



NORTH CAROLINA

Department of Transportation



2021 CAPA/NCDOT Virtual Workshop - Work Zone Traffic Control

Don Parker, PE, State Work Zone Engineer

March 2021

Today's Discussion Topics

- Updated WZ Crash Statistics
- National Work Zone Awareness Week
- Memorial Wall
- Installer Certification Update
- Connected Lane Closure Devices
- Pedestrian Accommodations in Resurfacing Packages



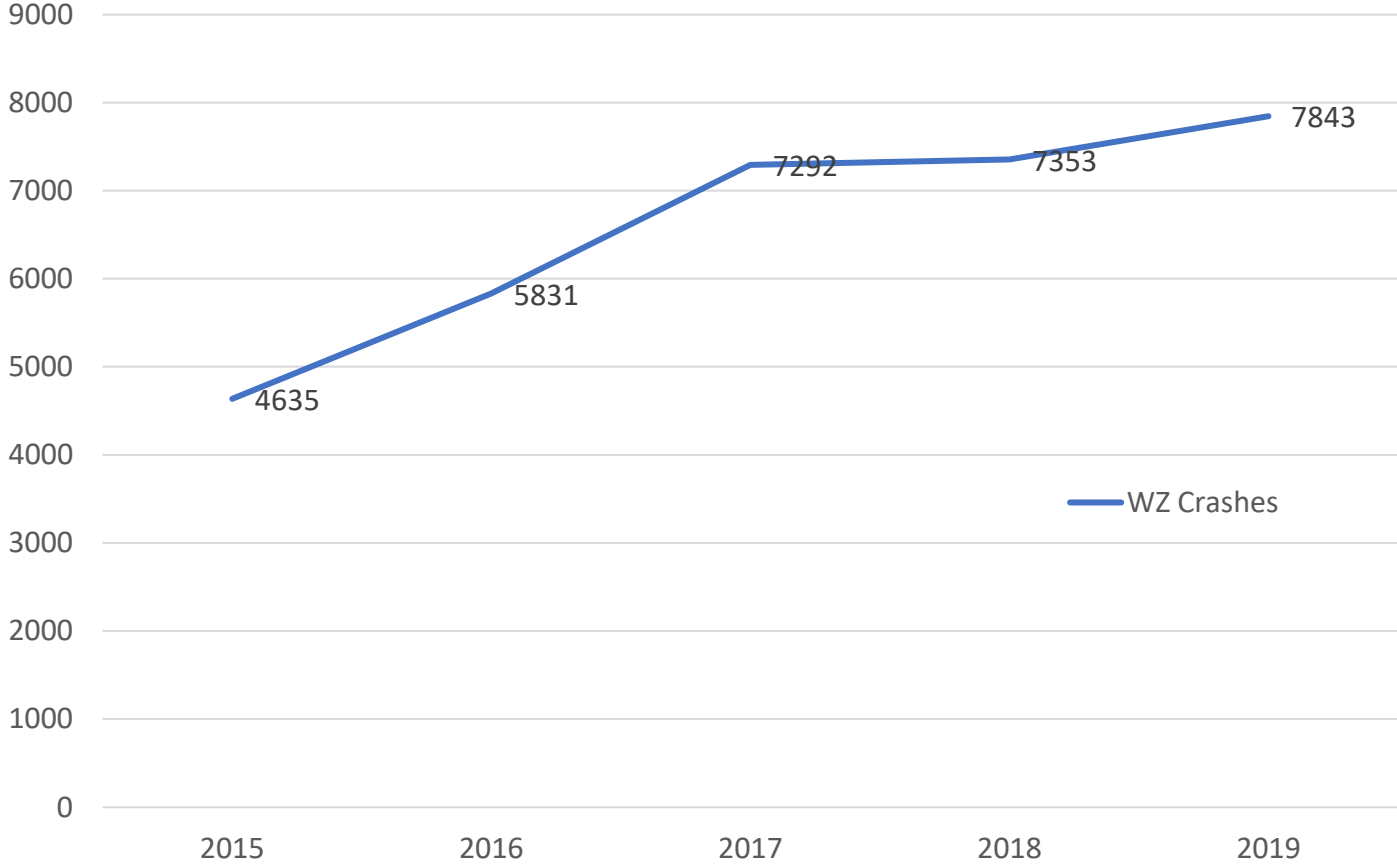
Work Zone Crash Data



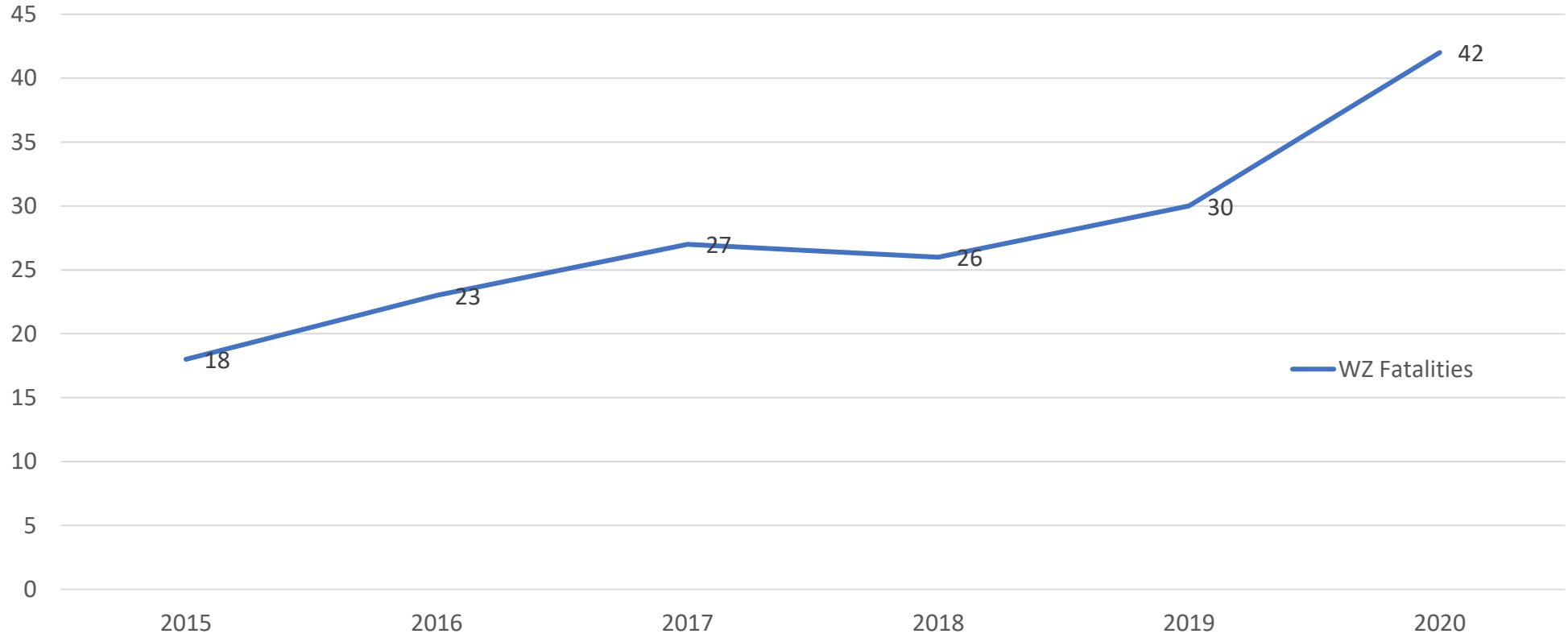
Work Zone Crash Data

- **30 Fatalities in 2019 (5 Year Average = 25)**
- **42 Fatalities in 2020 (data through 12/25/2020)**
 - 40% increase over 2019 numbers and 45% over the 5-year average
- **3 Fatalities in 2021 (data through 3/19/2021)**
- 2019 – 7,843 Work Zone Crashes
- 2020 – 3,685 Work Zone Crashes (as of 8/31/2020)

5 Year Trend of Work Zone Crashes



5 Year Trend for WZ Fatalities



Work Zone Crash Data – COVID Impacts

- 2020 - Mid-March to Mid-April our highway system saw a 40-50% reduction in travel
- With less congestion, speeds increased and the severe crash and fatality rates per miles traveled also increased, including in work zones
- Travel steadily increased over the summer and early fall last year. Currently, traffic volumes are now within 5-8% of pre-COVID travel levels.

Work Zone Fatalities involving Construction Workers in 2019 & 2020

UPDATE: Three construction workers on crew repairing guard rail on I-40 killed Thursday morning

DONNA SWICEGOOD Feb 27, 2020 Updated Feb 29, 2020



Sign up for our Coronavirus & Rossen Reports Newsletters

Surry County service worker dead after being hit by pickup truck

308 Shares

WXII12.com Web Staff

Swagger said there was a truck in the right lane, which was closed, and the three workers were in the road ahead of that truck. A second truck was in front of the three workers, he said.

FLAGGER FOR ROAD CONSTRUCTION ALONG 421 KILLED IN HIT AND RUN

Written by Bill Fisher
News
Published: 29 July 2019



A man who was working as a flagger on road construction

Construction worker killed Fri. after being struck by motorist

By Editor | March 31, 2020 | 0

A Hudson woman working at a construction site was killed last week when she was struck by a car, authorities said.

On Friday, March 27, 2020, at approximately 5:35 p.m., the NC State Highway Patrol responded to a fatal collision in Alexander County on Church Road near Fox Court, according to Ma: State Highway Patrol.

As part of a lane closure due to water line installation, a traffic control stop sign. The work zone was marked with several signs. A 2014 Voll flagger.

The flagger, Tabatha Dawn White, 44, of Hudson was pronounced de Sipe, 23, of Taylorsville. Sipe has been charged with Misdemeanor D

The collision continues to be under investigation.

NEWS

Construction worker dead, three others injured after being hit by drunk driver near Concord Mills Mall



CRIME

Woman charged after Winston-Salem man working traffic control hit and killed

National Work Zone
Awareness Week
April 26-30, 2021



Wear Orange Day April 28th

Show support for those killed in work zones as well as their families.

Post images to social media

#Orange4Safety

#GoOrangeDay



Coming to North Carolina!

April 12-16, 2021

DEDICATED TO THE MEMORIES OF THOSE LOST IN OUR NATION'S ROADWAY WORK ZONES

NATIONAL WORK ZONE MEMORIAL

The Foundation
American Traffic Safety Services Foundation

Welcome Center I-95 SB in Northampton County just south of the Virginia Line

April 12-16, 2021 Press Conference April 13th at 8:30

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Work Zone Training Certification Update

- North Carolina requires that work zone training appropriate to the job decisions that each individual is required to make.
- Three levels of Certification:
 - Supervisor (2011)
 - Installer (2021)
 - Flagger (2010)



Installer Certification

- Goal is safe and correct installation of temporary traffic control
- Bridge the gap between the Supervisor and Flagging certification
- Challenges
 - Large number of people
 - Course and Exam rigor
 - Turnover rates
 - Course availability



Installer Certification

Effective July 1, 2021

At least one member of every crew responsible for setup, installation, and removal of traffic control devices within any highway right of way shall be trained and certified as a Work Zone Installer. The certified Work Zone Installer should serve as crew leader and shall be on site and directing the installation and removal of temporary traffic control.

All other members of the crew shall be certified flaggers, even if flagging is not being performed as part of the traffic control.

Installer Certification

- The installer is **ON SITE - DIRECTING** and **PARTICIPATING** in the safe and correct set up and removal of temporary traffic control
- Supervisor does not have to be on site, but the Installer does



Installer Certification

The Work Zone Installer does not replace or change the requirements of a Work Zone Supervisor as described in article 1101-13 of the Standard Specifications. For every project, the contractor must provide a certified Supervisor that

- Has the overall responsibility for proper implementation of the TMP
- Ensures employees have received proper training.
- Available to address concerns of the Resident

A supervisor can replace an installer during a TTC installation, but an Installer cannot be a replacement for the Supervisor

Installer Certification

All other members of the crew shall be certified flaggers, even if flagging is not being performed as part of the traffic control.

An approved flagger course does include necessary components of safety for someone working in and around traffic

- Entering and exiting the work zone
- Proper positioning of oneself and vehicles relative to traffic.
- Instruction on personal protective equipment and safety vest
- How to conduct yourself in and around traffic
- How to make sure you are clearly visible to motorist

Course is more readily available and appropriate for the decisions being made of most members of a traffic control crew.

Installer Certification

Training and certification provided by Department approved trainers

- ATTSA
- ITRE
- JM Teague Engineering
- <https://connect.ncdot.gov/projects/WZTC/Documents/SupervisorTraining.pdf>
- Certification is good for 4 years

Installer Certification - Self Certification

Contractors can train and self certify their employees.

Trainer Credentials (Revised)

- 3 years' experience in the road construction industry. Examples of qualifying industry experience include but not limited to the following:
 - Construction Foreman, Superintendent, Project Engineer, Project Manager
 - Flagging, Traffic Control Installation, and/or Pavement Marking Installation
 - Equipment Operator, Material Testing/Inspection and/or Utility work within highway R/W
 - Company Safety Officer or similar position knowledgeable in roadside safety.
 - Construction Engineering and/or Designing or Developing Temporary Traffic Control Plans and details
- Completion of an approved Work Zone Supervisor course including a passing score on the exam.

Installer Certification - Self Certification



Installer Course Content

- Traffic Control Fundamentals
- Common Traffic Control Devices
- Other Devices specific to Interstate Work Zones
- How to use and apply the Roadway Standard Drawings
- Installation sequencing for traffic control
- Pedestrian Accommodations
- Tail Gate meetings

Installer Certification-Self Certification

- All Day Class; 6 to 7 hours worth of instruction
- 25 Question (Min) Exam 70 or better to pass
- Retesting is permissible
- Develop written course manual that the student can keep
- Develop a Power Point to teach it from
- Submit to training material, power point, and exam to WZTC for review and approval

Installer Certification Summary

- Effective July 1, At least one person on the traffic control crew shall be certified as an Installer
- All other members certified as Flaggers
- Certification will be good for 4 years
- Training is available from approved trainers
- Contractors can also self certify

Updated Work Zone Safety Training Website

- Latest Memo is at the top of the page.
- Historical memos are to the right
- Added Installer course guidelines
- NEW: Work Zone Education Verification App (WZ-EVA)

Connect NCDOT
BUSINESS PARTNER RESOURCES

Home Help Site Map

Doing Business Bidding & Letting **Projects** Resources Local Governments

Search...

Planning Construction Research Roadway Design **Work Zone** Contracts Toolkit Bike & Pedestrian Project Management Value Management

Work Zone Safety Training

Work Zone Safety Qualification and Training Program

Connect NCDOT > Projects > Work Zone > Work Zone Safety Training

- March 2021 Work Zone Certification Update
2021-03-10 15:00:49
- WZ - Updated Minimum Training Elements
2020-08-25 09:29:14
- Implementation Document - FHWA Final Rule on Safety & Mobility
2019-09-30 08:46:30

Approved Training Resources

- Work Zone Traffic Control Flagger Trainer Resources
- Work Zone Traffic Control Flagger Training Resources
- Work Zone Supervisor / Installer Training Resources
- Work Zone Supervisor Instructor Training Resources
- NCDOT Maintenance Utility Traffic Control Guidelines

Work Zone Education Verification (WZ-EVA)

- Instruction For Uploading Training Certifications
- Work Zone Education Verification

Training Memo Archive

- WZ_Certifications_Extension MEMO_Nov2020
- WZ_Certifications_Extension_MEM O_July2020

Contact Form
For questions & feedback about this area of Connect NCDOT, contact WZ Training and Certifications .

WZ-EVA

- Online database for Residents and Inspectors to verify WZ training credentials
- Records are uploaded by training firms

The screenshot displays the 'Work Zone Education Verification' web application. The header includes navigation links like 'Home', 'Help', 'Team Sites', and 'Site Map', along with a search bar. The main content area is titled 'Search Verified Personnel' and features a table of personnel records. A sidebar on the left provides additional search options.

Last Name	First Name	MI	Certification Type	Expiration Date	Class Date	Trained By	Training Firm	Training Program	UniqueNum	Card	Status
Abbott	Scott		Flagger	10/15/2022	10/16/2018	Tim Baughman	ITRE	ITRE	WZ100962537	Card	Active
Abdalla	Hany		WZ Installer	6/8/2024	6/9/2020	Scott Tison	ITRE	ITRE	WZ277729704	Card	Active
Ables	William		Flagger	9/21/2024	9/21/2020	Idaly Patridge	ITRE	ITRE	WZ335876375	Card	Active
Adame	Juan		WZ Supervisor	12/10/2023	12/11/2019	Scott Tison	ITRE	ITRE	WZ408333546	Card	Active
Adams	Levi		Flagger	7/1/2021	5/30/2017	Tim Baughman	ITRE	ITRE	WZ82299510	Card	Active
Adams	Kenny		WZ Supervisor	3/20/2023	3/21/2019	Tim Baughman	ITRE	ITRE	WZ66881760	Card	Active
Ahren	Peter		WZ Supervisor	9/13/2021	9/14/2017	Tim Baughman	ITRE	ITRE	WZ425215193	Card	Active
Albers	Cory		Flagger	3/1/2022	3/2/2018	Scott Tison	ITRE	ITRE	WZ110414301	Card	Active
Alcantara	Luis		WZ Installer	7/24/2022	7/25/2018	Tim Baughman	ITRE	ITRE	WZ128491450	Card	Active
Alexander	Paul		WZ Installer	5/7/2022	5/8/2018	Tim Baughman	ITRE	ITRE	WZ409788873	Card	Active
Alford	Michael	Scott	WZ Supervisor	12/17/2024	12/17/2020	Scott Tison	ITRE	ITRE	WZ358852029	Card	Active

WZ-EVA

- Public-facing site does not allow for printing wallet cards
 - Only individuals approved to upload records can print wallet cards.
- Only NCDOT WZTC staff can modify or delete records.
- NCDOT will not be providing hard-copy wallet cards. We will issue digital wallet cards only to individuals seeking 1-year SC/VA reciprocity.

WZ-EVA

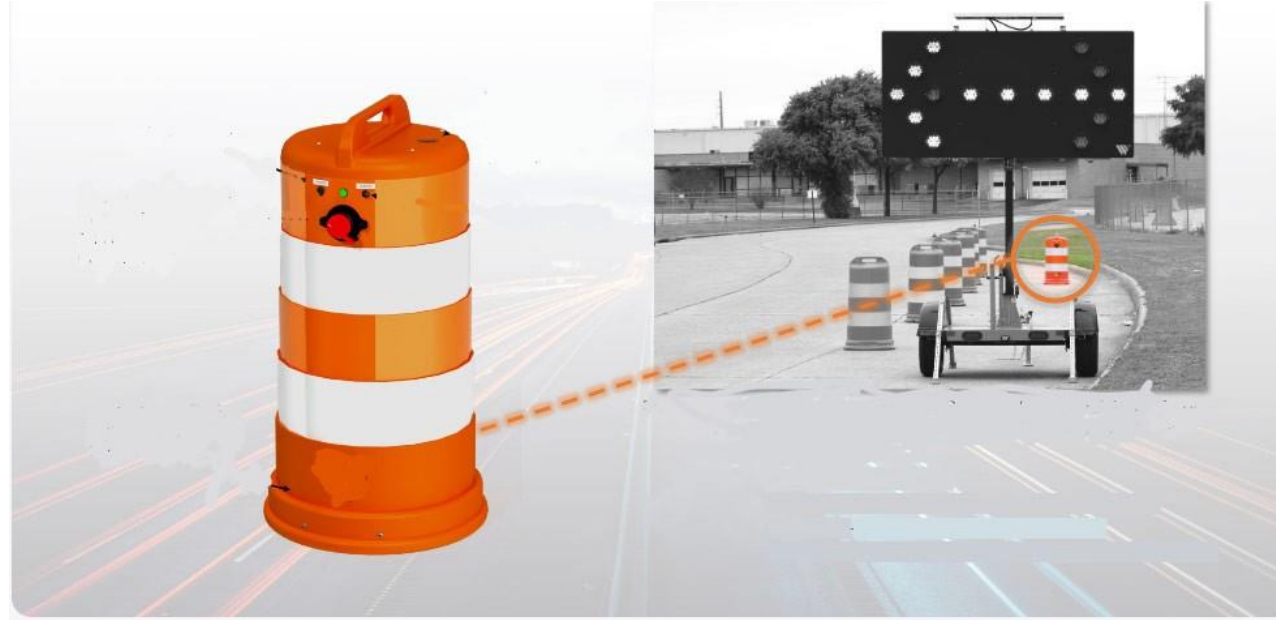
- Each certification has a unique identifying number.
- Re-certifications will get a unique number
- System will generate flagger/installer/supervisor wallet cards
- Trainers need to provide wallet cards to students.



Work Zone Certifications

- SC/VA certification reciprocity grace period is 1 year.
 - WZTC unit will be tracking these certification requests
 - Individuals will be issued a NC Certification card that expires in 1 year, and they will be listed in WZ-EVA.
 - Non-renewable – Individuals must obtain NC certification within that year to avoid a disruption in certification

Connected Lane Closure Devices



- Continuing Implementation of Smart Work Zone Technology
- Effective July 2021 Lettings

Connected Lane Closure Devices

- Connected lane closure devices function as a pair
- GPS equipped, and transmits the location of the lane closure to navigational companies such as WAZE, Google Maps, as well as the Statewide Transportation Operations Center, STOC.
- Also going to provide the WZ info directly to the dash of connected vehicles which will make up larger and larger percentage of the overall fleet as the automotive industry advances toward automation



Connected Lane Closure Devices

- Alert motorists that they are approaching an active work zone where people are working inside a closed travel lane



Connected Lane Closure Devices

- For a group of lane closure (could be a single, double, or triple) two devices are required
- Paid by the each
- Device is installed on first FAB identifying the beginning of a lane closure
- Device is installed to a drum or other crashworthy device at the end of the same closure
- Pay item is for the device , not the FAB or the drum (they are included in the lane closure
- Effective July 2021 lettings



Pedestrian Accommodations in Resurfacing Projects

- Sidewalk curb ramp upgrades are now in some resurfacing packages
- Requires removal and replacement of sidewalk segment to meet ADA standards
- Pedestrian access must be maintained
- New Special Provisions included with these packages
 - RWZ-4
 - ADA Compliant Traffic Control Devices
 - Pedestrian Transport Service



Pedestrian Accommodations in Resurfacing Projects

7 days is allowed for each severed sidewalk location

New Special Provision inserted that provides 3 options:

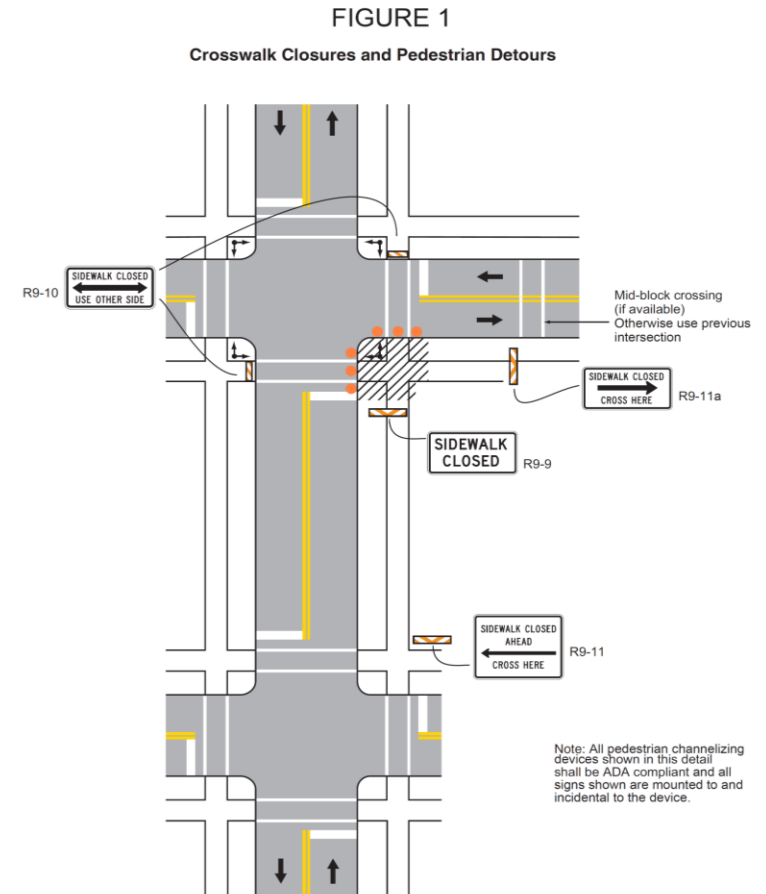
- If on site, can provide an escort to assist the pedestrian around the location
- Provide a temporary pedestrian detour
- Provide a Pedestrian Transport Service



Pedestrian Accommodations in Resurfacing Projects

Temporary Pedestrian Detour

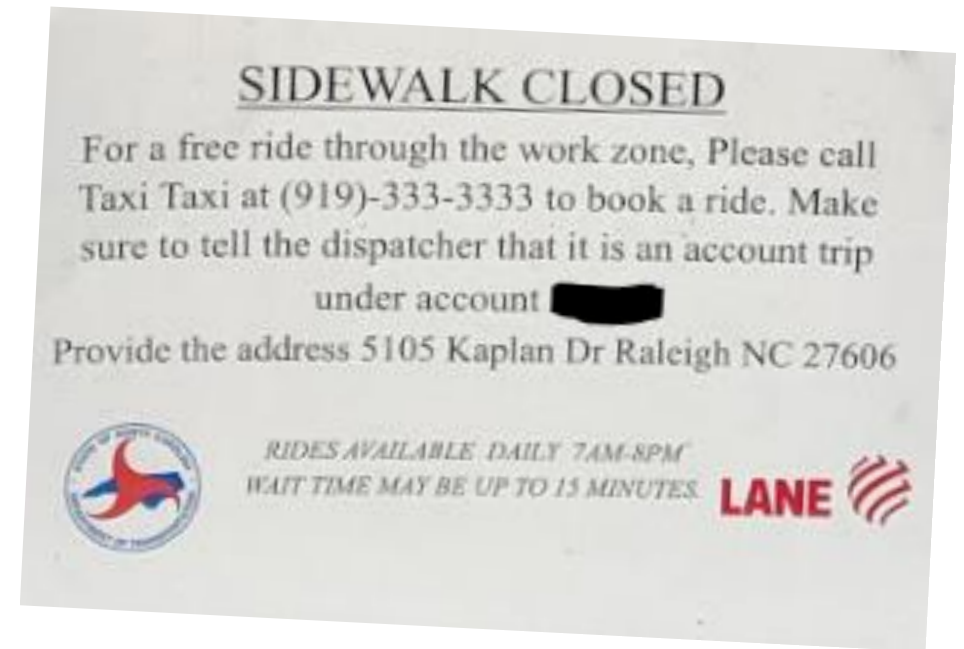
- Detour requires approval of the Engineer
- Detour cannot exceed ½ mile of additional travel
- Accessibility features are consistent with the closed sidewalk
- No existing accessibility pedestrian signals with ½ mile
- Use ADA compliant control devices (SP and Pay Item provided)



Pedestrian Accommodations in Resurfacing Projects

Pedestrian Transport Service SP

- An on-call service used to transport pedestrians around the project when no stable, traversable path can be maintained through the work area. Must enlist a licensed operator, such as a taxi or ridesharing service.
- Requires Audible Warning
- Will need to identify suitable pickup locations in plans.
- SP and Pay Item Provided
- Estimate: (Daily Ped Count) x (# of Days Sidewalk Interrupted)



ADA Compliant Traffic Control Devices

- ADA Compliant Traffic Control Devices – Pedestrian Channelizing Devices and Temporary Curb Ramp
 - Used in conjunction with pedestrian detours at hard and soft closure
 - Would Include a sidewalk closed sign
 - Smooth top rail
 - Detectable bottom rail



ADA Compliant Traffic Control Devices

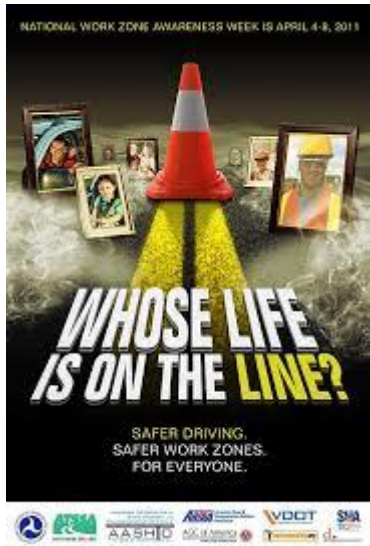
- Temporary Curb Ramps
 - Used whenever pedestrians must traverse an existing curb or other grade change.



ADA Compliant Traffic Control Devices

- ADA Compliant Traffic Control Devices – Audible Warning Devices
 - For visually impaired individuals
 - Used in conjunction with pedestrian transport service at sidewalk closure locations.
 - Motion Activated
 - Provide a recorded Message





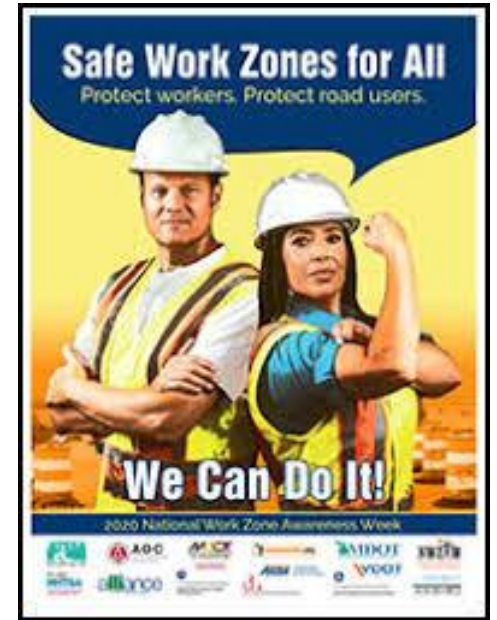
Questions/Comments?

Contact Information

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National WZ Awareness Week April 26-30, 2021

