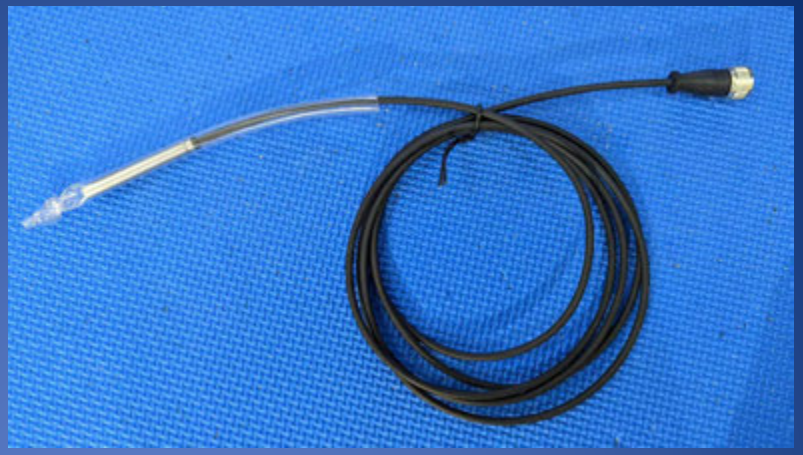
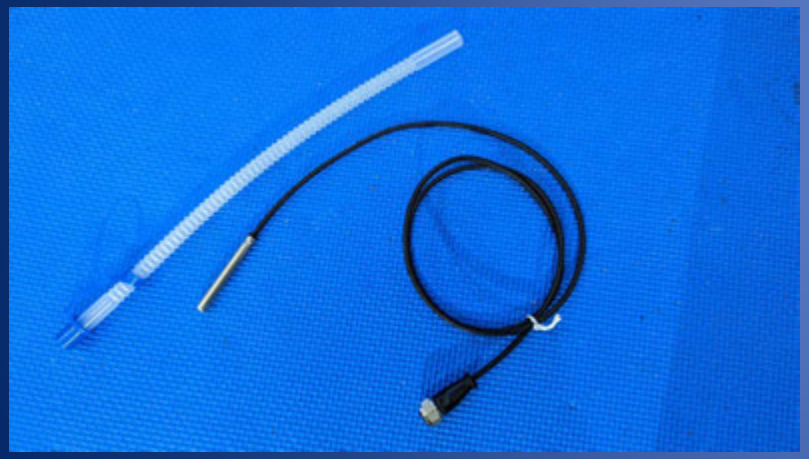
What is HardTrack?

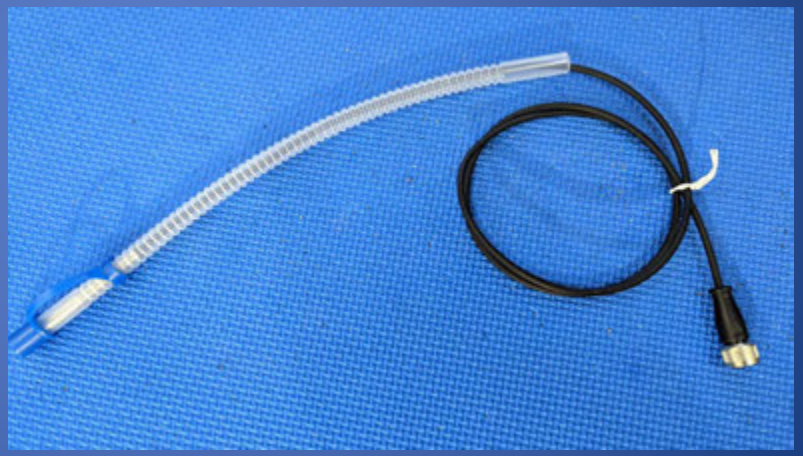
The
Leading
Wireless
Concrete Maturity
&
Temperature Monitoring
System

HardTrack makes your Concrete Talk

Only Sacrifice the Sleeve







- Bury the Probe within the Sleeve
- Cover it with concrete
- Logger collects the temperature data
- HardTrack retrieves data
- Pull Probe out of Sleeve and Reuse

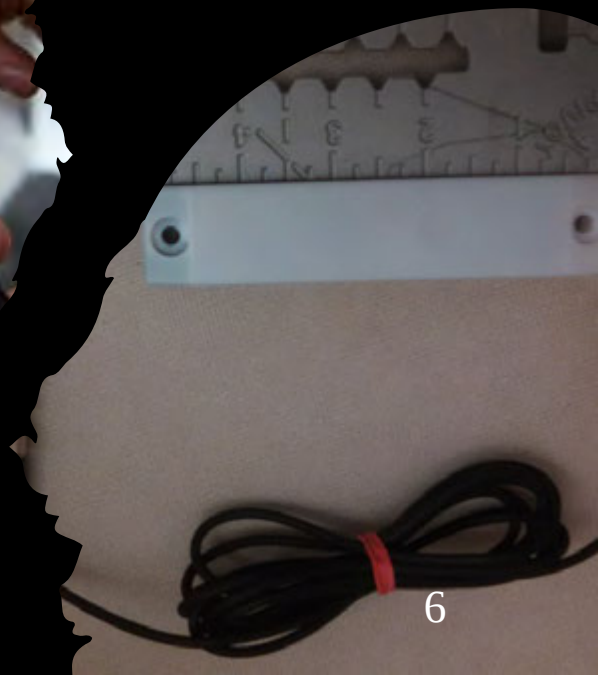
Components of HardTrack Mobile

- Handheld Portable Data Collection Device or Tablet with Bluetooth Reader
- *Wireless Logger with Temperature Probe*

- Sacrificial Temperature Probe Sleeve

Wireless Technology

- Advantages:
  - Wireless
  - Mobile & Remote
  - Data logging



Software

The HardTrack software is designed to allow the User to determine the internal temperature and/or strength of the Concrete.

HardTrack is based on the in-situ (in place) temperature

Both the Nurse-Saul (time-temperature factor) and the Arrhenius (Equivalent Age) methodology is Supported within HardTrack

Need to Reach into a Deep Pour?

Need to Reach into a Deep Pour?
No Problem!
Wireless Logger with External Probe
1m, 2m, 4m, 6m, 8m, 11m, 13m, 16m, 24m, 31m to 100 meters

Lane Construction Road Project

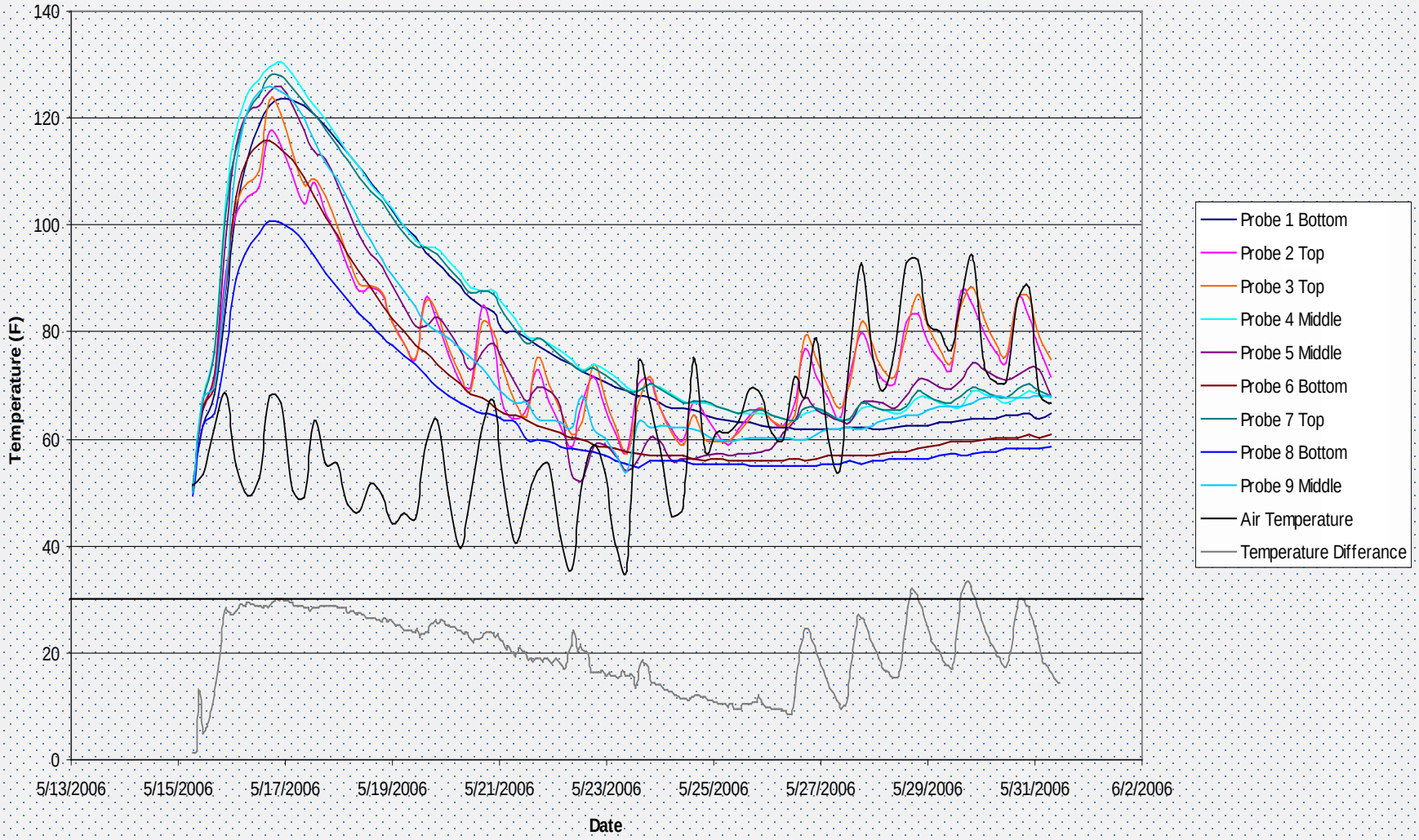
Lane Construction Road Project

LaMar Construction Project

LaMar Construction Project

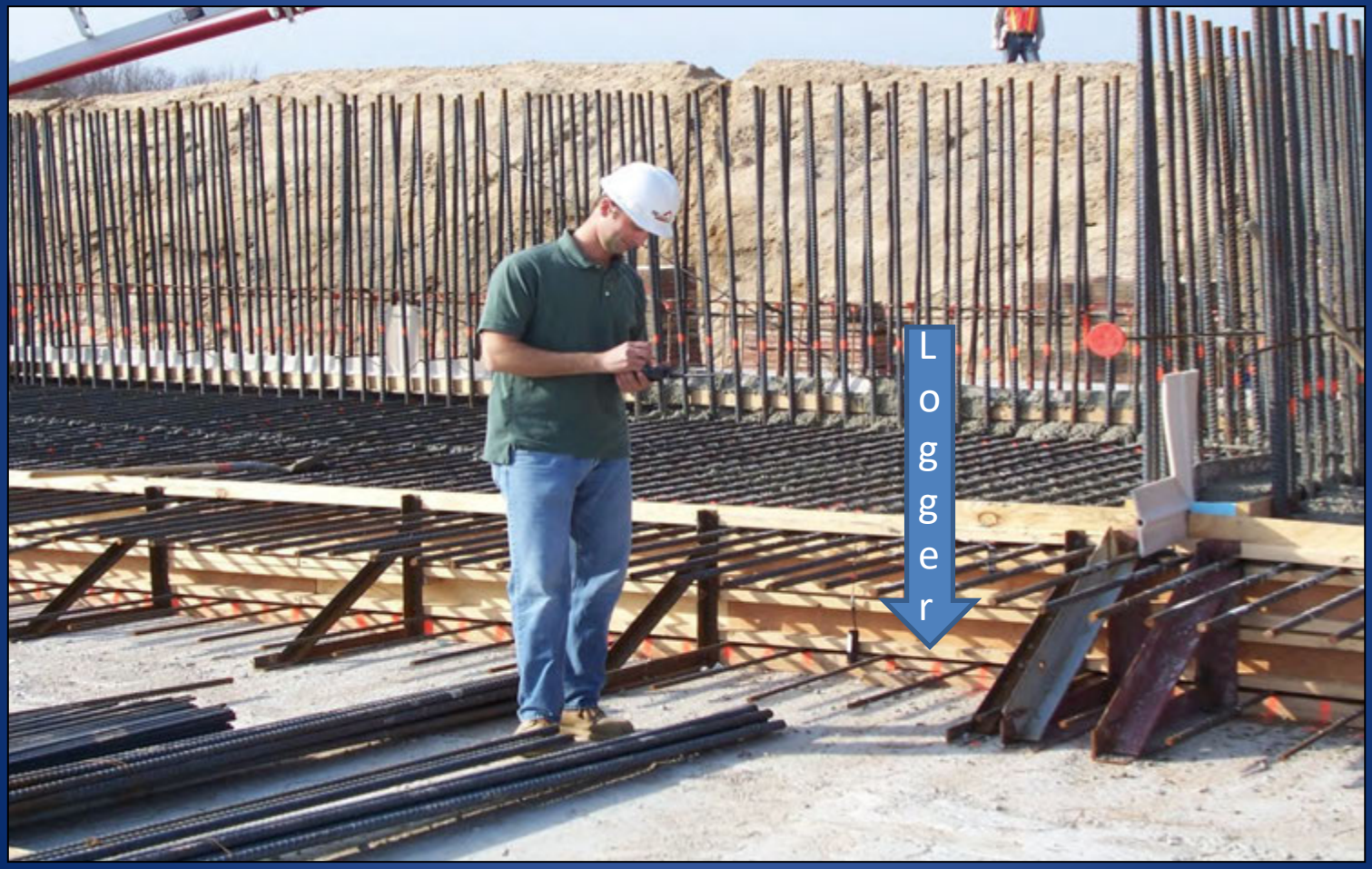
Base & Walls of Pump Station

Mass Pour Temperatures



North Kent Sewer Authority

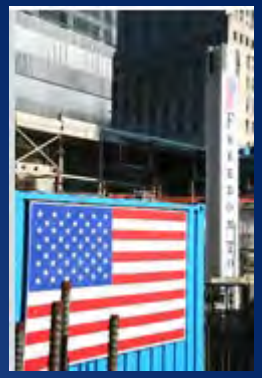
North Kent Sewer Authority



NATIONAL RENEWABLE ENERGY LABORATORY

1 WTC – Freedom Tower
WORLD TRADE CENTER 1 – 1000+ Loggers Used to Construct the Decks of the Tower

1 WTC



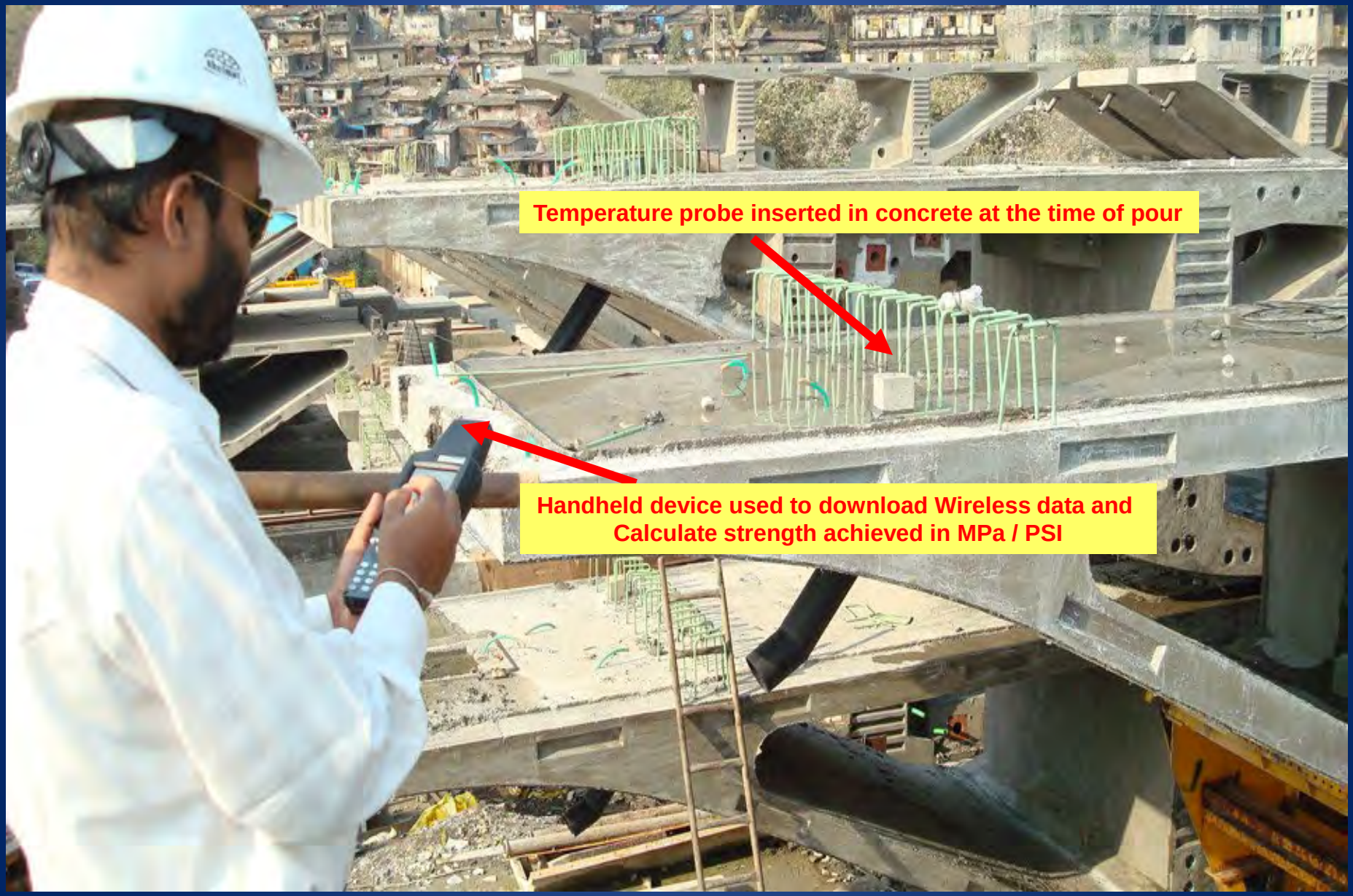
Advantages with Wireless Logger

- Recorded temperature accuracy is +/- 1◦ F
- Data is available real time (*right now*)
- Constantly monitoring the In-Situ temperature
- Temperature monitoring can continue for years
- Data can be transferred, analyzed and archived
- Documents proof of quality assurance
- Eliminate concerns of weather problems
- Eliminate concerns of construction problems

Detroit Metro Runway Rebuild

Bridge on the Sea - India

On site coordinator downloading data from Wireless Logger Bridge on the Sea - India



SHIMMICK CONSTRUCTION

The new Transbay Transit Center will be built on the site of the former Transbay Terminal in downtown San Francisco, and it will serve 11 transportation systems: AC Transit, BART, Caltrain, Golden Gate Transit, Greyhound, Muni, SamTrans, WestCAT Lynx, Amtrak, Paratransit and future High Speed Rail from San Francisco to Los Angeles/Anaheim.

SHIMMICK CONSTRUCTION

When completed in 2015, the new Transit Center will accommodate more than 100,000 passengers each weekday and more than 45 million people per year to make public transportation a convenient and accessible option for everyone who lives, works and visits the San Francisco Bay Area.

SHIMMICK
CONSTRUCTION

SHIMMICK
CONSTRUCTION
Putzmeister
LANDAVAZO

Kiewit

General Civil works for the Spillway Replacement Project at Pointe du Bois, MB, Canada

Kiewit

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Kiewit

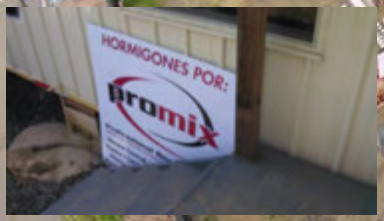
CONCRELAB
material testing laboratories

San Juan

Projects

2015

CONCRELAB
material testing laboratories



Hyatt Place

CONCRELAB
material testing laboratories

Hyatt Place

CONCRELAB
material testing laboratories

Ciudadela

CONCRELAB
material testing laboratories
Ciudadela

CONCRELAB
material testing laboratories

Directional Antenna & Reader with Internet Connection

Ciudadela

Ciudadela

HardTrack Gateway

Access Your Temperature Logs Remotely

- HardTrack Gateway contains both a wireless connection to your temperature loggers and to the Cloud

- You can access and download your temperature logs from your home or office without the need to walk the site holding the Handheld device.

- Cellular Internet Connections can be made to and from the HardTrack Gateway with the built-in 4G LTE cellular connection which uses carries, such as:

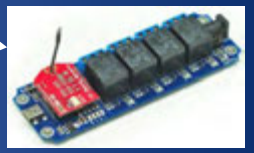
    - Verizon,
    - AT&T Worldwide,
    - T-Mobile,
    - International: Rogers, Bell, TELUS & Telstra

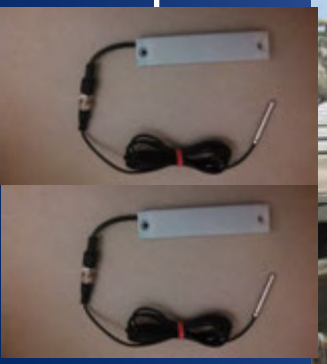
HardTrack Gateway – Power

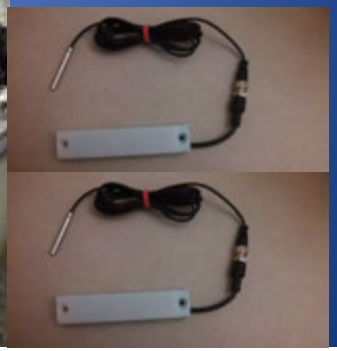
- **A/C**
- **Turbine & Solar Power**

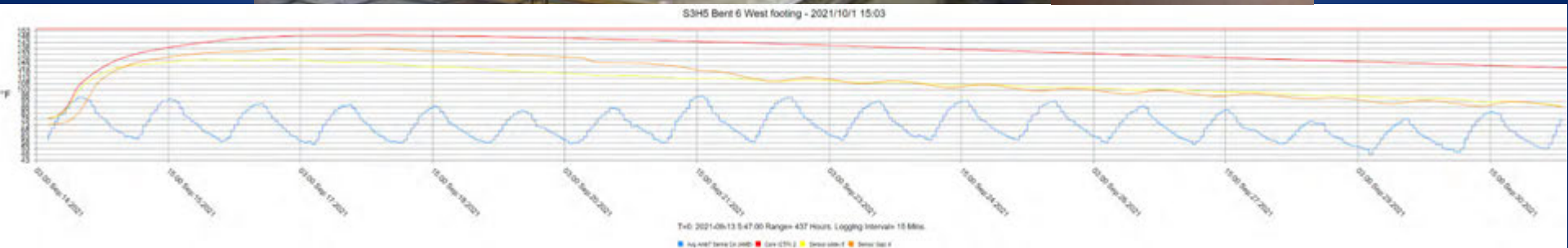
Includes Rechargeable Backup Batteries

Realtime from the casting bed to your phone









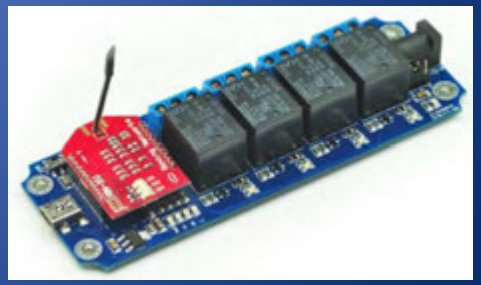
HardTrack Gateway cellular connected Temperature Logger Reader

UNI

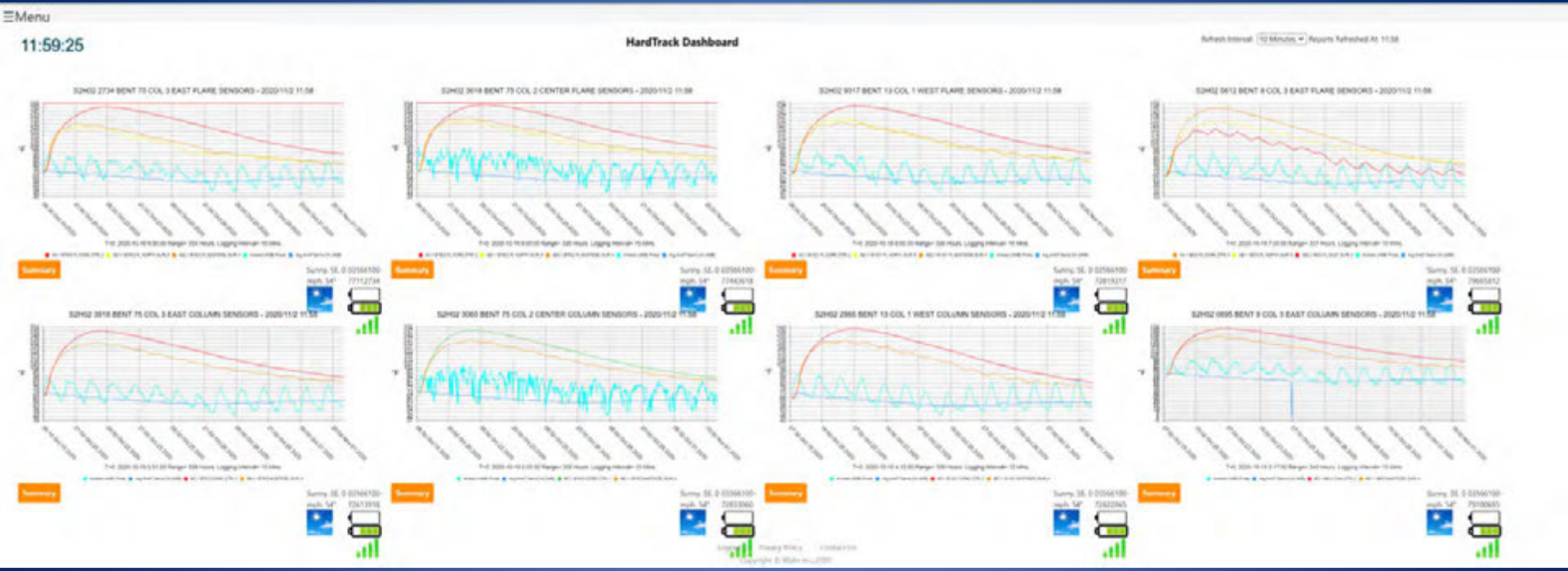
WAKE

• Wireless 4 or 8 Channel Relay

- Light Pole to Indicate:
  - Temperature Monitoring Complete
  - Concrete Maturity
  - Temperature out of Specification Approaching



See all Casts at the same time online



HardTrack makes your Concrete Talk!

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Wake will be with you every step of the way

Wake, Inc.

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