



East Market Street/Harrison Street Intersection Signal Upgrade



MCDITE Annual Meeting April 17, 2026

PennDOT District 8-0



Barbara Hoehne, PE

- ▶ Senior Principal / Engineering Director
- ▶ 12 years with STV Incorporated
- ▶ 37 years' experience with Central PA Consulting Engineering Firms
- ▶ Current Role: PA/NJ Civil Highway Discipline Chief (Project Delivery Team) and Senior Project Manager
- ▶ Projects ranging from intersection and safety improvements to limited access highways on new alignments
- ▶ WTS Central PA Founding Member
- ▶ ASHE Altoona Past President



Kyle Tarnoviski, PE, PTOE, RSP1

- ▶ Senior Engineer
- ▶ 15 years with STV Incorporated
- ▶ Current Role: Perform project design and project review, Assistant Project Manager
- ▶ Signals, Signing and Marking, MPT, Roadway Lighting, Light Rail, BRT
- ▶ 2018 ITS Maryland President
- ▶ PE in DC, MD, PA, & VA

Team Organization Slide

PennDOT
District 8-0

Kinsley
Construction,
LLC
Contractor

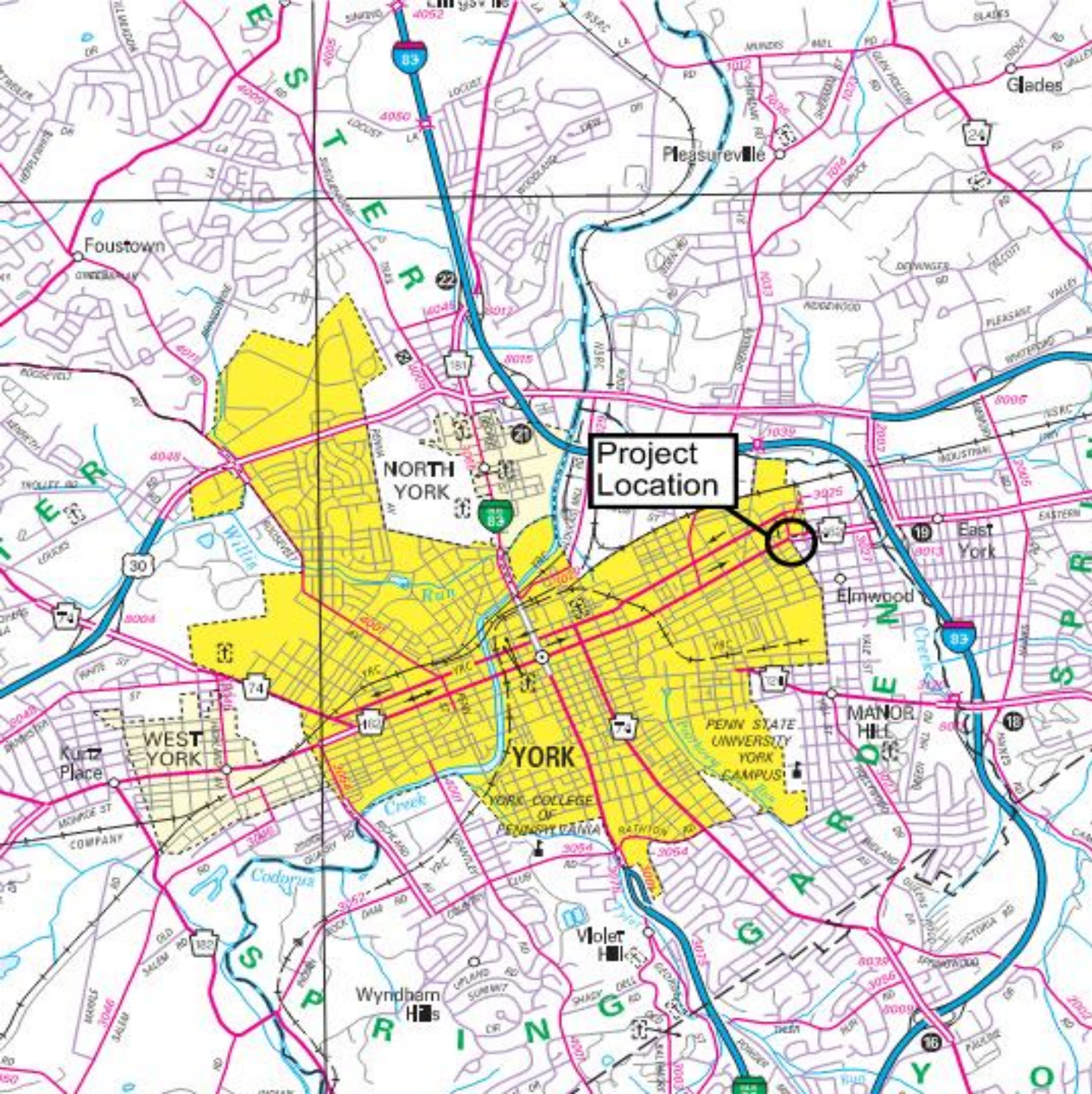
RK&K
Construction
Management /
Construction
Inspection

STV
Incorporated
Prime Consultant
Engineer

A. Morton
Thomas And
Associates, Inc
Utility coordination
support

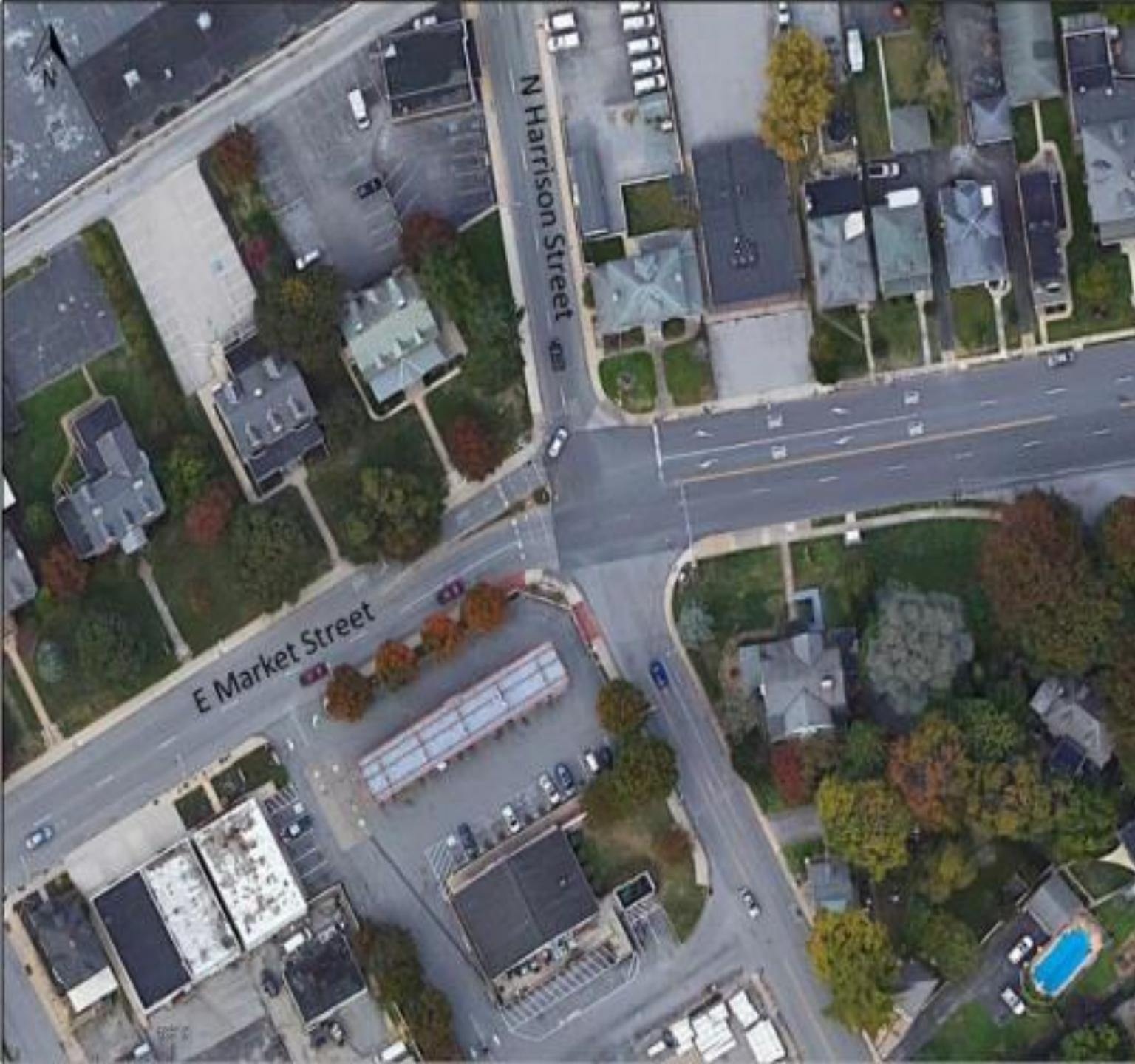
AD Marble & Co.
Environmental and
cultural resource
services;
public involvement

Susquehanna
Civil, Inc.
Field Surveys



Project Location Map

- ▶ East Side of City of York
- ▶ City of York / Spring Garden Township
- ▶ Proximity to I-83 and SR 30



Existing Condition

- ▶ East Market Street one-way eastbound – west side of intersection
- ▶ East Market Street two-way – east side of intersection
- ▶ Harrison Street one-way northbound – north side of intersection
- ▶ Harrison Street two-way – south side of intersection



Purpose and Need

- ▶ Improve Intersection Safety
- ▶ Safety Concern
 - East Market Street line striping
 - Two-way vs one-way traffic
 - Crash history



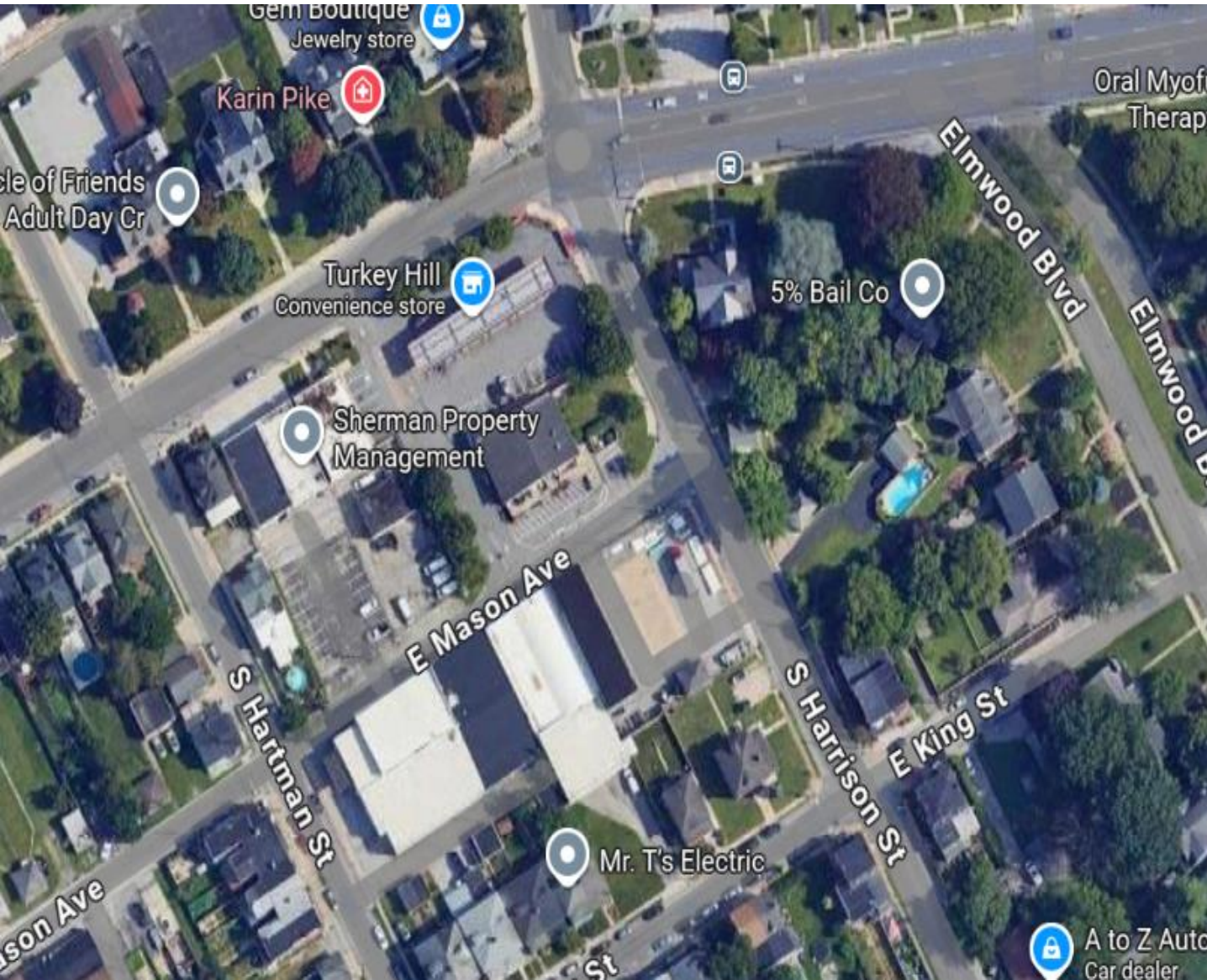
Concept Plan

- ▶ Prepared by TRG for City of York 2021
- ▶ Signal upgrade
- ▶ Median and crosswalk striping
- ▶ Bus stop striping east side of intersection
- ▶ NB Harrison Street combined through-right



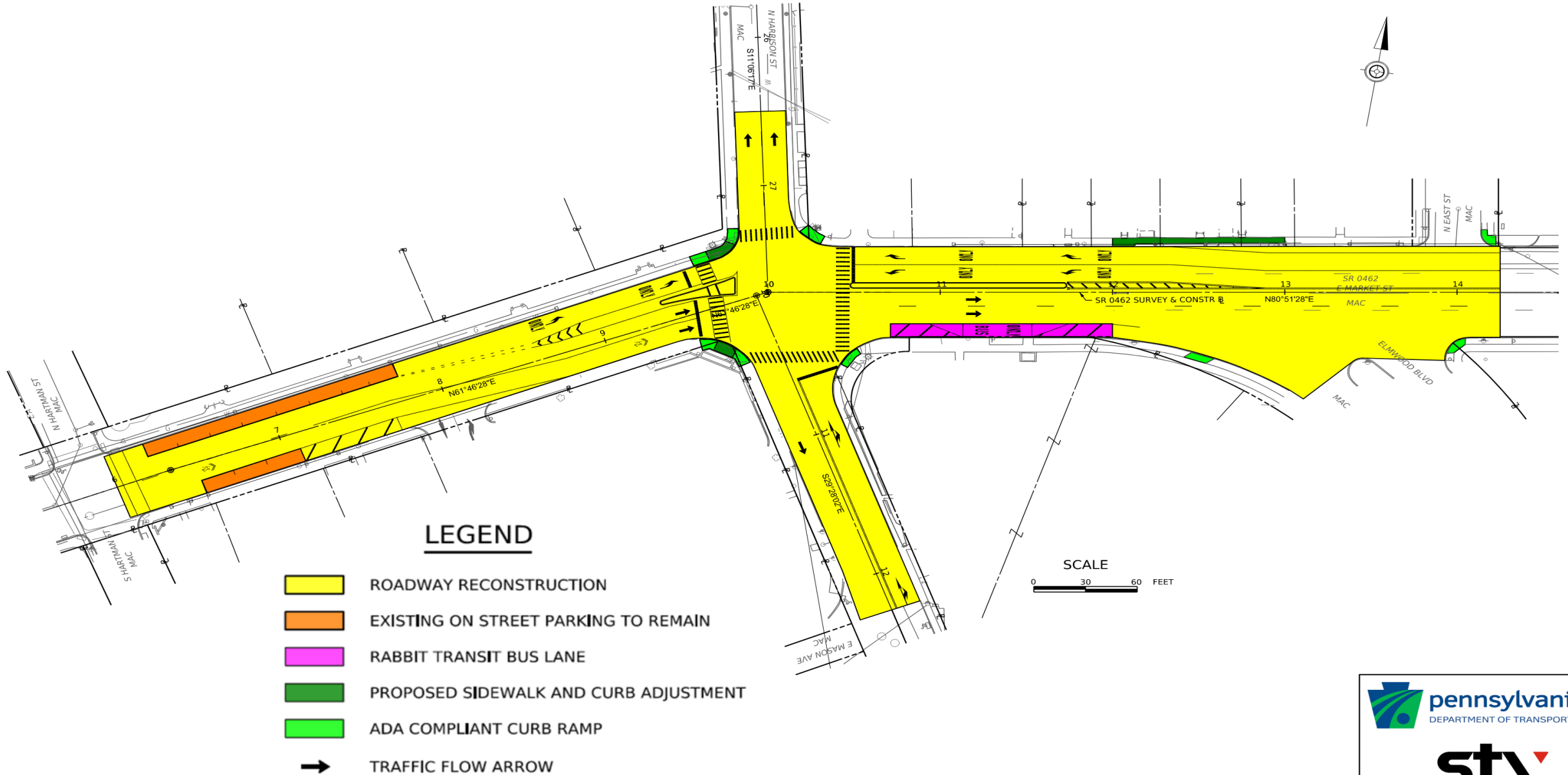
**September 8, 2022 – Pre-Scoping
Field View - Engineering**

Safety Review Meeting – August 2, 2023



- ▶ Crash History
 - HSM Analysis
- ▶ Traffic Analysis
 - Traffic Count
 - Synchro/Sim Traffic

Online Project Plans Display

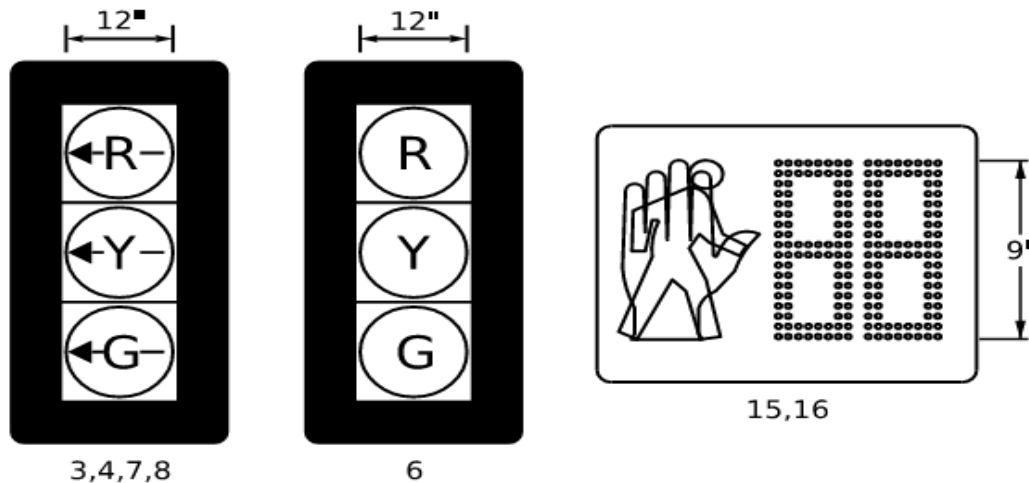


Design Field View Meeting – November 14, 2023

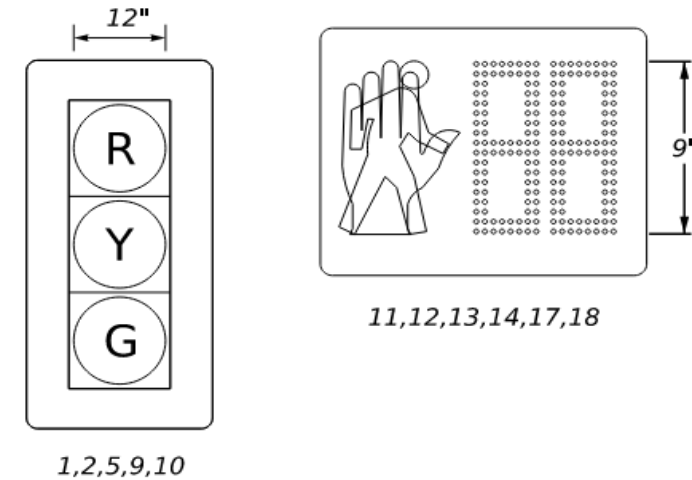
▶ Signal Design

- Exclusive WB LT (4a vs 3&4)
- Exclusive EB LT (8a vs 7&8)
- Added East leg ped xing

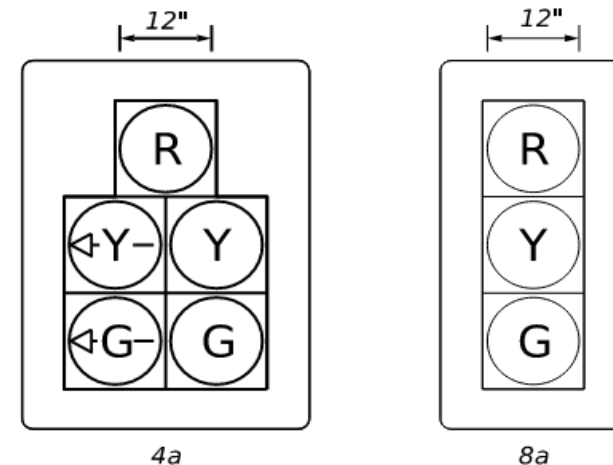
PROPOSED SIGNALS



EXISTING SIGNALS TO REMAIN



EXISTING SIGNALS TO BE REMOVED



Design Field View Meeting – November 14, 2023

► Signal Operation

- 05=Excl. WB left turn
- 01 EB LT & 02 WB RT permitted on red

MOVEMENT, SEQUENCE AND TIMING

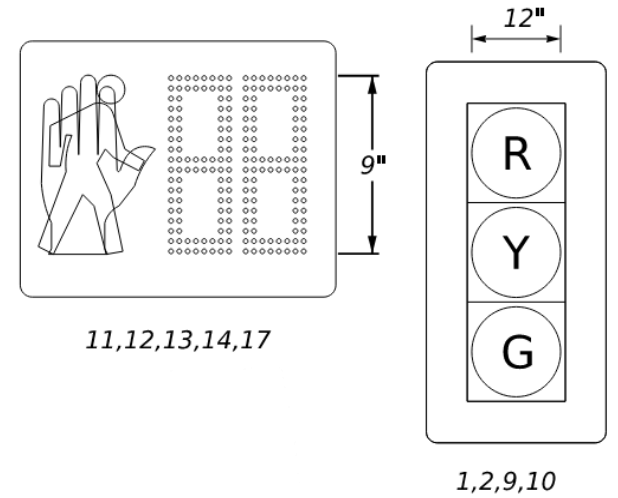
	PHASE 1+5				PHASE 1+6				PHASE 2+5				PHASE 2+6				PHASE 4				E M F L R A G S E H N I C N G
	INTERVALS				INTERVALS				INTERVALS				INTERVALS				INTERVALS				
SIGNALS	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
1	R	R	R		G	G	Y	R	R	R	R	R	G	G	Y	R	R	R	R	R	Y
2	R	R	R		G	G	Y	R	R	R	R	R	G	G	Y	R	R	R	R	R	Y
3	←G	←Y	←R		←R	←R	←R	←R	←G	←G	←Y	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R
4	←G	←Y	←R		←R	←R	←R	←R	←G	←G	←Y	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R
5	R	R	R		R	R	R	R	G	G	Y	R	G	G	Y	R	R	R	R	R	Y
6	R	R	R		R	R	R	R	G	G	Y	R	G	G	Y	R	R	R	R	R	Y
7	←G	←Y	←R		←G	←G	←Y	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R
8	←G	←Y	←R		←G	←G	←Y	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R
9	R	R	R		R	R	R	R	R	R	R	R	R	R	R	R	G	G	Y	R	R
10	R	R	R		R	R	R	R	R	R	R	R	R	R	R	R	G	G	Y	R	R

Right-Turn Flashing Yellow Arrow

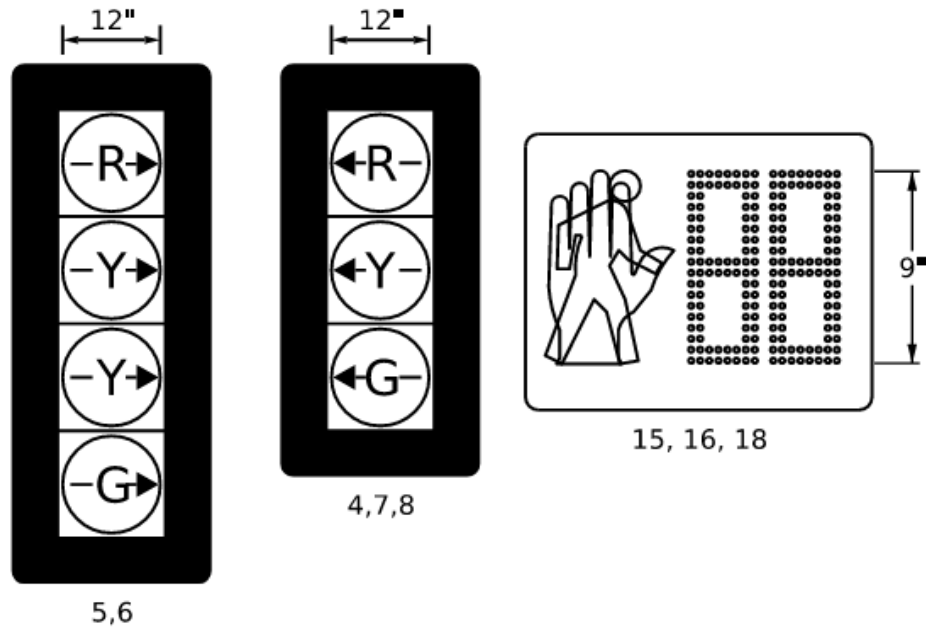
► Signal Design

- E/P WB RT (5a vs 5&6)
- More conspicuity for right turn

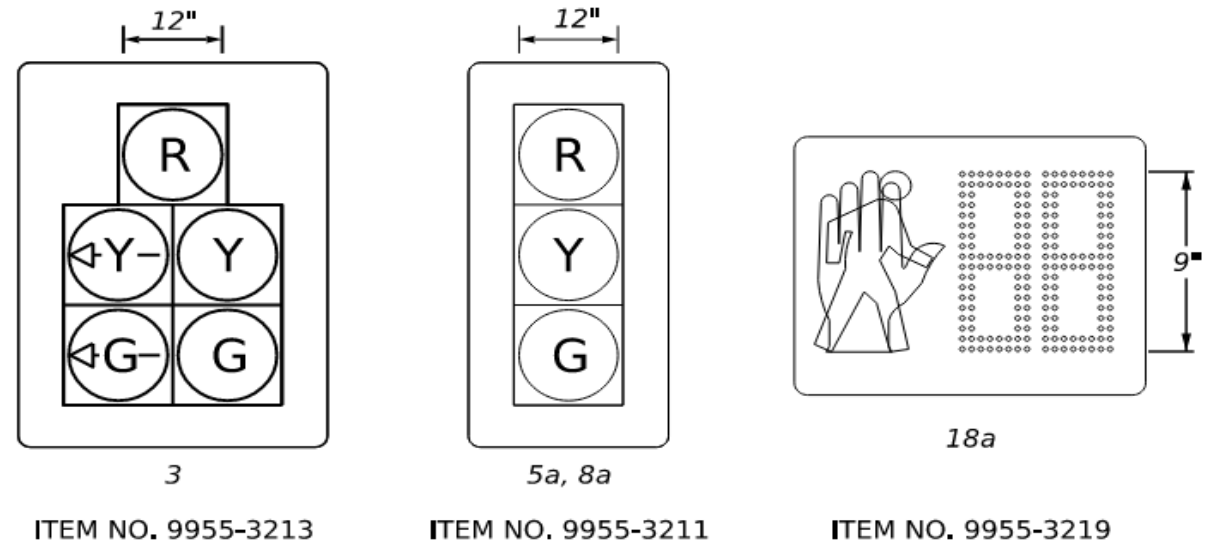
EXISTING SIGNALS TO REMAIN



PROPOSED SIGNALS



EXISTING SIGNALS TO BE REMOVED



Right-Turn Flashing Yellow Arrow

► Signal Operation

- 02 green arrow with no peds
- 02 Alt yellow arrow with peds

MOVEMENT, SEQUENCE AND TIMING

	PHASE 1+5				PHASE 1+6				PHASE 2+5				PHASE 2+5 ALT				PHASE 2+6				PHASE 2+6 ALT				PHASE 4				E M F L R A G S E H N I C N Y G				
	INTERVALS				INTERVALS				INTERVALS				INTERVALS				INTERVALS				INTERVALS				INTERVALS								
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5	R	R	R		R	R	R	R	←G	←Y	←R		FL ←Y	FL ←Y	←Y	←R	←G	←G	←Y	←R	FL ←Y	FL ←Y	←Y	←R	R	R	R	R	R	R	R	R	R
6	R	R	R		R	R	R	R	←G	←Y	←R		FL ←Y	FL ←Y	←Y	←R	←G	←G	←Y	←R	FL ←Y	FL ←Y	←Y	←R	R	R	R	R	R	R	R	R	R
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8	←G	←Y	←R		←G	←G	←Y	←R	←R	←R	←R		←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R
9	R	R	R		R	R	R	R	R	R	R		R	R	R	R	R	R	R	R	R	R	R	R	G	G	Y	R	R	R	R	R	R
10	R	R	R		R	R	R	R	R	R	R		R	R	R	R	R	R	R	R	R	R	R	R	G	G	Y	R	R	R	R	R	R
13	DW	DW	DW		DW	DW	DW	DW	DW	DW	DW		WK	FDW	DW	DW	DW	DW	DW	DW	WK	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF
18	DW	DW	DW		DW	DW	DW	DW	DW	DW	DW		WK	FDW	DW	DW	DW	DW	DW	DW	WK	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF

Right-Turn Flashing Yellow Arrow – District 5-0



- ▶ W Lehigh Street / Center Street / Phillip J. Fahy Memorial Bridge
- ▶ Bethlehem, PA

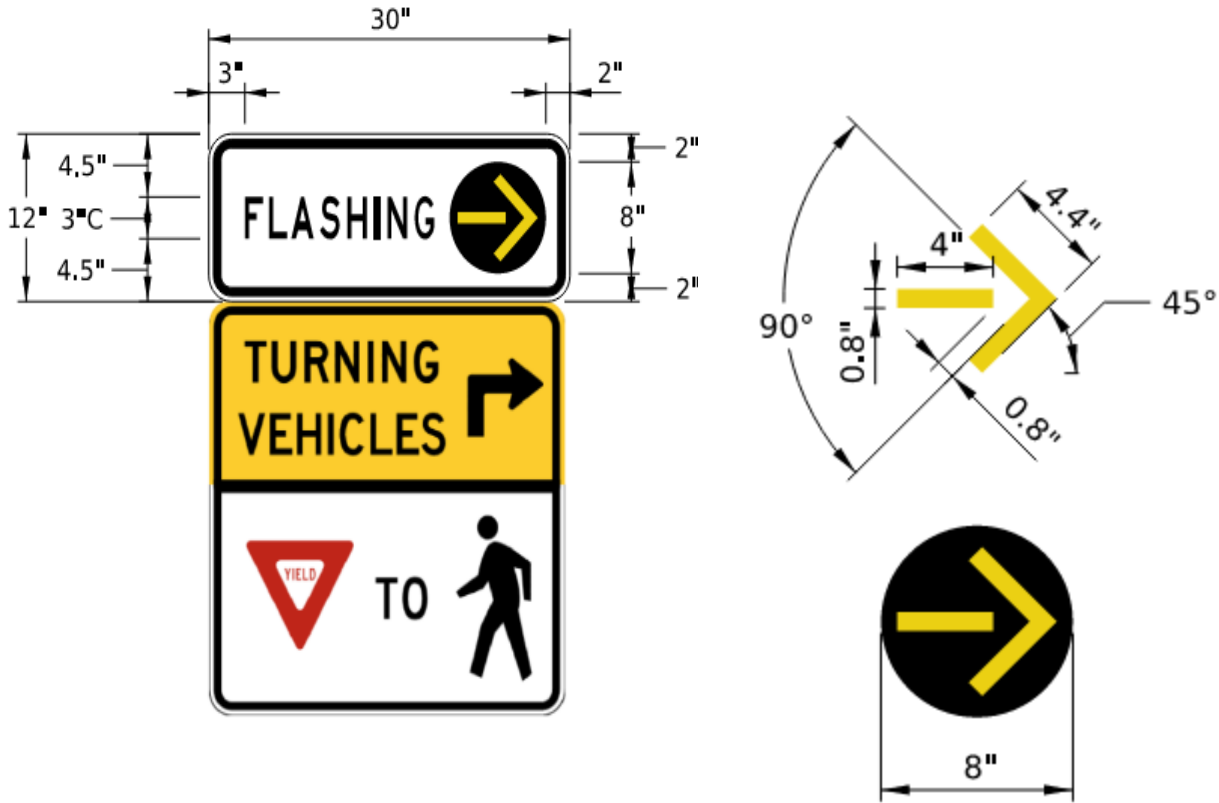
Right-Turn Flashing Yellow Arrow – District 11-0



- ▶ Centre Avenue / Penn Avenue / East Liberty
- ▶ Pittsburgh, PA

Right-Turn Flashing Yellow Arrow -

► Westbound Custom Signing



ARROW DETAIL



No Turn on Red Analysis – NB Harrison Street



- ▶ Comparable to Right Turn on Red permitted
 - 95th percentile queue length same for 1 lane with or without NTOR
 - Intersection LOS D

Pre-Bid Construction Schedule



- ▶ Reviewed at each Constructability Review Meeting
- ▶ Included activities
 - Lead time for coordinated utility relocations (utility poles and water valve adjustments)
 - Signal equipment fabrication lead time
 - Video detection testing
 - Traffic signal testing
- ▶ 11/25/24 NTP to contractor
- ▶ 10/30/25 Construction completion

Construction Cost Estimate



- ▶ Each design submission
- ▶ STV/PennDOT Design Team Estimate = \$776,870.50
 - PennDOT District 8-0 Bid Prices – Project History
 - *Let Date*
 - *Special Items*
 - *Project Type*
 - *Project Size*
 - *Project Location*
- ▶ Kinsley Construction Cost Estimate = \$775,711.00
- ▶ Difference = 0.02%

Construction – 2025 Season



- ▶ No questions received from Kinsley during Construction
- ▶ District 8-0 approved short term lane closures from 8:00 am to 4:00 pm (8:30 am to 3:30 pm per contract 0901-0001 special provision)
- ▶ Work completed using short-term lane closures instead of contract staged MPT plan

During and After Construction Photos

▶ East Market Street – Southwest Quadrant of Intersection with S Harrison Street



During and After Construction Photos

► East Market Street – Northeast Quadrant of Intersection with N Harrison Street



During and After Construction Photos

► N. Harrison Street – Looking North



During and After Construction Photos

► East Market Street – Looking West at Median Island



During and After Construction Photos

► East Market Street – Southwest Quadrant of Intersection with Elmwood Boulevard



Before and After Construction Photos

► East Market Street – Looking East at Reconstructed Sidewalk



Before and After Construction Photos

► East Market Street – Looking East at Northeast Quadrant of Intersection



Before and After Construction Photos

▶ East Market Street – West Side of Intersection - Looking East



Before and After Construction Photos

► S Harrison Street – Looking North





QUESTIONS?

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