

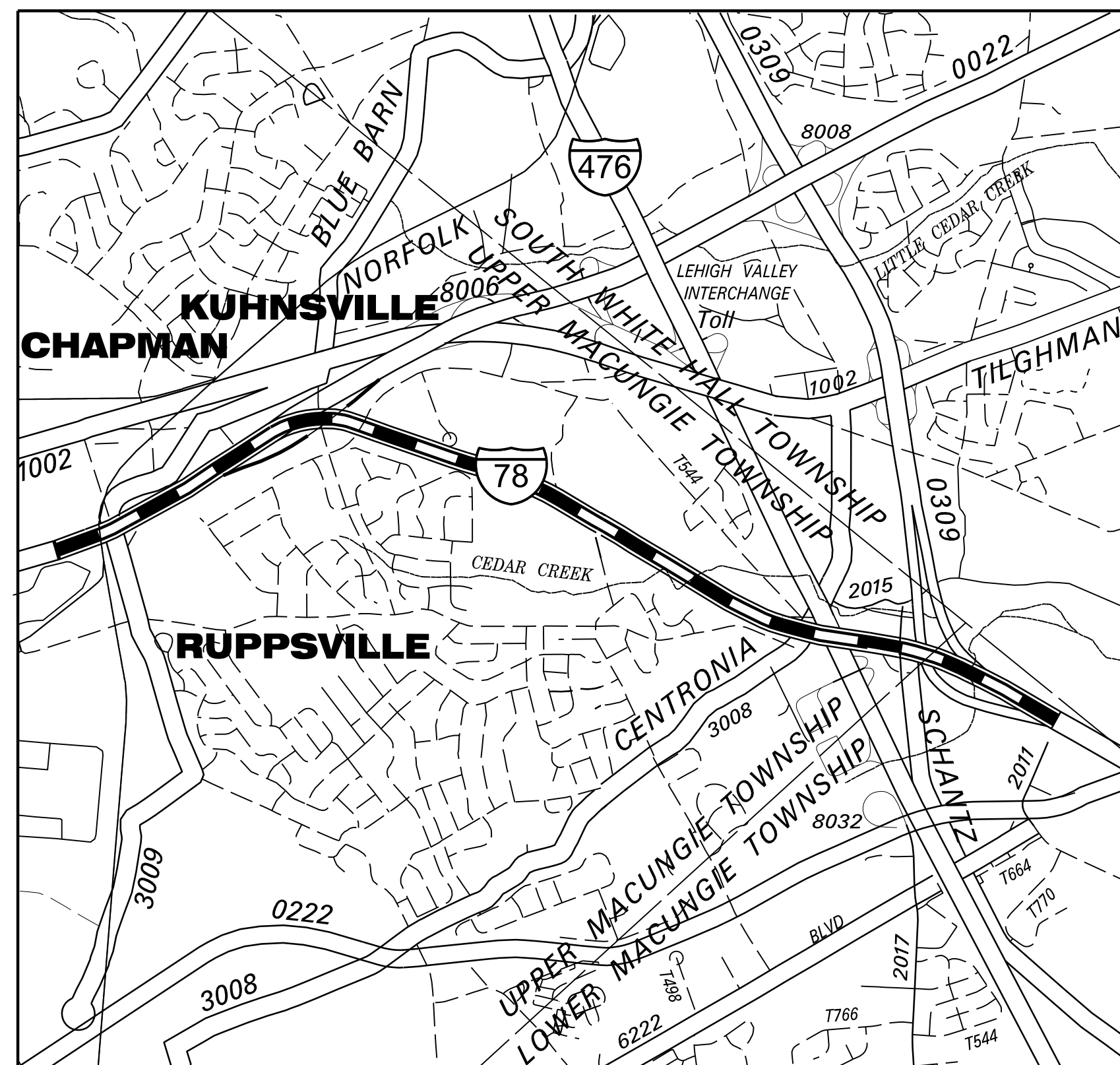
OPERATOR: kpeters - FILE NAME: \\ad-rkk.com\fs\cloud\Projects\2019\19096\_050E2019\W04 - SR 78 - 16M\CADD\Drawings\SR 78 - 16M\CADD\Drawings\Summary-ALL-0078.dgn PLOTTED: 8/5/2020

## PROJECT DESCRIPTION

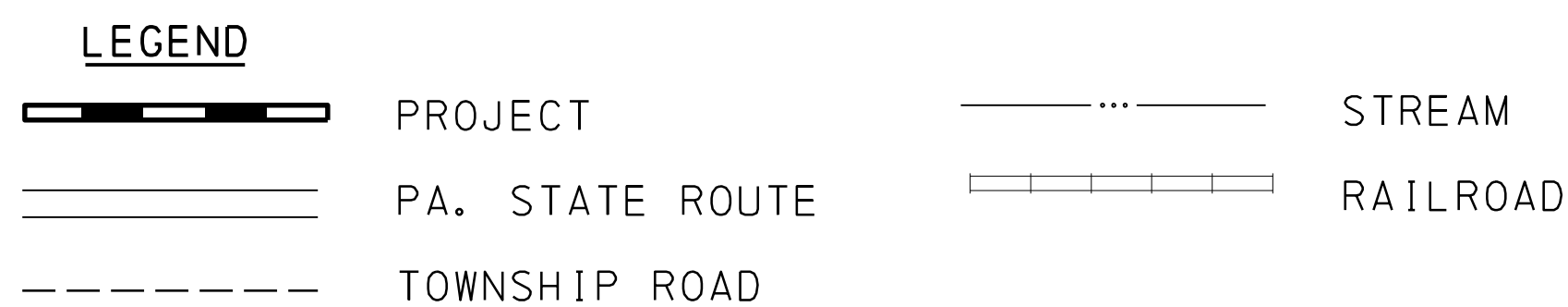
The I-78 Pavement Preservation Project consists of pavement rehabilitation, traffic barrier upgrades, and drainage improvements. Located in Lehigh County within Upper and Lower Macungie Townships, the project limits begin 1 mile east of the SR 0100 interchange and extend for approximately 3 miles to the interchange with SR 0309 (See Location Map below). The existing pavement within the corridor consists of plain cement concrete pavement that was constructed in 1987-1988 but has been exhibiting multiple types of failures throughout its life.

The proposed project will repair the deteriorating pavement sections with select full-depth patching, slab stabilization, and application of Ultra-Thin Bonded Wearing Course (UTBWC). Based on past studies that indicate drainage failures may be a contributing element leading to the premature pavement failure, the existing pavement underdrain, or base drain, will be replaced. Other improvements to the existing drainage system include cleaning and select pipe lining.

Additional improvements associated with this project include removal of the existing concrete median barrier and replacement with concrete glare screen set to the elevation of the new pavement surface. Also, all existing guide rail, crash attenuators, and end treatments will be replaced with new guide rail that meets current standards. Concrete barrier located adjacent to existing noise walls and/or concrete barrier integral with existing moment slabs and retaining walls will not be replaced as a part of this project. No changes to bridges or overhead sign structures are proposed as part of this project



**PROJECT LOCATION MAP**



## TRAFFIC CONTROL AND CONSTRUCTION SEQUENCING

Construction activities will be undertaken using several traffic patterns to include both short term and long-term patterns. The patterns will be directly related to the type of construction to be undertaken.

- Short term traffic control on this project consists of using removeable channelizing devices with lane restrictions that are implemented during nighttime hours (9:00 pm to 6:00 am). Traffic patterns are returned to existing by 6 am every day. Lane restrictions will not be implemented on Friday or Saturday nights.
- Long term traffic control will be undertaken where work areas are adjacent to travel lanes. In this instance, temporary concrete barrier will be utilized. Traffic patterns remain in effect for the duration of that specific construction activity.

Specifically, traffic control during construction will be undertaken as follows:

Stage 1 – Construction activities will include pipe cleaning, video inspection of the drainage facilities, and removal and replacement of the concrete median barrier and pavement base drain.

- Stage 1A will involve pipe cleaning and video inspection. Work will be completed during nighttime operations (9:00 PM to 6:00 AM) using lane and shoulder closures.
- Stage 1B will consist of removing and replacing the existing median barrier with concrete glare screen and replacing the 6-inch median pavement base drain. Work will be performed using long term traffic control to be facilitated with temporary concrete barrier. See the plans for locations of work in Stage 1B.

Stage 2 – Construction activities will include shoulder reconstruction, pavement base drain replacement and off shoulder drainage repairs. This work will be broken into three (3) different sub-stages for varying types of pavement base drain replacement.

- Stage 2A – will consist of shoulder reconstruction and pavement base drain replacement. This work will take place from the western limit of the project up to the SR 0022 split.
- Stage 2B –will consist of drainage repairs that fall outside the limits of the paved shoulders. This work will begin at the eastern limit of Stage 2A (the SR 0022 split) and will continue to the eastern project limit at the interchange with SR 0309. Since the pavement base drain is located along the outside of the shoulder, a full shoulder reconstruction is not needed.
- Stage 2C –will consist of shoulder reconstruction and pavement base drain replacement as under stage 2A, however, due to the existing traffic patterns and lane configurations, shifts in the traffic will need to be incorporated to facilitate construction. This work is located 1 mile east of the SR 0100 interchange in the eastbound direction. Travel lanes will be reduced to 11 feet during Stage 2C to facilitate removal and replacement of the damaged inlet and pavement base drain.

All work in Stage 2 will be performed under a combination of short- and long-term traffic control patterns. See the plans for locations of work in Stage 2.

Stage 3 – Construction activities will involve pipe lining, guide rail replacement, slab stabilization and concrete patching using accelerated curing concrete followed by placement of ultra-thin bonded wearing course. All work completed in Stage 3 will be performed under nighttime operations (9:00 PM to 6:00 AM) using lane and shoulder closures. Once patching has been completed, a nova chip micro surfacing treatment will be placed using short term lane closers followed by line painting. Exact locations are not depicted on the following plans.

We anticipate bidding this project in March 2021 and beginning construction in early Summer of 2021 with completion by Fall of 2022.

**PRELIMINARY**

<b>LEHIGH COUNTY SR 0078, SEC 16M I-78 PAVEMENT PRESERVATION PROJECT</b>		
<b>PROJECT OVERVIEW</b>		
	<b>August 2020</b>	<b>SHEET 1 OF 7</b>

8/5/2020

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**LEGEND**

- EXISTING LANE PAVEMENT MARKINGS
- 320 BASELINE AND STATION
- STAGE 1B WORK ZONE
- STAGE 2A WORK ZONE
- STAGE 2B WORK ZONE
- STAGE 2C WORK ZONE
- TEMPORARY CONCRETE BARRIER
- TRAFFIC FLOW ARROW

SCALE  
0 75 150 FEET



SEE BELOW



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SEE SHEET 3

**PRELIMINARY**

**LEHIGH COUNTY  
SR 0078, SEC 16M  
I-78 PAVEMENT PRESERVATION PROJECT**

**CONSTRUCTION WORK ZONES  
EASTBOUND AND WESTBOUND I-78**



August 2020

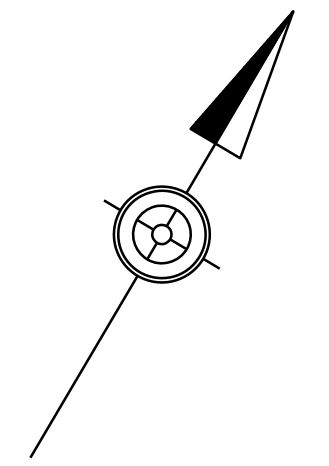
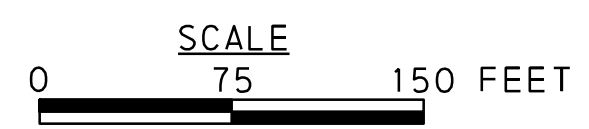
SHEET 2 OF 7

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**LEGEND**

- EXISTING LANE PAVEMENT MARKINGS
- 320 BASELINE AND STATION
- STAGE 1B WORK ZONE
- STAGE 2A WORK ZONE
- STAGE 2B WORK ZONE
- STAGE 2C WORK ZONE
- TEMPORARY CONCRETE BARRIER
- TRAFFIC FLOW ARROW



SEE SHEET 2

SEE SHEET 4

LEHIGH COUNTY  
 SR 0078, SEC 16M  
 I-78 PAVEMENT PRESERVATION PROJECT

CONSTRUCTION WORK ZONES  
 EASTBOUND AND WESTBOUND I-78

**PRELIMINARY**



August 2020

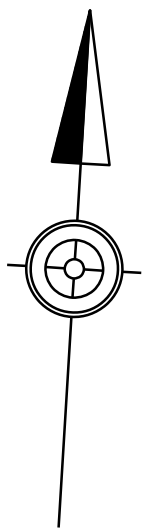
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**LEGEND**

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SCALE  
0 75 150 FEET



**PRELIMINARY**

**LEHIGH COUNTY  
SR 0078, SEC 16M  
I-78 PAVEMENT PRESERVATION PROJECT**

**CONSTRUCTION WORK ZONES  
EASTBOUND AND WESTBOUND I-78**



August 2020

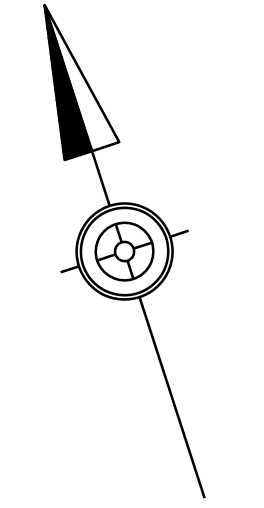
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**LEGEND**

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- BASELINE AND STATION
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- STAGE 2C WORK ZONE
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- TRAFFIC FLOW ARROW

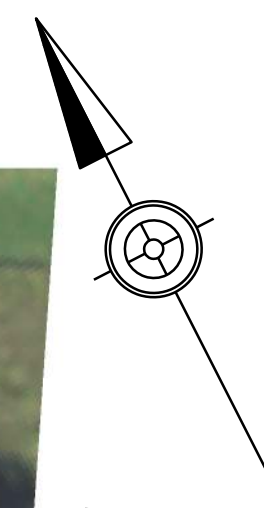
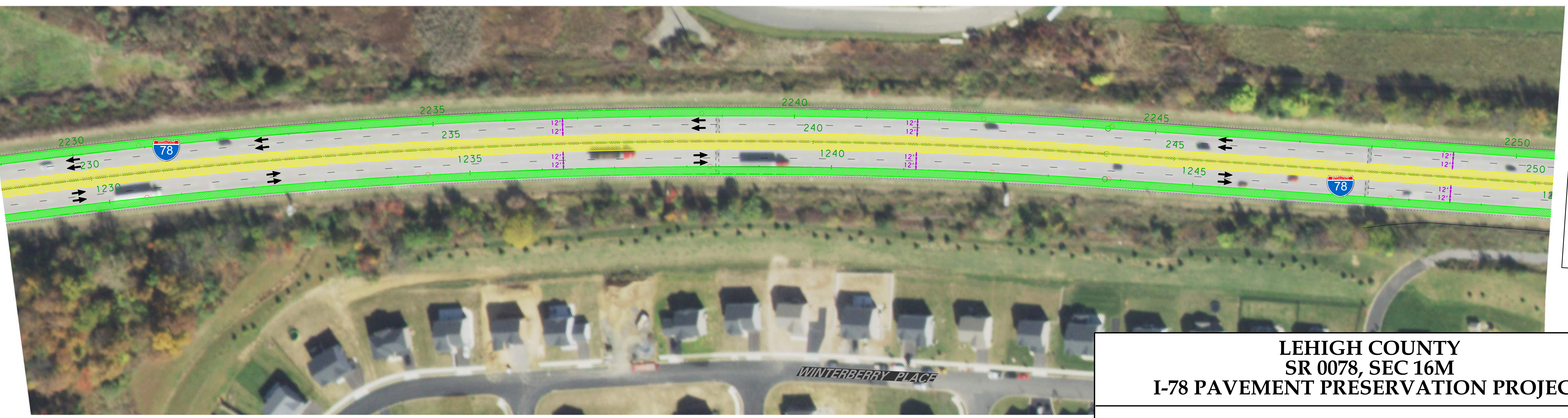


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**LEHIGH COUNTY  
SR 0078, SEC 16M  
I-78 PAVEMENT PRESERVATION PROJECT**

**CONSTRUCTION WORK ZONES  
EASTBOUND AND WESTBOUND I-78**

**PRELIMINARY**



August 2020

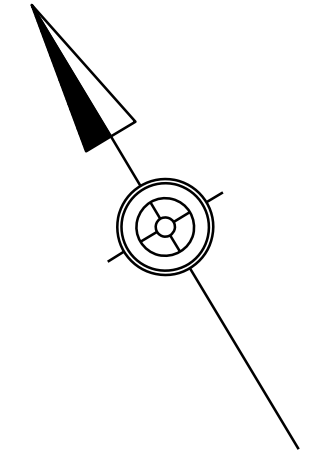
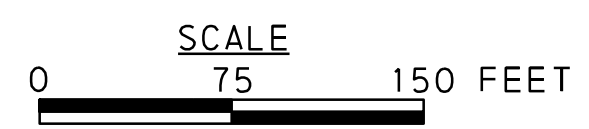
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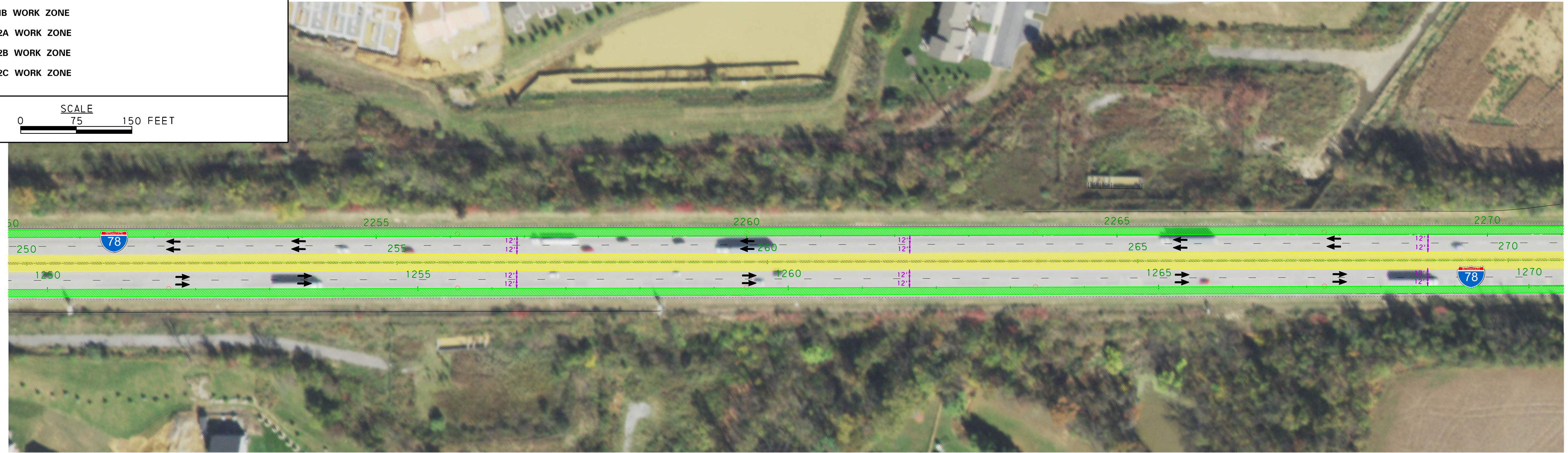
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**LEGEND**

- EXISTING LANE PAVEMENT MARKINGS
- 320 BASELINE AND STATION
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- STAGE 2C WORK ZONE
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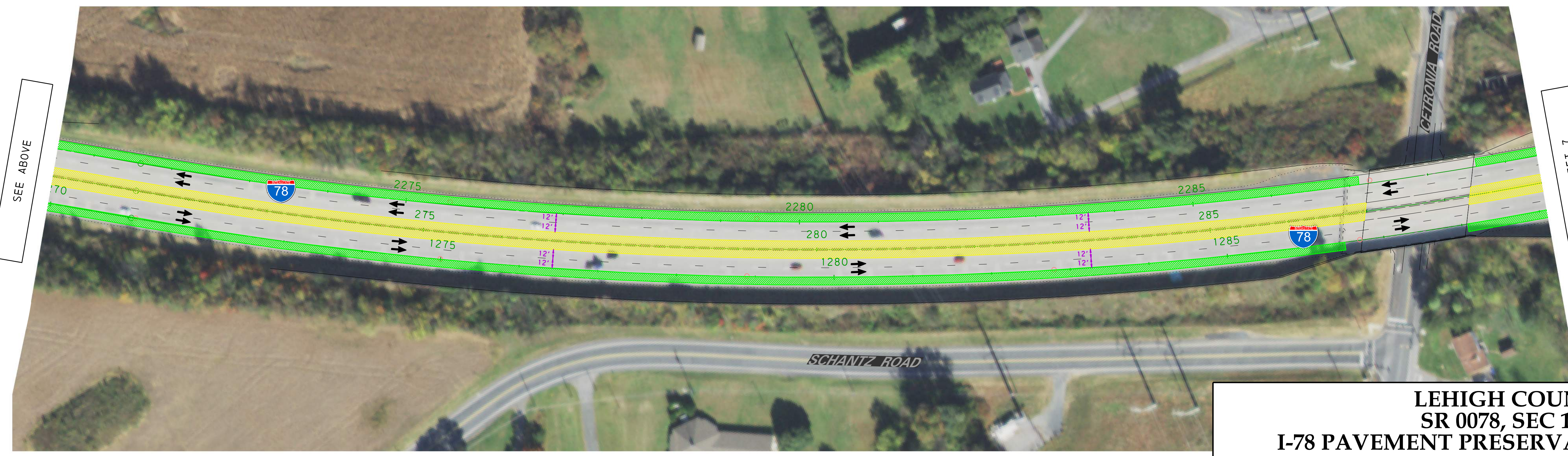


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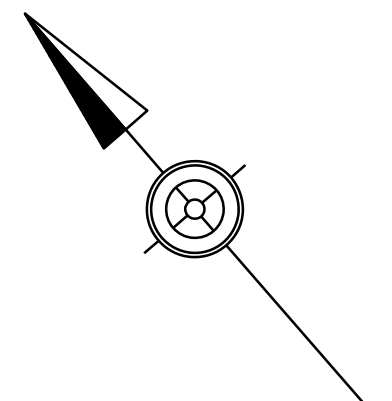


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**LEHIGH COUNTY  
SR 0078, SEC 16M  
I-78 PAVEMENT PRESERVATION PROJECT**

**CONSTRUCTION WORK ZONES  
EASTBOUND AND WESTBOUND I-78**

**PRELIMINARY**



August 2020

SHEET 6 OF 7

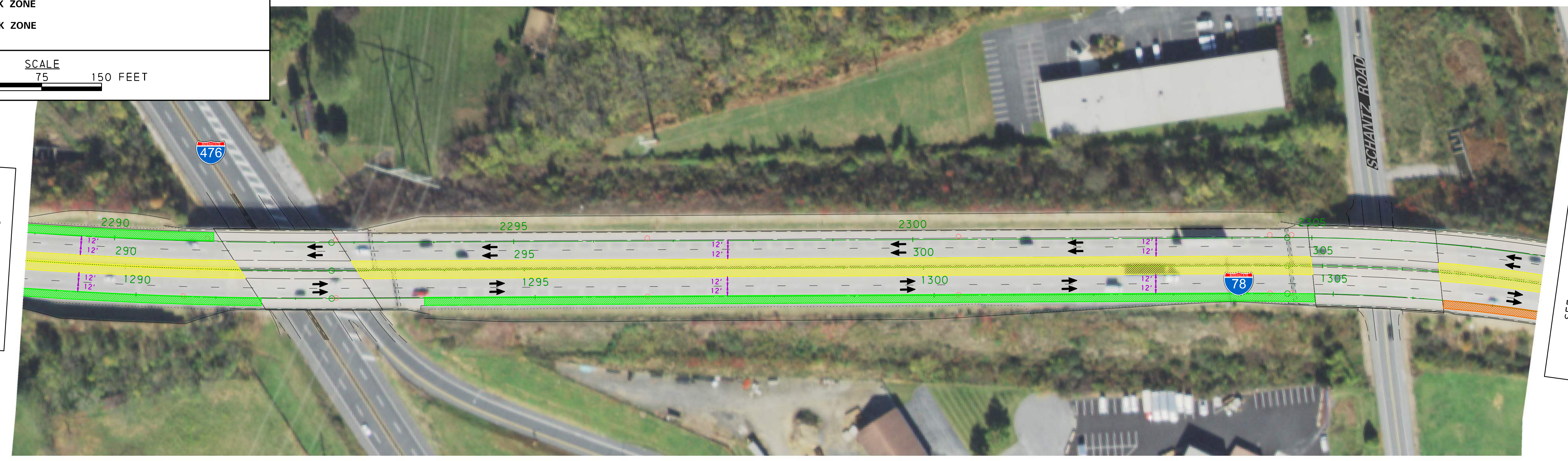
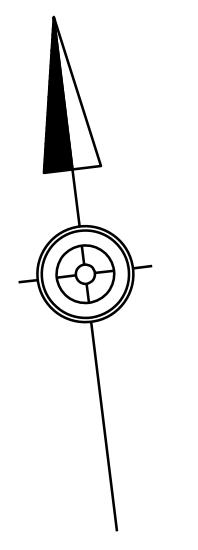
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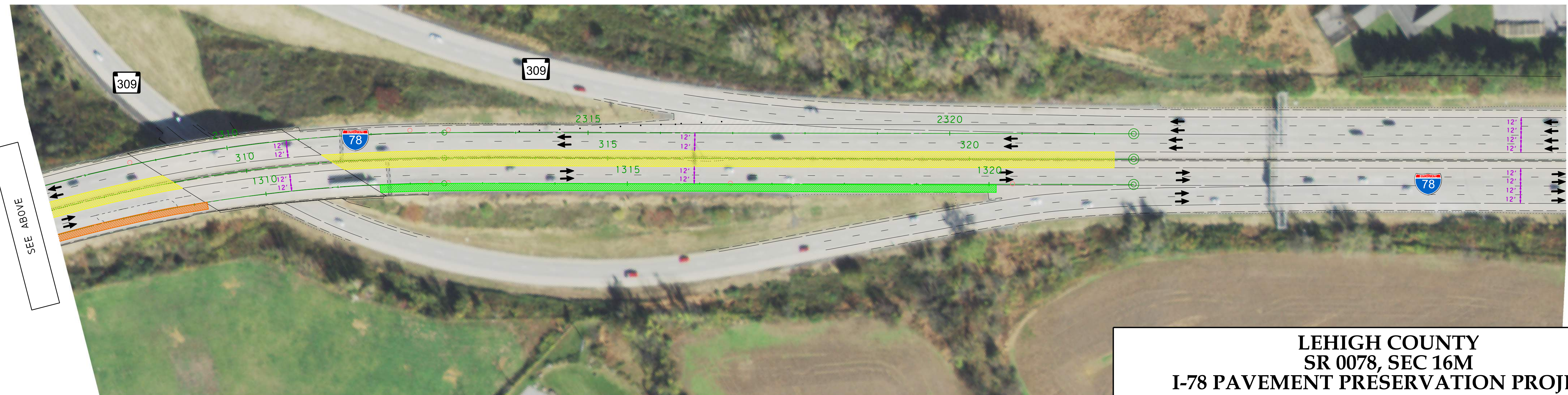
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SCALE  
0 75 150 FEET

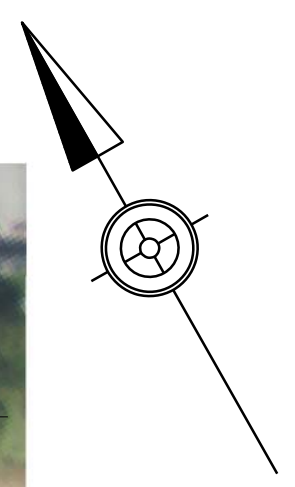


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**LEHIGH COUNTY  
SR 0078, SEC 16M  
I-78 PAVEMENT PRESERVATION PROJECT**

**CONSTRUCTION WORK ZONES  
EASTBOUND AND WESTBOUND I-78**

**PRELIMINARY**



August 2020

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