

RED BALL TRAIL WOODEN BRIDGE

Public Forum Presentation

January 7th, 2025



Project Funding

-Illinois Commerce Commission

Committed to 80% of Project Costs

- Includes Engineering, Construction, R.O.W. and Permits
- Will not pay for Utility relocations



-Burlington Northern Santa Fe Railroad

Committed to 20% of Project Costs

- Includes Engineering, Construction, R.O.W. and Permits
- Will not pay for Utility relocations



-Bond County

Will have some expenses towards Administration and Coordination

Bridge Construction is estimated at \$3,000,000.00, regardless of alignment/location.

Proposed Structure

- Bridge and Road will be 6 foot higher than existing.
- Must have a fence along both sides (Andrews Drive)
- Driven steel piles
- Concrete precast beams
- Poured parapet wall (guardrail)
- Approach road and deck will be HMA (asphalt)
- Will not resemble old bridge in any way
- Construction of actual bridge/road will take 8-9 months

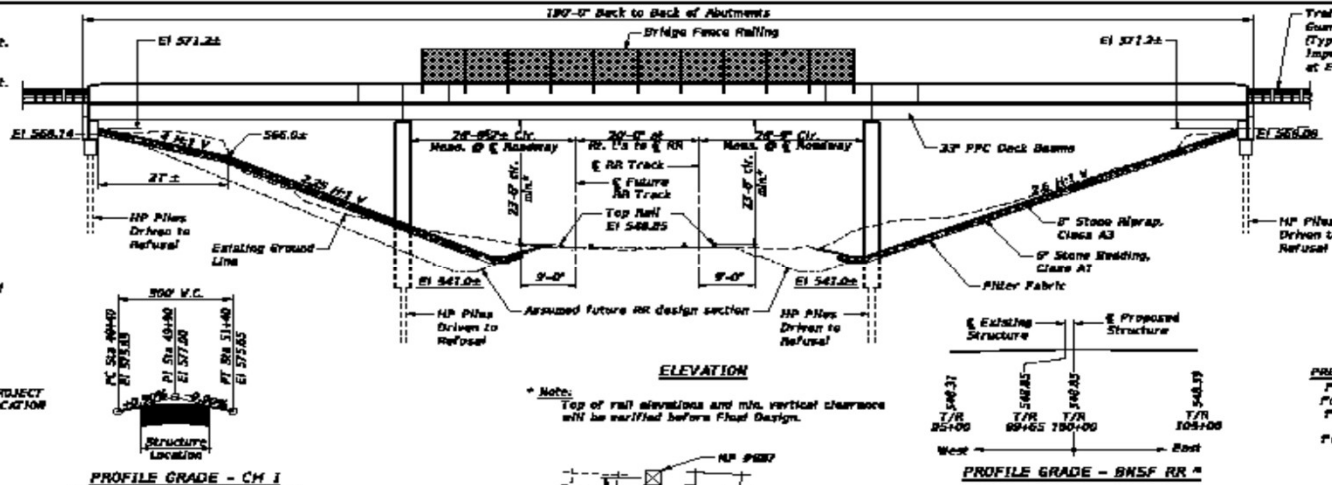


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BENCHMARK:
 TBM RR Spike In Power Pole
 El @ Sta 47+81.85, 38.39' LT.
 El 570.05
 TBM RR Spike In Power Pole
 El @ Sta 34+88.59, 30.43' LT.
 El 399.98

EXISTING STRUCTURE:
 Existing SN 003-9004 is an 17-span structure over the BNSF Railroad. The existing structure consists of timber decking on timber stringers supported on 10 pile bent abutments measuring 137'-8" back to back of abutments and 21'-2" out to out of deck. Existing structure to be removed by others.



PROFILE GRADE - CH 1 (FAS 1748/RED BALL TRAIL)

PROFILE GRADE - BNSF RR

ELEVATION
 * Note: Top of rail elevations and min. vertical clearance will be verified before final design.

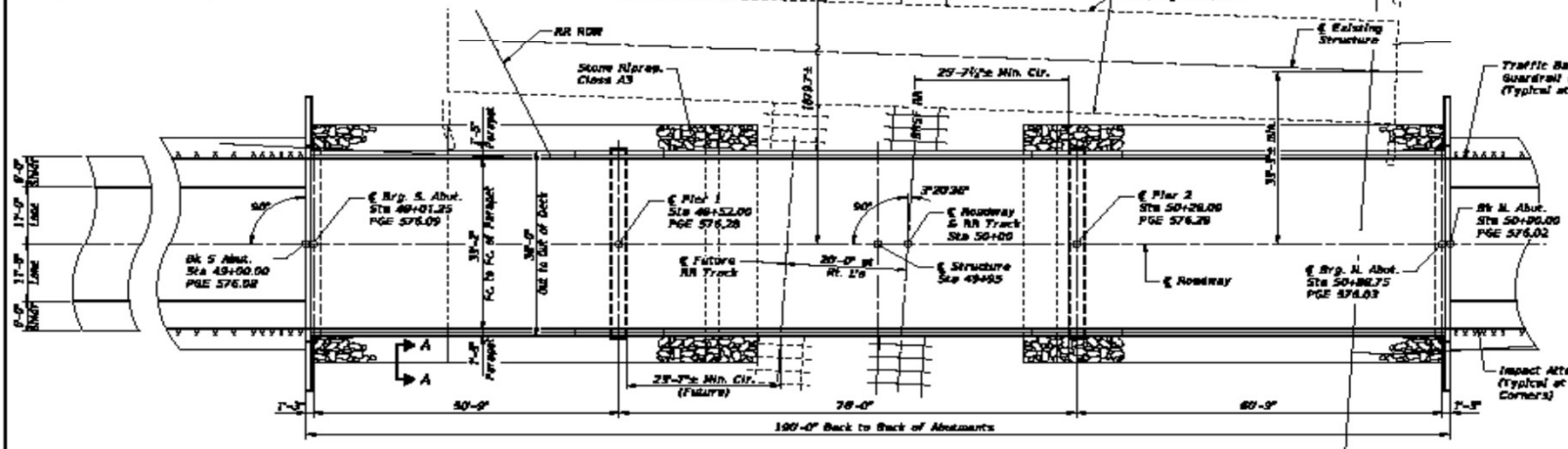
Traffic Barrier Terminal Type B, Guardrail & Type 1 Special (Typical at Approach Corners) or Impact Attenuator (Typical at Exit Corners)

DESIGN SPECIFICATIONS
 2017 AASHTO LRFD Bridge Design Specifications with 2018 Interim
LOADING 10-93
 Allow 50 psf. for future wearing surface
DESIGN STRESSES

PRECAST PRESTRESSED UNITS	FIELD UNITS
$f_c = 7,800$ psi	$f_c = 3,500$ psi
$f_{ct} = 8,000$ psi	$f_c = 4,000$ psi (Superstructure Concrete)
$f_s = 275,000$ psi (1/2 Strands)	$f_y = 60,000$ psi (reinf.)
$f_m = 207,900$ psi (1/2 Strands)	$f_y = 50,000$ psi (R270 Gr. 50)

SEISMIC DATA
 Seismic Performance Zone (SPZ): 2
 Design Spectral Acceleration at 1.0 sec. (S_{D1}): 0.161 g
 Design Spectral Acceleration at 0.2 sec. ($S_{D0.2}$): 0.286 g
 SSI Site Class = C

ROADWAY DATA
 FAS 1748 (CH 1)
 Class: Major Collector (Rural)
 Current ADT (2013): 773
 Design ADT (2046): 1300
 Design Speed: 30 mph



PLAN
 SCALE 1/8" = 1'-0"

GENERAL PLAN
 FAS 1748 (CH 1)/RED BALL TRAIL
 OVER BNSF RAILROAD
 MP 88.30, BEARDSTOWN SUBDIVISION
 SECTION 01-00072-00-BR
 BOND COUNTY
 STATION 48+95
 STRUCTURE NO. 003-3048
 LAT./LONG.: 38.8499°N/89.3980°W

HMG	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS	GENERAL PLAN
DEPARTMENT OF TRANSPORTATION	SHIRT 1 OF 8 SHEETS

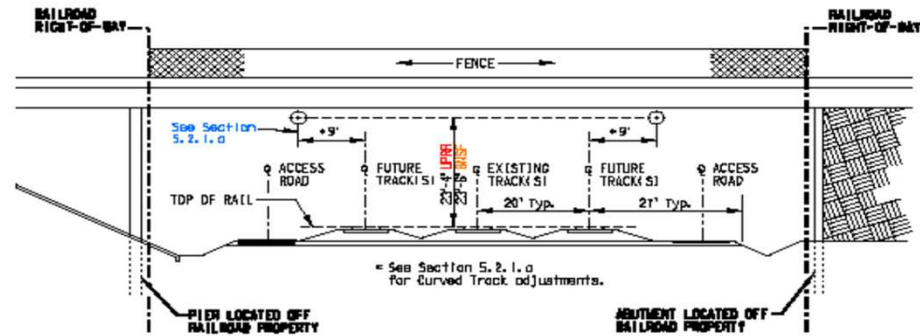
SCALE 1/8" = 1'-0"	NO. 100
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PAGE	SHEET	COUNTY	TOTAL SHEETS
1748	01-00072-00-BR	MO	8

DATE	BY	CHKD	APP'D

UNION PACIFIC RAILROAD - BNSF RAILWAY

GUIDELINES FOR RAILROAD GRADE SEPARATION PROJECTS



The above depiction is for example purposes only. The individual dimensions are the minimum required. Project specific design plans require the review and prior approval by the Railroad.

It is the intent of the Railroad to maintain the right-of-way free of permanent obstructions such as overhead bridge piers, earth fills and drainage facilities which do not support Railroad infrastructure. Permanent obstructions restrict the Railroad's ability to perform maintenance and expand service to existing and future customers. Keeping the right-of-way unobstructed is not a barrier for the Railroad, it is a necessity.



Existing Bridge

- Third bridge at this location to serve travelling public
- Built in 1950's
- Currently has traffic count of 1000 vehicles per day (2022)
- Owned and maintained by BNSF RR, County inspects only.
- Historic listing is on its predecessor that was built in 1907
- Considered "Historically Significant" due to age, design and material
- Designation stays on bridge, regardless of owner

Project Commitments

Bond County

- Has to assume ownership, responsibility, and liabilities of new structure.

BNSF-RR

- Requires that existing structure must be removed for funding participation, regardless of new bridge location.

How does the Historic Significance affect the project??

- Existing Bridge removal is required by BNSF-RR
- Illinois Historic Preservation Division of Illinois Department of Natural Resources has to approve documentation and removal.
- All documentation gets memorialized at Library of Congress
- Structure does NOT have to have a Sponsor
- Bridge documentation approval process currently takes 5+ years
- Sponsor cannot just “accept gifting of bridge”
 - Approved by IDNR
 - Prove financial means to reconstruct bridge to back to before removed condition
 - Approved maintenance program

Which alignment will best serve Bond County, local and commuter traffic??

Four options to consider

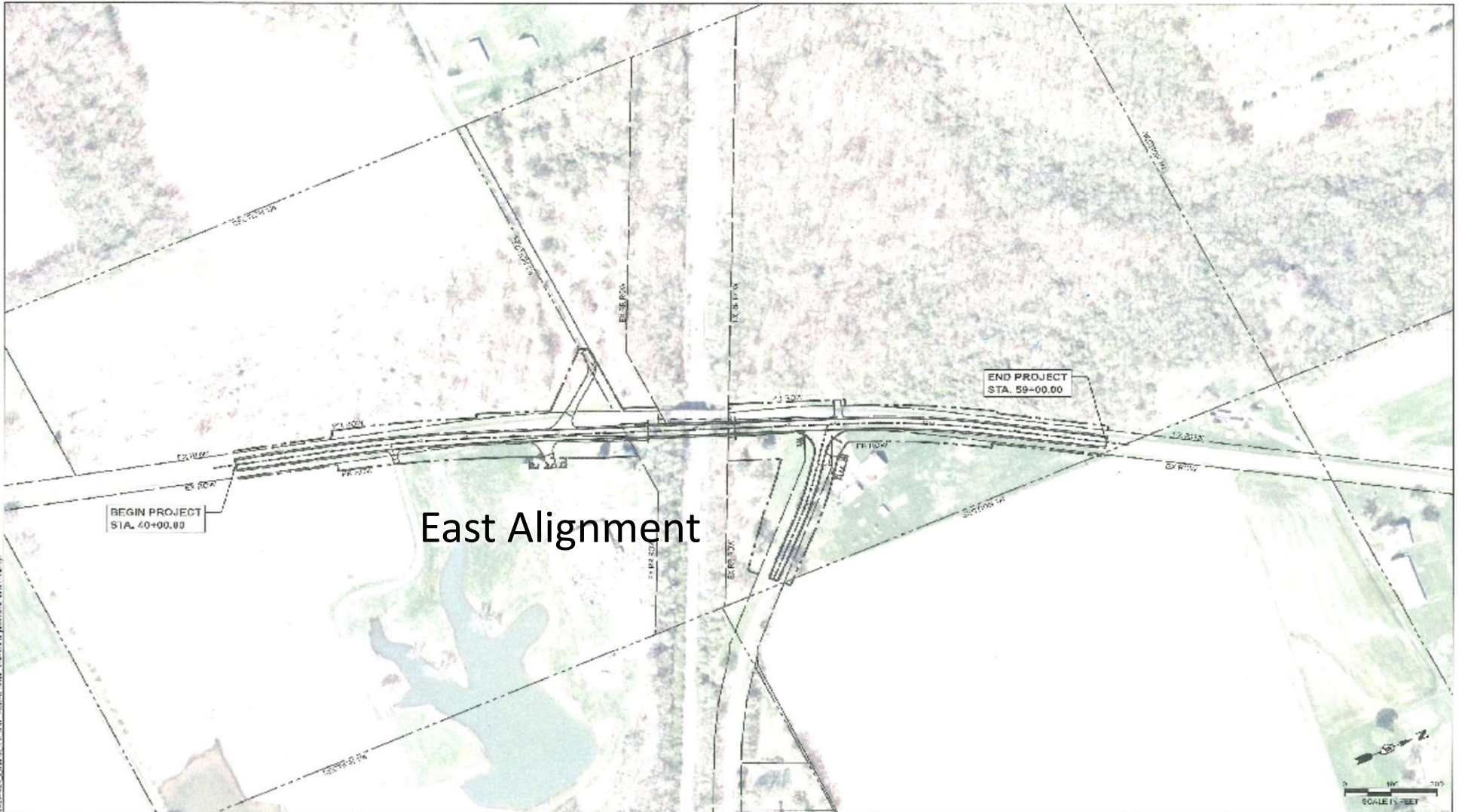
1. Continue with current alignment-East of existing bridge
2. Have new bridge to the West of existing bridge
3. Have new bridge dropped right in on existing alignment
4. Do nothing....



East Alignment

PRELIMINARY

		DISIGNED - CHECKED - DATE -	REVIEWED - REVIEWED - REVIEWED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	AERIAL SITE PLAN & PICTURE DIRECTION FOR 1714 RCH 1, 1/2ND RAIL TRAIL, OVER IRR&N RR	P.A.S. 3788	Section 93-69072-89-801	COUNTY MOHAWK	TOWNSHIP 12S	RANGE 10E
<small>FILE NAME: ...</small>		<small>DATE: ...</small>	<small>DATE: ...</small>	<small>SCALE: ...</small>	<small>SHEET 1 OF 1 SHEETS</small>	<small>TO STA. ...</small>	<small>...</small>	<small>...</small>	<small>...</small>	<small>...</small>



East Alignment

SOURCE: AS BUILT MAP
 FILE NO. 1022-005-3-DWG-C.DWG
 DATE: 08/11/09

DATE PLOTTED	BY	DATE CHECKED	BY	DATE REVISION	BY

RED BALL TRAIL BRIDGE REPLACEMENT BOND COUNTY, ILLINOIS

CURRENT PROPOSED ALIGNMENT EXHIBIT

DATE	SHEET	OF	TOTAL SHEETS	DATE	SCALE	PROJECT NO.	SHEET NO.

East Alignment

PROS

- Alignment and Design already approved by IDOT and BNSF
- Existing bridge can be used until new bridge is done
- Allow existing bridge to remain for Historical documentation

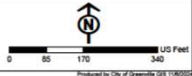
CONS

- Waterline will have to moved
 - Add \$500,000. Paid by County and City of Greenville
 - Take at least 2 years to relocate
 - Can not relocate until R.O.W. is acquisitioned
- Right of Way Acquisition
 - Affected property owners may not want to sell
 - Take at least 2 years if County pursue condemnation
- Lake Point road and community will be inconvenienced

Red Ball Trl - BNSF Water Main

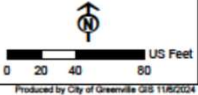


- Casing
- Valve
- Service
- Water Main

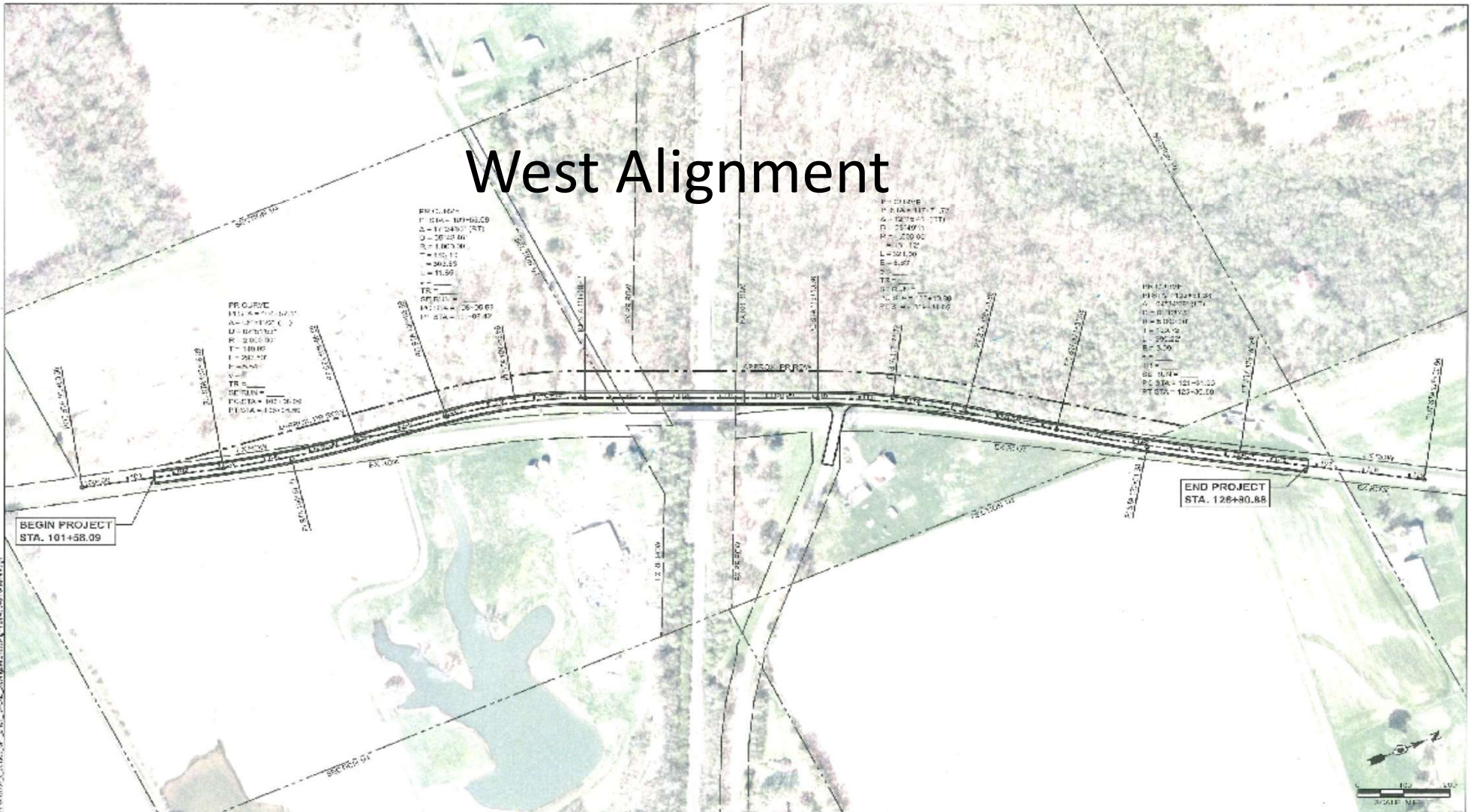




-  Casing
-  Valve
-  Service
-  Water Main



West Alignment



BEGIN PROJECT
STA. 101+58.09

END PROJECT
STA. 126+90.88

PROPOSE
STA. 101+58.09
A = 27.1100
E = 200.00
T = 100.00
L = 200.00
TR =
PC STA = 101+58.09
PT STA = 101+58.09

PROPOSE
STA. 101+58.09
A = 27.1100
E = 200.00
T = 100.00
L = 200.00
TR =
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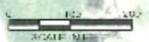
PROJECT NO. 15-110-1000
 DRAWING NO. 15-110-1000-01
 SHEET NO. 15-110-1000-01-01
 DATE: 10/20/15

DESIGNED BY	DATE	SCALE
CHECKED BY		
APPROVED BY		

**RED BALL TRAIL BRIDGE REPLACEMENT
BOND COUNTY, ILLINOIS**

PROPOSED ALTERNATE ALIGNMENT EXHIBIT

PROJECT NO.	15-110-1000
SHEET NO.	01
TOTAL SHEETS	01



West Alignment

PROS

- Existing bridge can be used until new bridge is done
- Allow existing bridge to remain for Historical documentation
- No utility relocations
- Simple parcel R.O.W.
- Lake Point road and community not inconvenienced

CONS

- Start over with design, permits and reviews
- +2 years till construction
- Right of Way Acquisition
 - Affected property owners may not want to sell
 - Take at least 2 years if County pursue condemnation.



Existing Alignment

PROS

- No utility relocations
- No R.O.W. acquisition

CONS

- +5 years for Historical Documentation of existing bridge
- Once existing bridge is closed, everyone North of project will severed from emergency response and services for 9 months
- Creates a 12-mile detour, effecting school buses, mail delivery, commuters, etc.

Do Nothing...

PROS

- Community continues to “enjoy” use of bridge

CONS

- Matter of time until something happens