

Hunter Station Bridge – Where Transportation Meets Conservation



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Engineering District 1-0
December 6, 2018

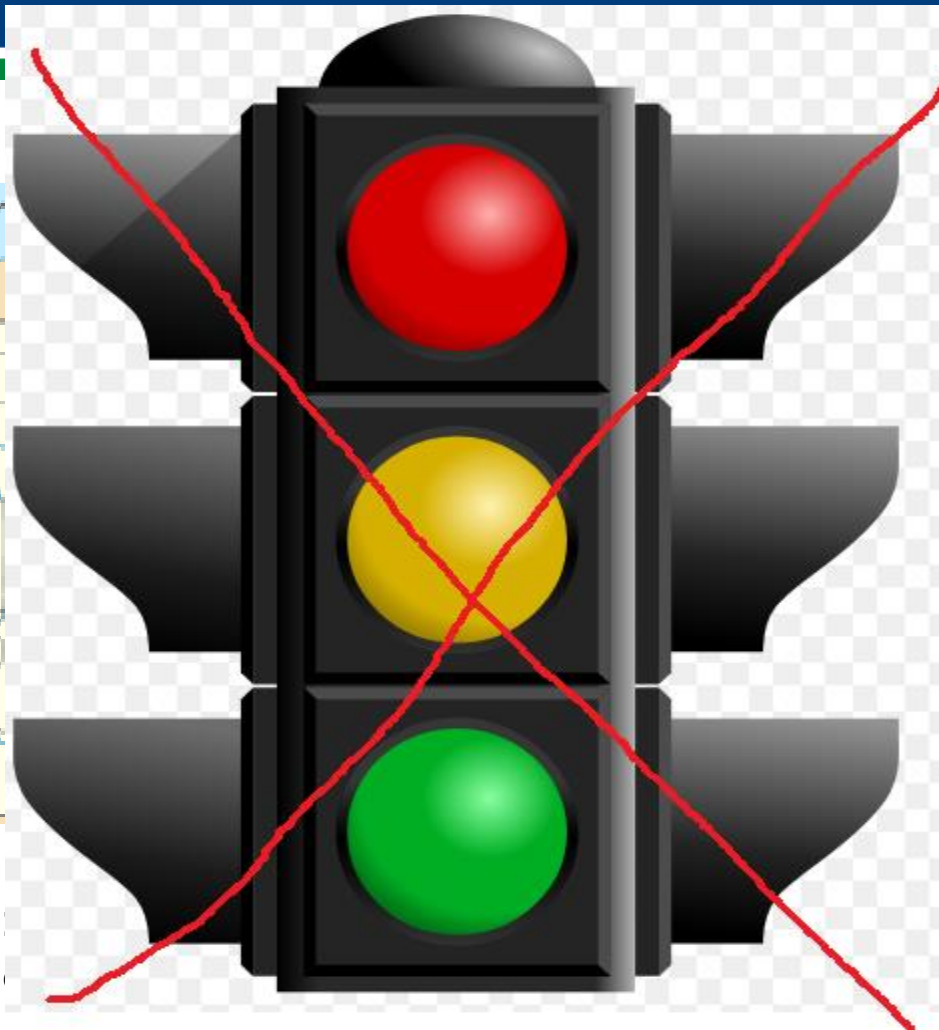
Acknowledgements



MEKIS Construction Corporation



**ADT =
7,716**



est)

Environmental Clearance -

- PE began in 1994

FONSI issued November 20, 2015

21 YEARS!!!

▶ Eligible for National Register of Historic Places



▶ Allegheny- Designated Wild and Scenic



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➤ Archaeology

- **Site contains intact archaeological deposits extending from the ground surface to channel lag at nearly 8 feet in depth.**
- **Radiocarbon dating revealed an occupation of the site as early as 8,000 years ago.**



Golf Course



Hole #13 moved North

Relocations of green (#17) and tee box (#14)

▶ Right-of-Way

- 2 appraisals



The image is an aerial photograph of a golf course with several holes labeled #9 through #18. A red line traces a path along the riverfront, enclosing a central area. A light blue box with the text 'Riverfront Condos' is overlaid on this area. Other annotations include 'NEW BRIDGE AND APPROACH ROADWAY' in red at the top, 'POTENTIAL ACQUISITION FROM ADJOINING PROPERTY FOR COURSE EXPANSION' in red on the left, and 'BRIDGE #57' in red on the right. Various features like 'GREEN', 'BUNKER', 'TEE', 'PARKING', and 'C.O.P.' are also labeled.

Riverfront Condos

Anatomy of Mussels



Mussels relocated prior project = 7,000

113,547 endangered
35,528 non-listed

**Mussels relocated prior to construction:
149,075 total**

➤ Mussels



Clubshell



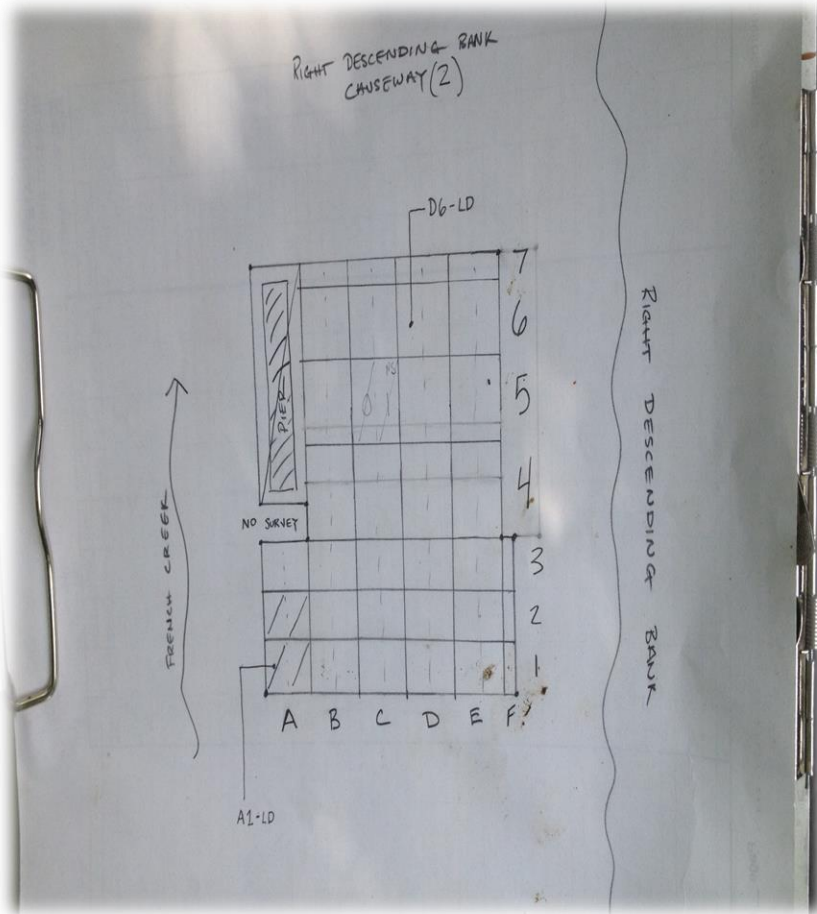
Northern Riffleshell

Mussel Species			
<i>Epioblasma torulosa rangiana</i>	Northern riffleshell	Endangered	Endangered
<i>Epioblasma triquetra</i>	Snuffbox	Endangered	Proposed Endangered
<i>Pleurobema clava</i>	Clubshell	Endangered	Endangered
<i>Villosa fabalis</i>	Rayed Bean	–	Proposed Endangered
<i>Plethobasus cyphyus</i>	Sheepnose	Threatened	Proposed Endangered
<i>Fusconaia subrotunda</i>	Long-solid	Rare	--
<i>Pleurobema sintoxia</i>	Round pigtoe	Rare	--
<i>Lampsilis fasciola</i>	Wavy-rayed lampmussel	Rare	--
<i>Alasmidonta marginata</i>	Elktoe	Rare	Species of Concern

Mussel Salvage Plan



Search Grids



SCUBA





▶ Mussel Processing



▶ Measurements







Mussel Moves

Endangered Mussels from Hunter Station already moved to Relocation Sites as Part of Pilot Studies between 2008 and 2014

Species	Destination					Grand Total
	Illinois	Kentucky	Ohio	Pennsylvania	West Virginia	
<i>Epioblasma torulosa rangiana</i>	2178	300	8813	458	1101	12,850
<i>Pleurobema clava</i>	1761	200	3550	452	406	6,369
Grand Total	3939	500	12363	910	1507	19,219

Source: PFBC (J. Allison)

Mussel Relocations



➤ Mussel Transportation



▶ Yearly Monitoring



▶ October 2016



February 2017



▶ April 2017



▶ July 2017



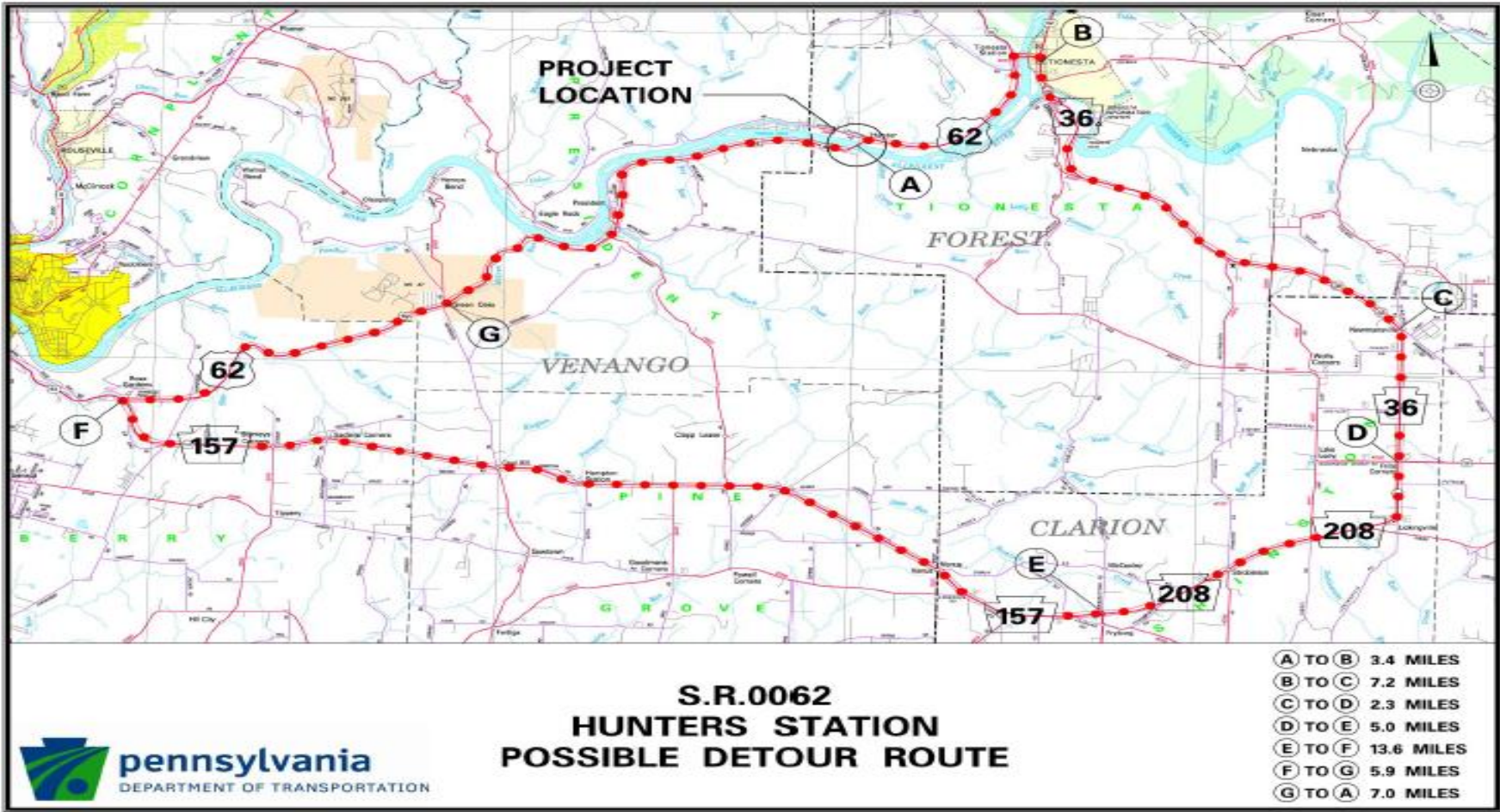
▶ August 2017



Traffic Control Plan

- Stage 1 - Maintain 2 lanes of SR 62 through deck pour.
- Stage 2 – Detour 62, Complete Approaches and Demo
- Stage 3 – Continue with 62 Detour, temporary signal access

▶ Detour



44 MILE DETOUR!



A + Bx Bidding

- Bid Item establishing incentive for completing the SR 62 Detour
- Road User Liquidated Damages (RULD) for detour
 - Assessed if detour is not removed and open to unrestricted traffic by September 21, 2017
 - \$15,553.00 per day
- A+Bx Interim Milestone
 - Bidder may propose from 0 to 79 consecutive calendar days to complete detour
 - "A" = sum of all work
 - "Bx" = (RULD cost per day)x(bidder's proposed number of calendar days)

MOVEMENT, SEQUENCE AND TIMING CHART

																	EMERGENCY FLASH
PHASE	ø-1				ø-2				ø-3				ø-4				
INTERVAL SIGNAL	1	2	3		1	2	3		1	2	3		1	2	3		
1, 2	G	Y	R		R	R	R		R	R	R		R	R	R		R
3, 4	R	R	R		G	Y	R		R	R	R		R	R	R		R
5, 6	R	R	R		R	R	R		G	Y	R		R	R	R		R
7, 8	R	R	R		R	R	R		R	R	R		G	Y	R		R
FIXED		3	134 ^①			3	134 ^②			3	103			3	134 ^③		
MIN INITIAL PASSAGE	10				10				7				7				
MAX J	3				3				3				3				
MEMORY	LOCKING				LOCKING				LOCKING				LOCKING				

SIGNAL NOTES:

1. SIGNALS TO REST IN RED IN THE ABSENCE OF A VEHICLE CALL.

▶ October 2017



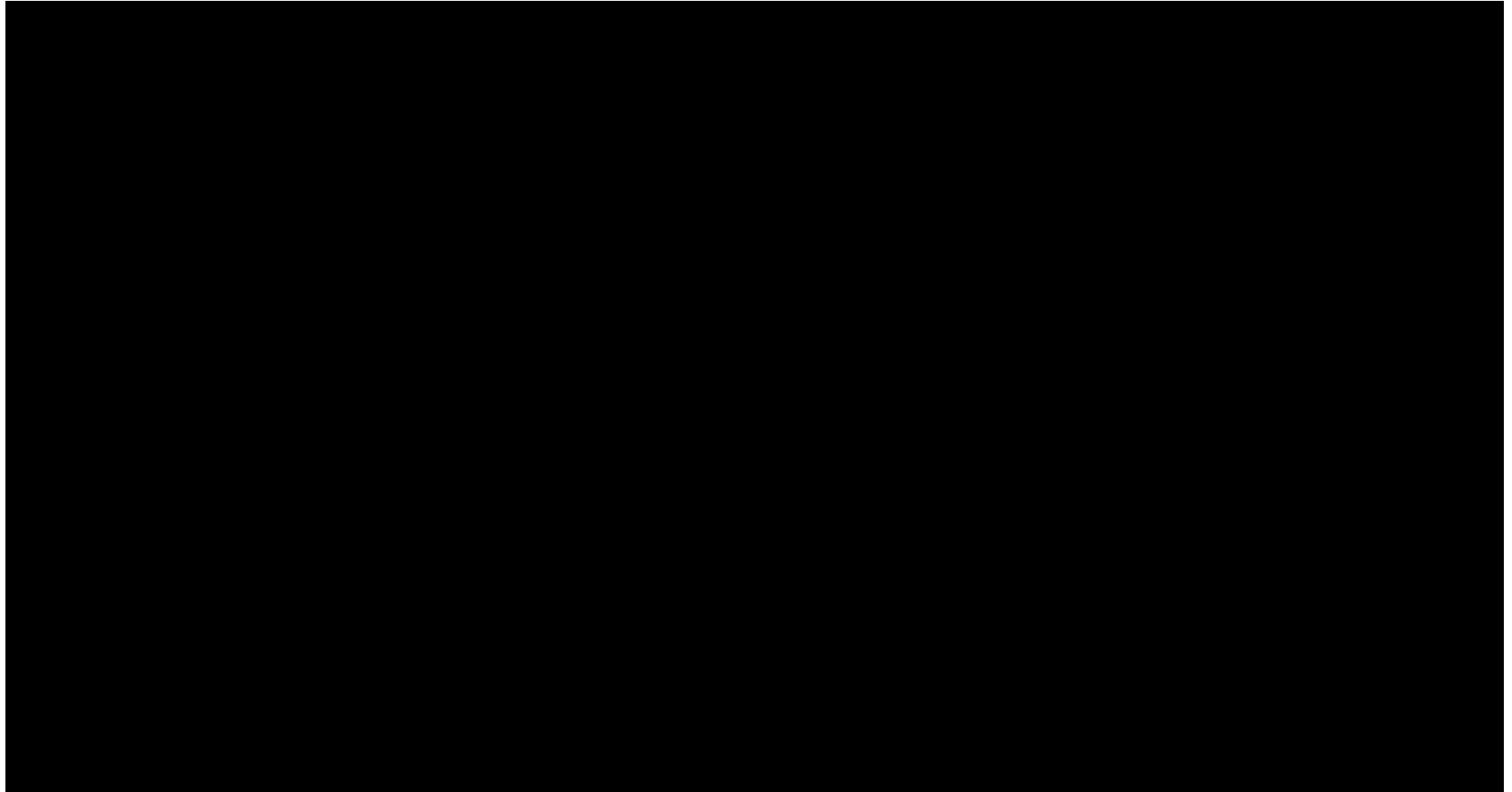
▶ October 2017



▶ Press the button!



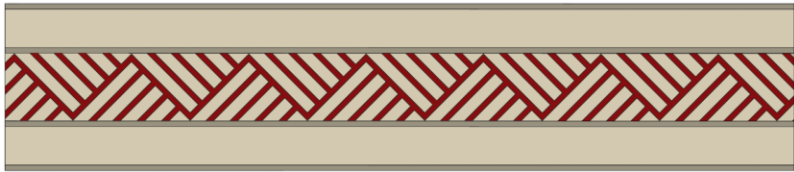
Demolition



Scenic Overlook



▶ Formliner with Native American Pattern



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d2c9af



98917e





Costs

- PE \$3 million
- FD \$1 million
- Mussels \$1 million
- ROW \$1 million
- Construction \$25 million

Awards

2016 Governor's Award for Excellence

AASHTO



Thank You!

