

STATE ROUTE 29 (N. MOREHALL ROAD) SINKHOLE REMEDIATION

PROJECT BRIEFING

EAST WHITELAND TOWNSHIP

BOARD OF SUPERVISORS MEETING – 6/12/2024

PURPOSE AND AGENDA

- Purpose: provide East Whiteland Township with an update on the SR 29 Sinkhole Remediation Project
- Agenda:
 - Overview
 - Proposed Improvements
 - During Construction
 - Project Schedule
 - Questions



PROJECT LOCATION



APPROXIMATE
SINKHOLE
TREATMENT AREA



SINKHOLE HISTORY

- Repeated sinkholes:
 - Winter 2023
 - Spring 2024



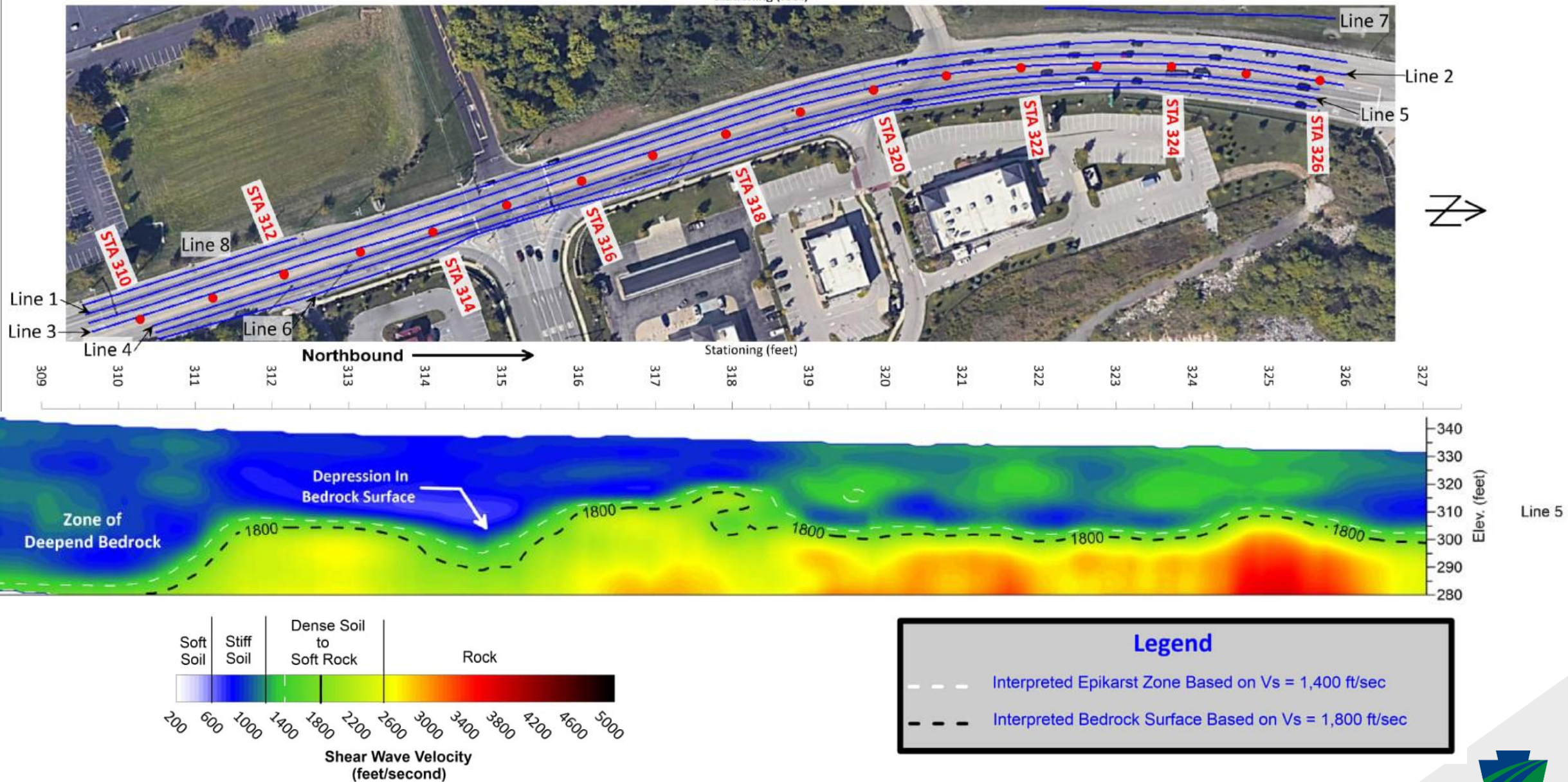
DESIGN / SITE INVESTIGATION



- 2024 Geotechnical Investigation
 - Multichannel Analysis of Surface Waves (MASW)
 - Ground Penetrating Radar (GPR)
 - Test Borings
 - Video of Storm/Sewer Lines



DESIGN / SITE INVESTIGATION



PROPOSED IMPROVEMENTS

- Limited mobility grouting (LMG) program
- Shallow sinkhole repairs
- Drainage improvements
 - Pipe lining / pipe replacement
 - Swale lining
- New pavement construction



PROPOSED IMPROVEMENTS

Limited Mobility Grouting Program – Typical Layout

Typical LMG Equipment:

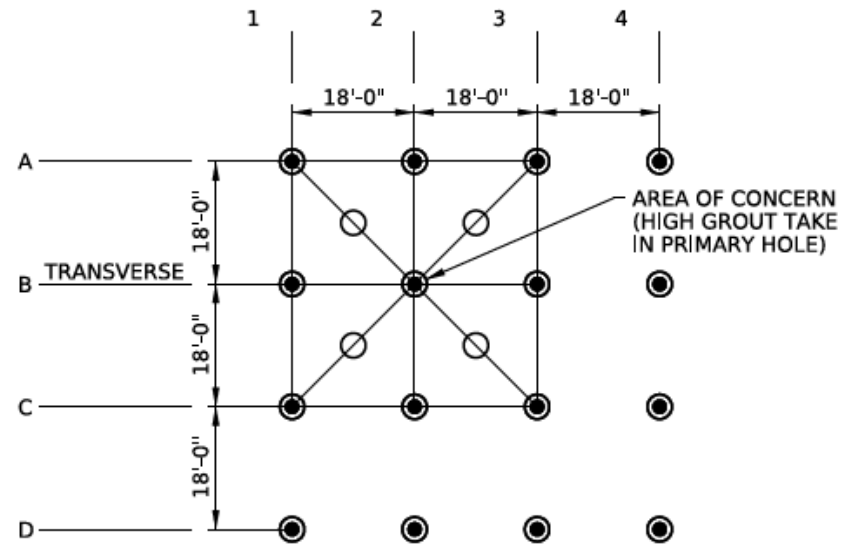
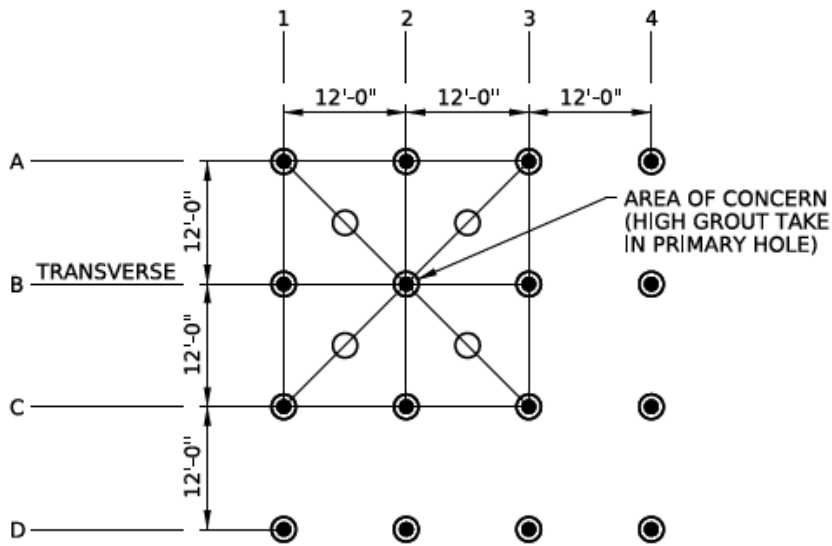
1. Drill Rig
2. Grout Pump
3. Grout Hose(s)
4. Air Compressor
5. Air Compressor Hose(s)
6. Skid-Steer
7. Grout Material
 - a) Concrete trucks
 - b) Batch Plant with Sand/Cement Staging Area

Other Equipment / Site Materials:

1. Water Truck or Water-Main Connection
2. Temporary Casing
3. Waste Grout



PROPOSED IMPROVEMENTS



TREATMENT PATTERN DETAIL FOR LIMITED MOBILITY GROUTING

NOT TO SCALE

LEGEND:

- PRIMARY GROUT INJECTION HOLE
- SECONDARY GROUT INJECTION HOLE (IF NECESSARY)



Typical grout hole drilling

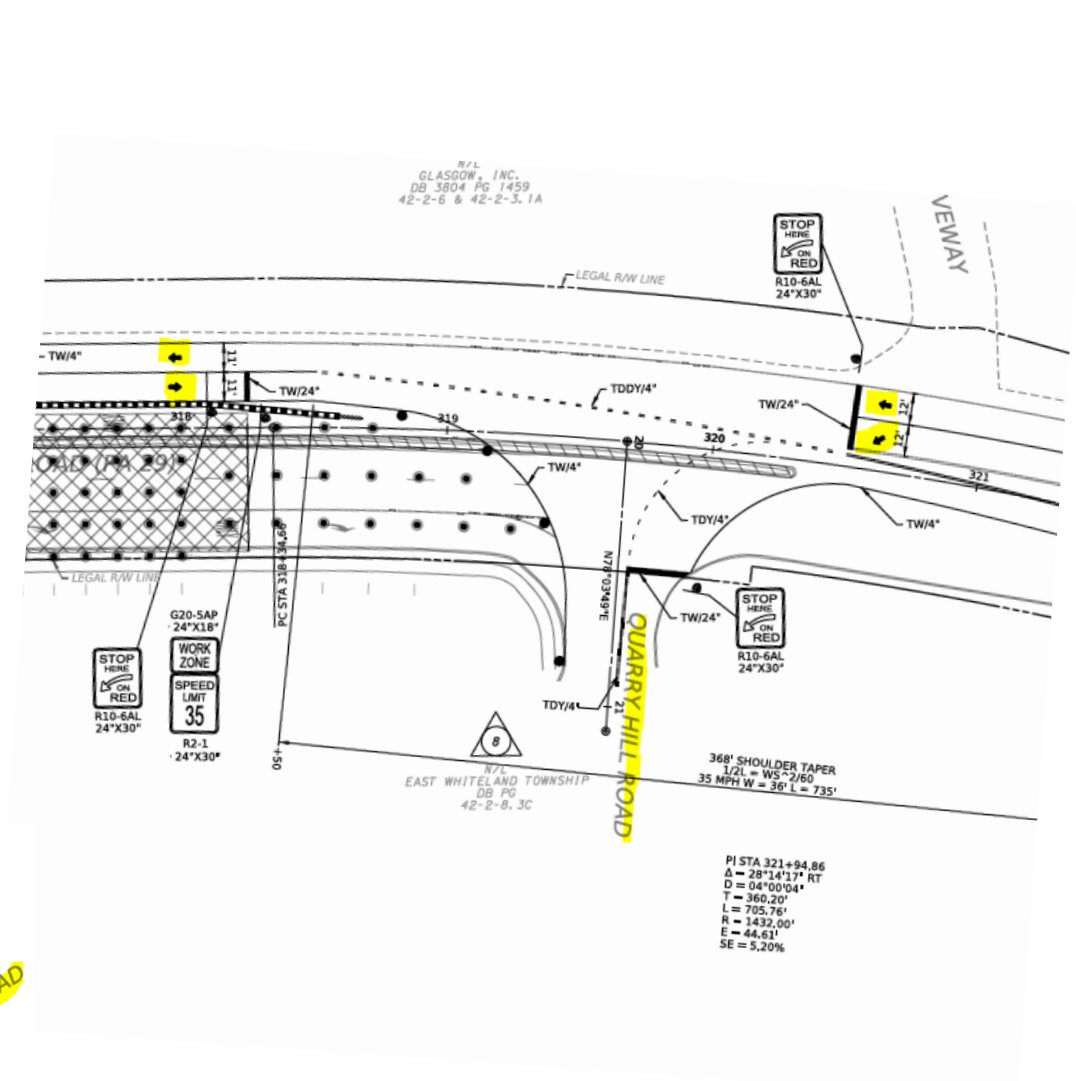
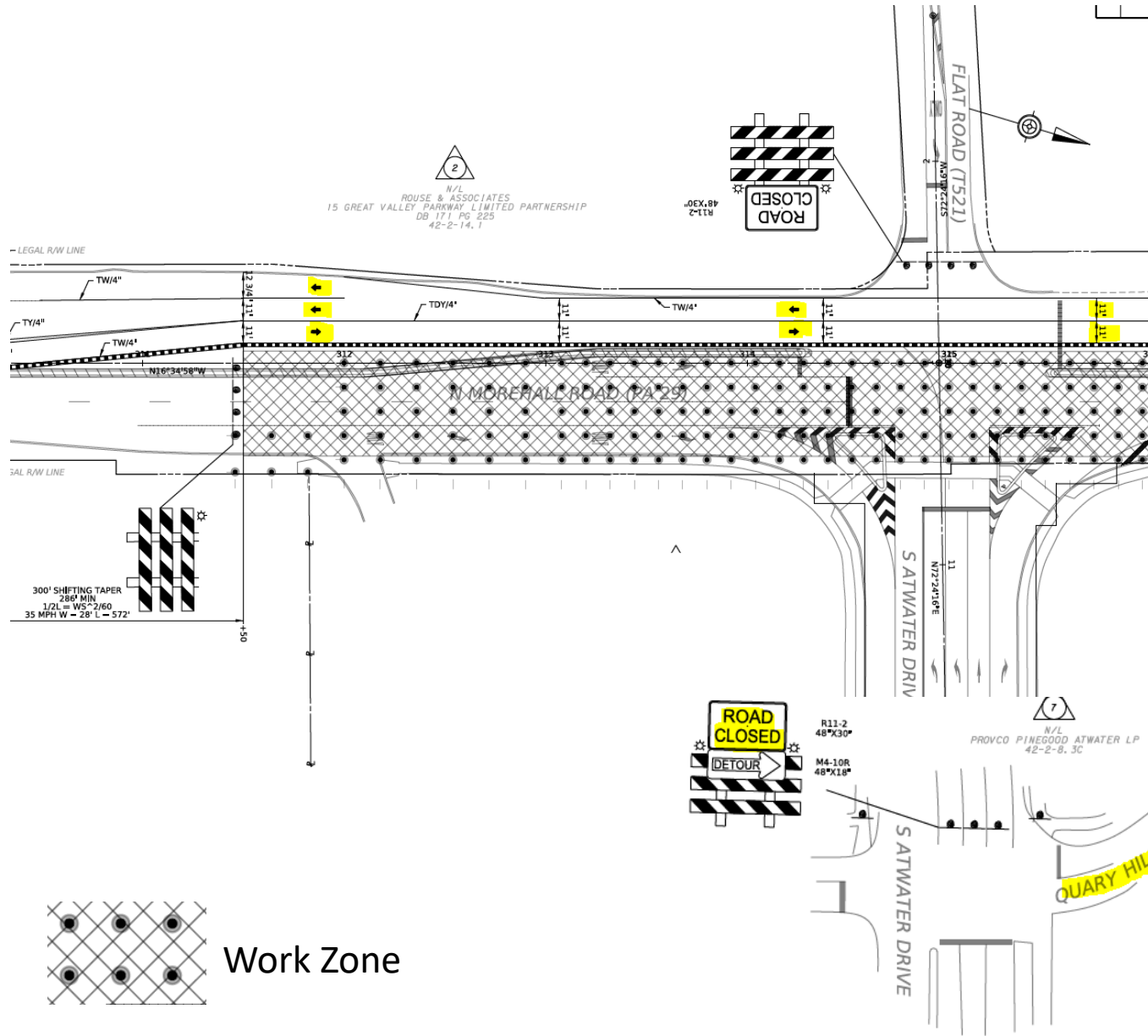


PENNDOT CONSTRUCTION

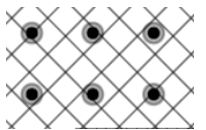
- Proposed Traffic Control Plan
 - Stage 1 – Short term / off peak closures for median removal and temporary pavement.
 - Stage 2 – Northbound construction. Shift all traffic to southbound lanes. Maintain one through-lane in each direction.
 - Detour Atwater Drive along Quarry Hill Road
 - Detour Flat Road
 - Stage 3 – Southbound construction. Shift all traffic to northbound lanes. Maintain one lane in each direction. Maintain turning lanes for Atwater Drive and Wawa.
 - Stage 4 – re-construct median curb and re-establish original roadway



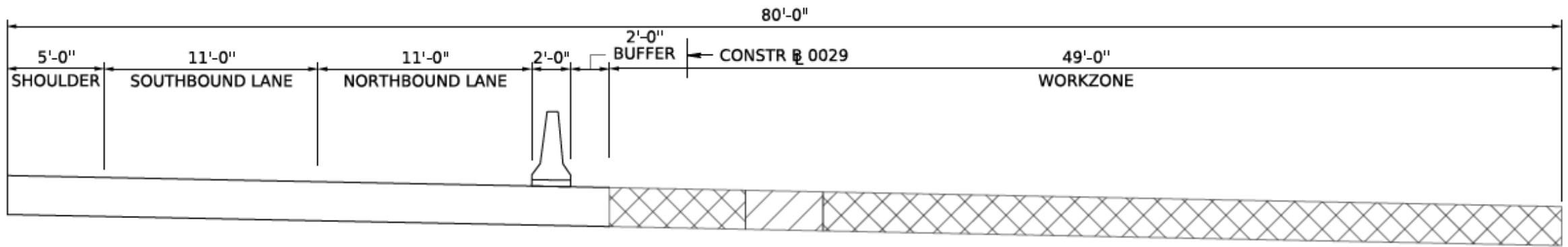
STAGE 2 DETOUR



Work Zone



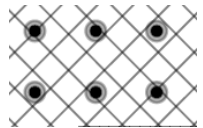
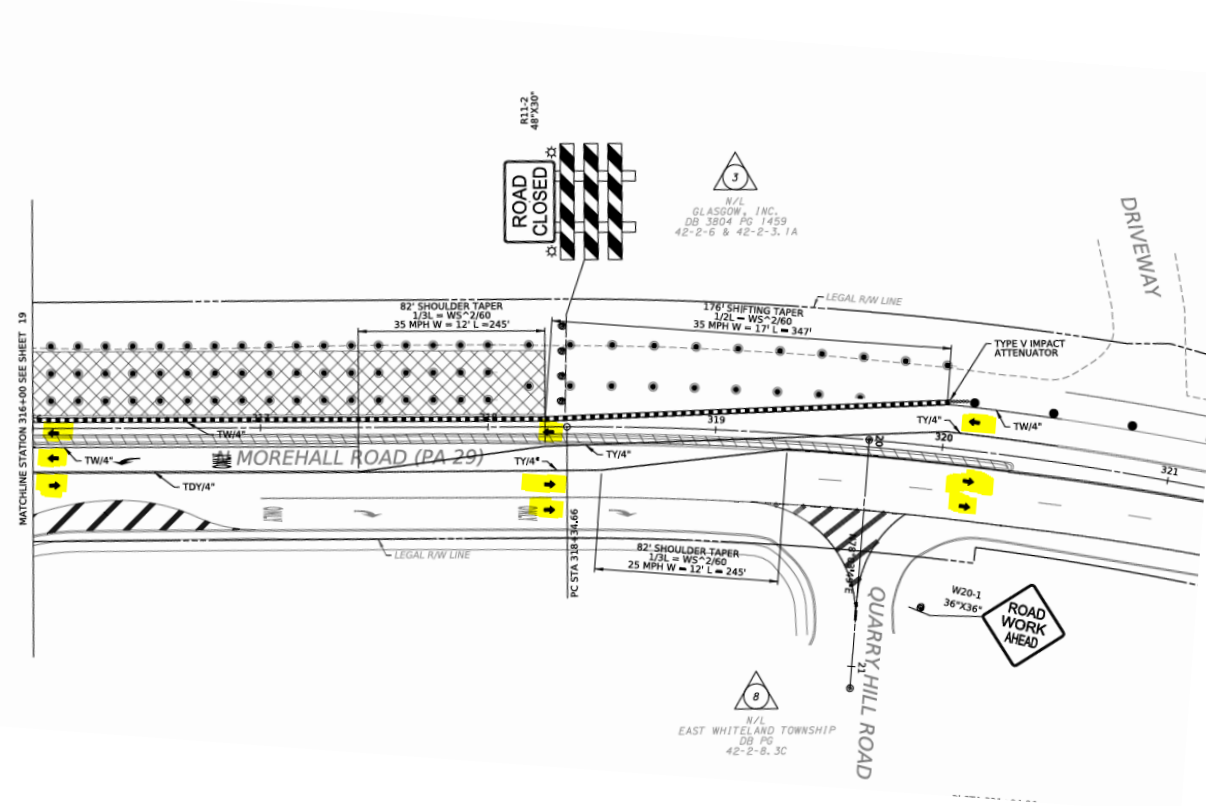
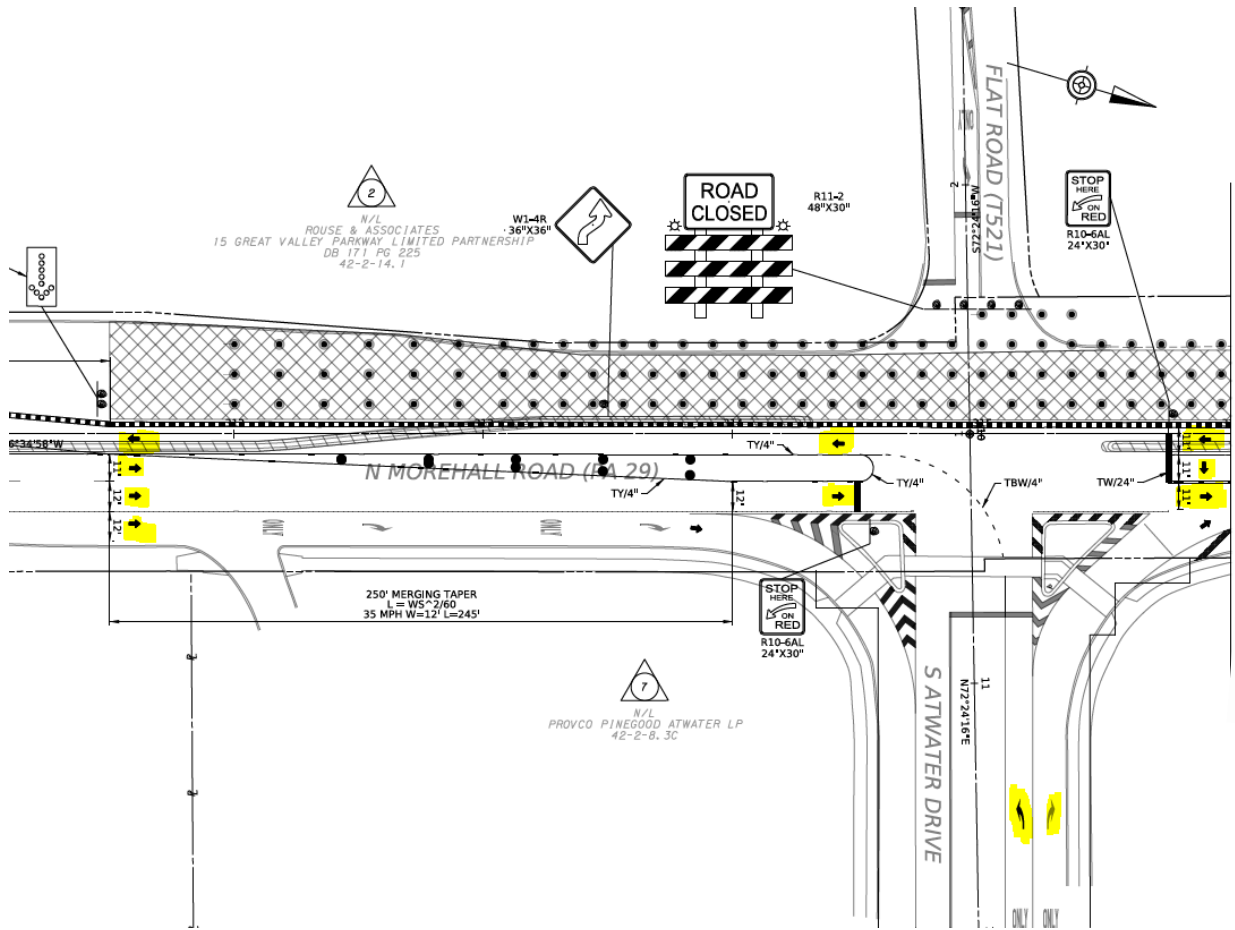
STAGE 2 DETOUR



STAGE 2 (LONG TERM)



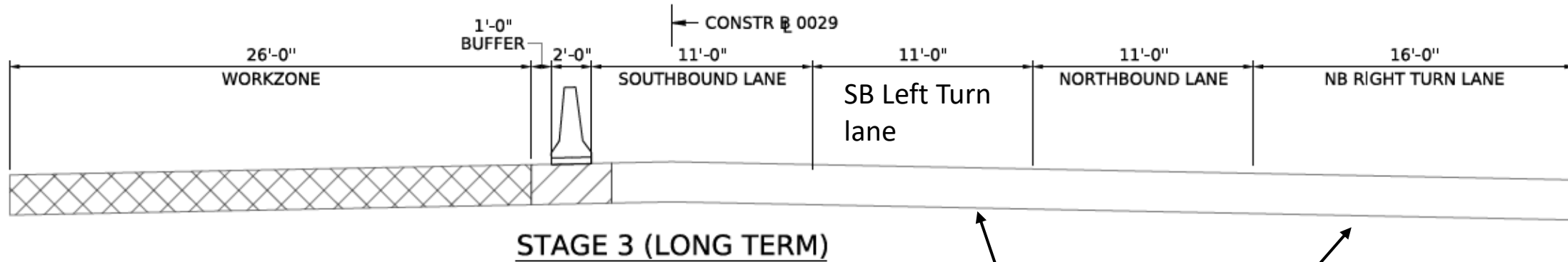
STAGE 3 DETOUR



Work Zone



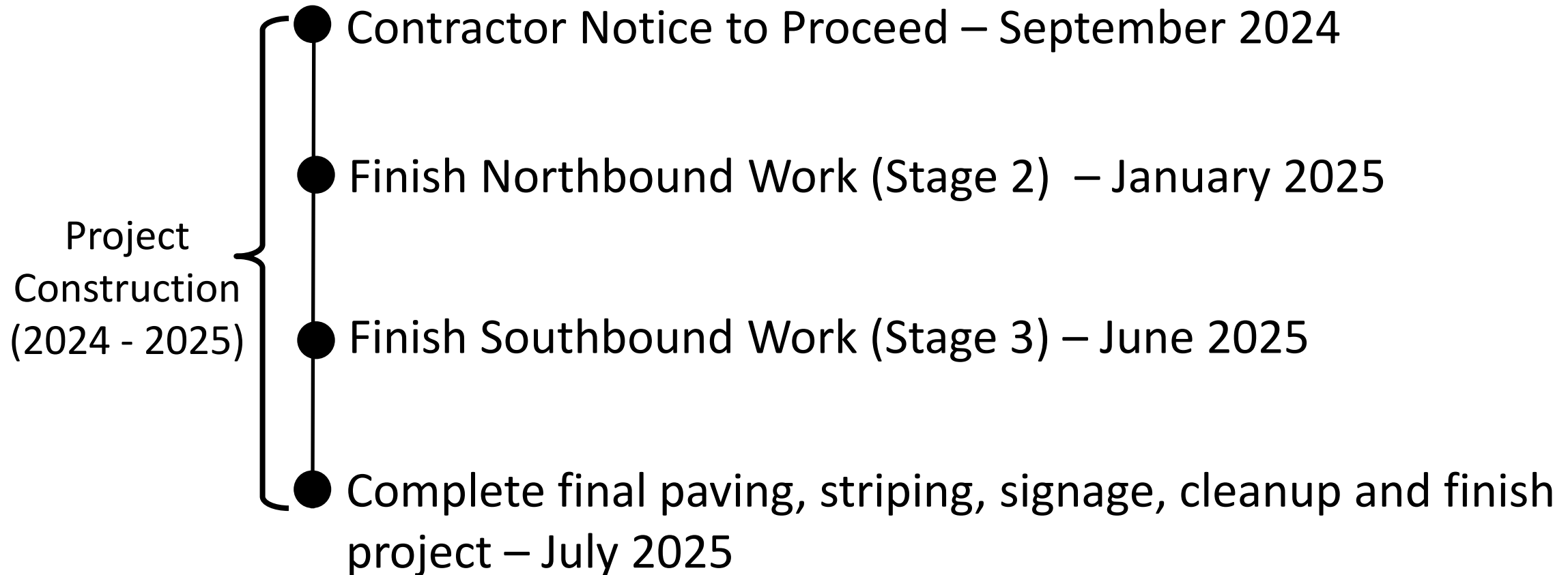
STAGE 3 DETOUR



Additional temporary turn lanes provided to accommodate traffic for Atwater Drive and Wawa



PLANNED PROJECT SCHEDULE



Questions?

Project Website:

[Route 29 \(Morehall Road\) Sinkhole Remediation Project
\(pa.gov\)](#)

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