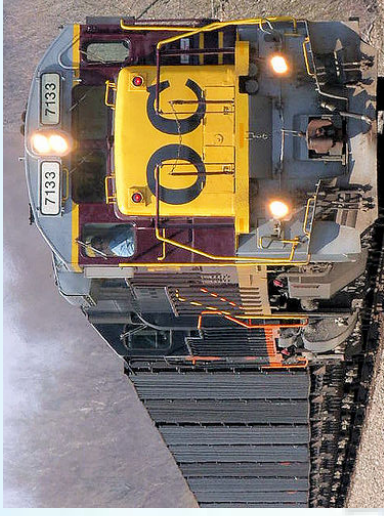
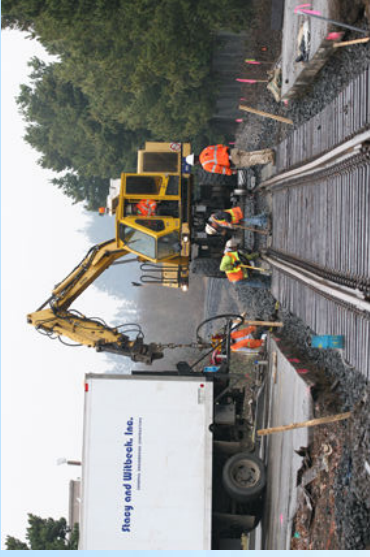
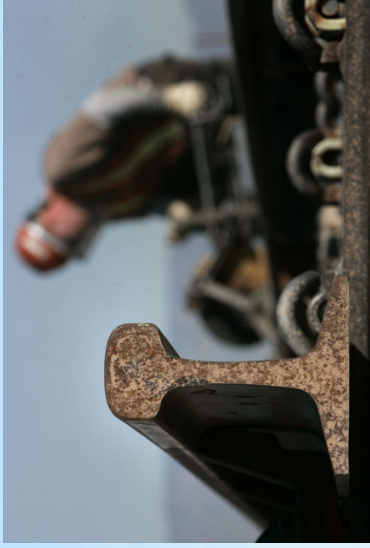


RESTORE

A rail enhancement program for the Mahoning Valley



Rail Enhancements = Sustainable Transportation, Opportunity, Revitalization & Employment

RESTORE

RESTORE overview

☐ What is RESTORE?

A proposed public-private program to restore rail infrastructure which supports the revival of the Mahoning Valley's industrial economy to serve energy, manufacturing and supplier markets.

☐ Why RESTORE?

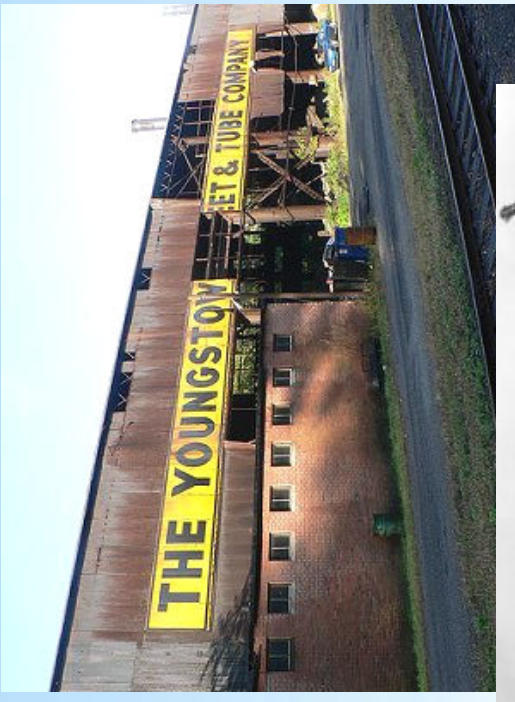
Inspired by Chicago's CREATE program to address its rail traffic congestion, Mahoning Valley's RESTORE seeks to revive or reconnect rail system assets that were downgraded over 35 years of deindustrialization.

☐ Why RESTORE rail?

Rail is a low-cost, high-volume, energy-efficient means of moving goods and people to promote economic efficiency, industrial development and job creation.



Deindustrialization = loss of rail infrastructure



The near-total collapse of the Mahoning Valley's steel industry in the 1970s/80s eliminated much rail traffic traveling less than 100 miles, causing the loss of many rail corridors and connection tracks between rail corridors.



RESTORE ~~RAIL~~

OHIO HISTORICAL SOCIETY

The new dynamic: Direct/spin-off development from gas/oil activity

Pipe makers, steel scrap recyclers, NGL take-aways, equipment manufacturers, frac sand companies, frac water treatment and more will benefit from restoring rail infrastructure in the region.



RESTORE



Resurgence of Mahoning Valley manufacturing

- ☐ The Youngstown-Warren-Boardman metro area ranked #1 in manufacturing job growth in the nation in 2010, according to the Brookings Institution.
- ☐ Strong growth continued into 2011, when American City Business Journals ranked Youngstown-Warren-Boardman as 14th-best in the nation for manufacturing job growth.
- ☐ Construction of large, new manufacturing facilities in the Mahoning Valley and the start of drilling into the massive Marcellus/Utica shale oil/gas play suggest more demand for manufactured goods to service these and other customers.

RESTORE ~~MAHONING~~

Resurgence of Mahoning Valley manufacturing

- ☐ Mahoning Valley industries are not as well-served by low-cost, energy-efficient freight rail as they were before the 1980s.
- ☐ Recent industrial growth has revealed that rail infrastructure cuts were made too deeply, leaving gaps in rail corridors, poor track conditions & stranded/captive shippers.
- ☐ Rail infrastructure losses are restraining faster industrial and commercial growth and redevelopment in the region.



RESTORE ~~RAIL~~

Why the Mahoning Valley needs to improve its rail infrastructure

Frac sand transload/distribution



No matter if the frac sand comes from this area of the country or from the southern portion where the deposits are of the brown sand, **all of it will have to use the railway for transport.** Many suppliers down south discount their process to get the business in the Marcellus region. **The only variable in the transport of the frac sand is then which transloading station is used to transfer the frac sand from rail car to tractor trailer.**

– *Transloading.org*, Nov. 5 2010

RESTORE 

Why the Mahoning Valley needs to improve its rail infrastructure

Frac flowback water recycling

The Niagara Falls Water Board in New York is considering treating fracking water, much like Patriot Water and the City of Warren Water Pollution Control Department here. **Preliminary plans call for Niagara Falls to ship the treated water via rail for re-use in drilling or disposal in the Niagara River. The rail supports this jobs-growth plan.**

– *Warren Tribune Chronicle*, Oct. 30 2011



RESTORE ~~the~~

Why the Mahoning Valley needs to improve its rail infrastructure

Scrap steel recycling at electric arc furnaces

(Niles Iron and Metal Co-President Gary) Clayman is optimistic about the future of the scrap business, because **most steel mills are putting in electric arc furnaces, which are ideally made for the processing of scrap metals. He also is optimistic about the future of Trumbull and Mahoning counties.**

– *Warren Tribune Chronicle, Aug. 8 2010*



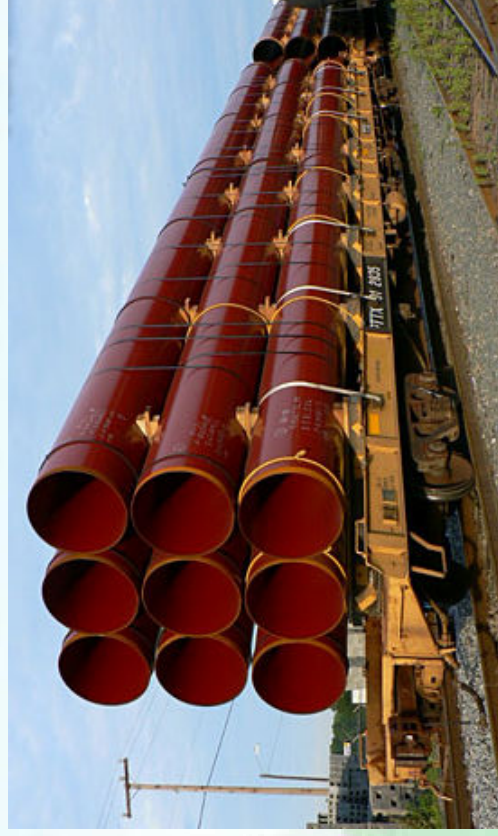
RESTORE

Why the Mahoning Valley needs to improve its rail infrastructure

Steel pipe-making for horizontal drilling, pipelines

And one of those investments is going towards revitalizing the site right next door, preparing it for new construction, and building a rail spur that connects to the Norfolk Southern line that runs through town. So as a result of this investment, V&M Star's parent company decided to invest \$650 million of its own money – its own money – (applause) – to build a new one-million-square-foot mill right here in Youngstown, the largest industrial plant built in the valley since GM built its plant over in Lordstown in the 1960s.

– *President Barack Obama, May 18 2010*



RESTORE ~~the~~

Why the Mahoning Valley needs to improve its rail infrastructure

Natural Gas Liquids take-away methods

The problem, according to (Stonehenge Energy Resources President Chuck) Wilkinson, is that there are no fractionation facilities near the (Butler County, PA) plant and no pipelines available to transport the NGLs. Moreover, he says, there are very few petrochemical plants in the Northeast. **“Since there is no NGL pipeline or local markets for all the recovered liquids, we will probably have to take the NGLs out by truck and rail, with several options for final destination,”** he speculates. The additional transportation costs associated with truck and rail shipping will impact NGL recovery economics.

– *American Oil & Gas Reporter, March 2010*



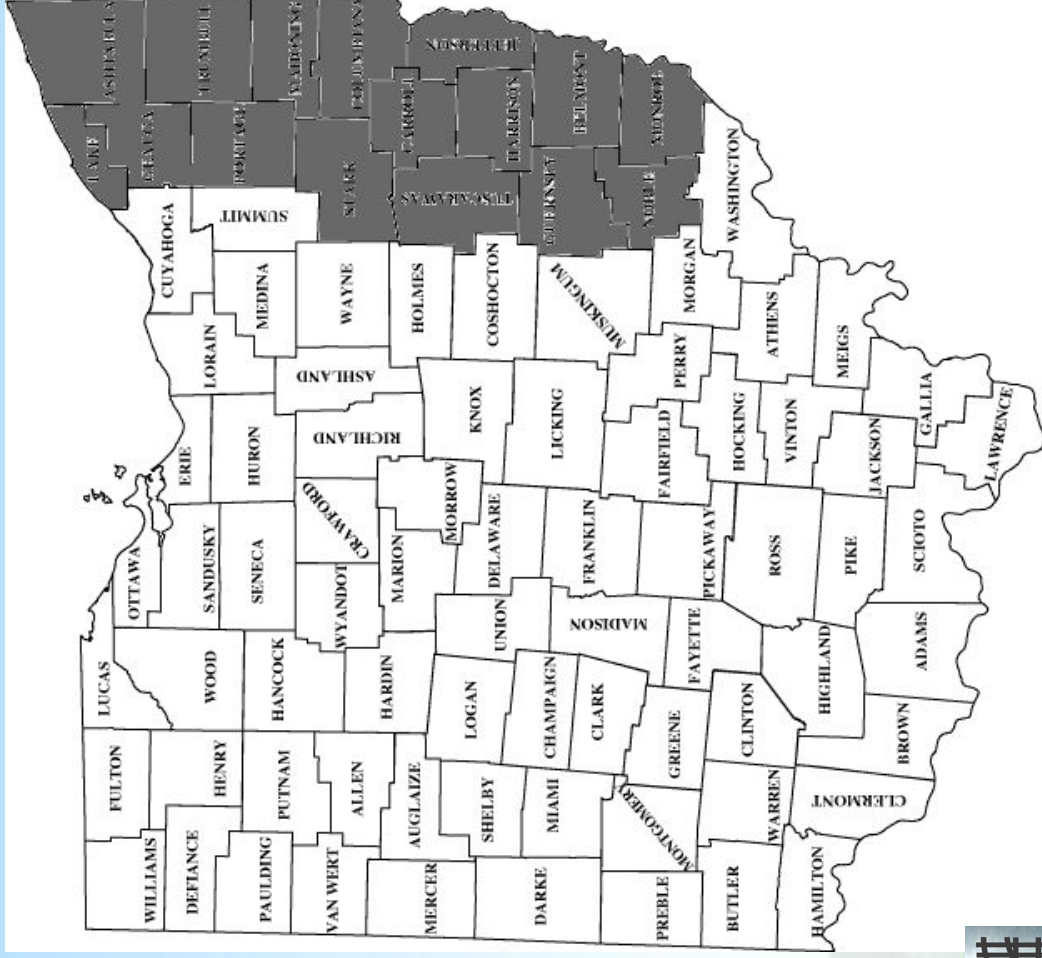
RESTORE ~~MAHONING~~

QUESTION: Where will these job-producing activities occur?

ANSWER: Where the wells are located, and where the lowest-cost, highest-volume transportation (water ports & rail services) exist



10,000+ new gas wells will be producing
in Ohio in 2011 – all in these 16 counties



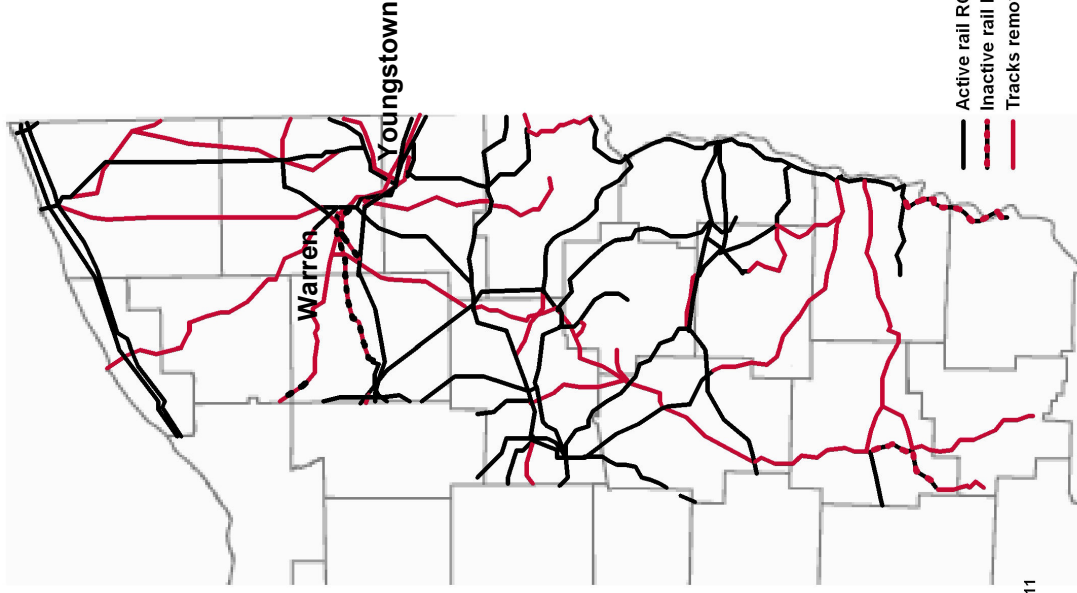
*Utica shale
region is in
eastern OH*

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Rail infrastructure status in Utica region



Railroad corridors in counties with 2011-issued oil gas permits



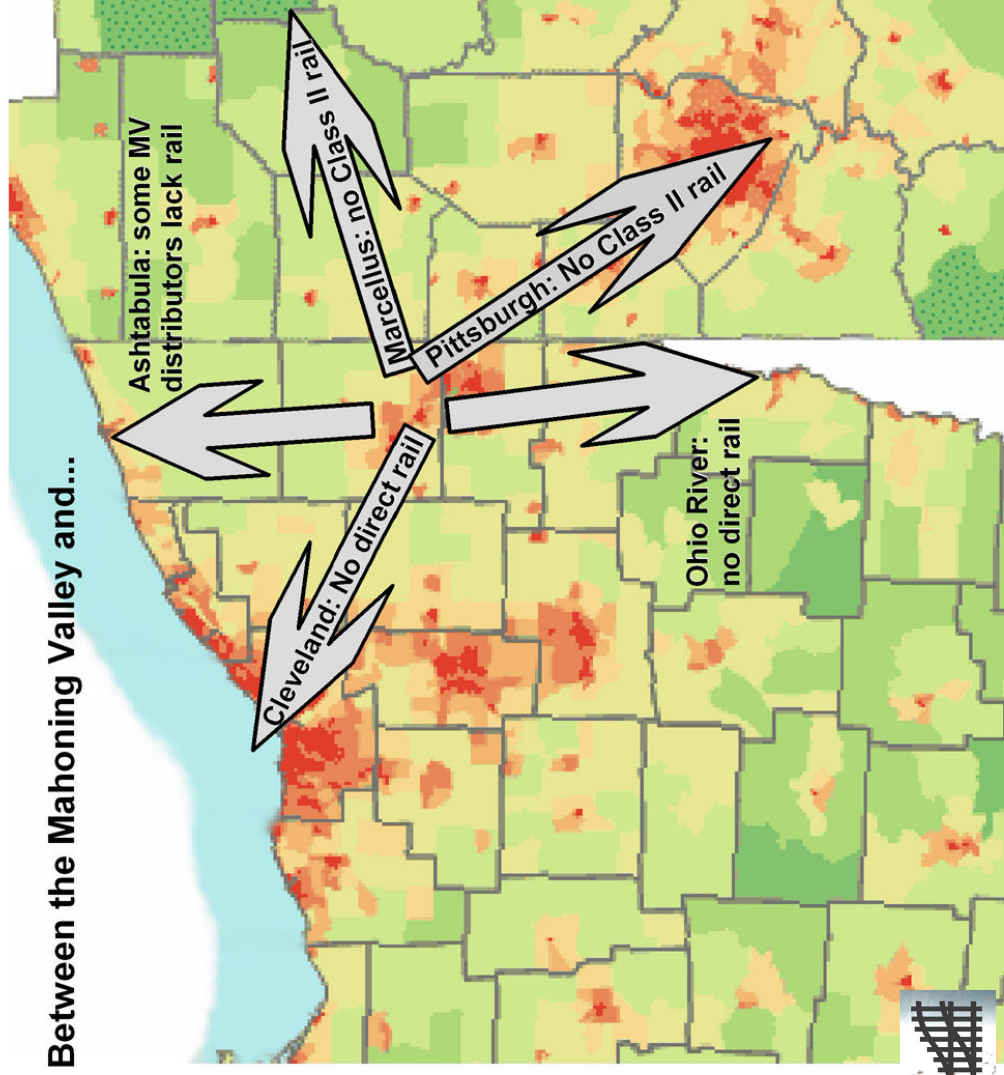
KJPrendergast 2011

RESTORE

Map of Misconnects

Key rail assets to meet many shippers' needs no longer exist

Between the Mahoning Valley and...



RESTORE

Why railroads don't always invest in more infrastructure

- ❑ Railroads are very capital-intensive enterprises. Unlike other modes of transportation, they own their rights of way and finance them mostly from private capital markets – not taxpayers.
- ❑ U.S. Surface Transportation Board: RRs cost of capital is 11.3%. Only Union Pacific earned a rate of return in 2010 that at least equaled its cost of capital. Two Class I RRs serving NE Ohio came close: CSX @ 10.85% and Norfolk Southern @ 10.96%.
- ❑ Regional/Shortline (Class II & III) RRs are far less “revenue-adequate” than the Class Is. They often depend on public-sector help (tax credits, grants/loans and outright ownership of rights of way) to improve and construct their infrastructure.

RESTORE ~~infrastructure~~

Why the public sector should aid, improve freight rail infrastructure

- The public sector in the US has historically owned, financed or otherwise assisted the development of transportation to expand commerce and raise Americans' standards of living.
- American Association of State Highway & Transportation Officials says 1% rise in market share by US freight RRs by 2020 would:
 - shift 600 million tons of freight and 25 billion truck vehicle-miles traveled off the highway system;
 - save shippers \$239 billion;
 - save highway users \$397 billion;
 - reduce highway costs by \$17 billion. Inclusion of costs for bridges, interchanges, etc., could double this estimate.

RESTORE ~~infrastructure~~

Why the Mahoning Valley should aggressively promote rail infrastructure improvements

- ☐ Our competition is promoting rail improvements to tap the Marcellus region. PennDOT provides 10-20 times more funding to rail freight improvement projects than ODOT does.
- ☐ PA formed a Governor's Marcellus Shale Advisory Commission and Transportation Funding Advisory Commission.
- ☐ PA's Marcellus commission recommends giving priority to rail freight in the Marcellus region to relieve the burden on roads and bridges from transporting sand, water and pipe to serve gas well operations. It also suggests the state partner with local rail authorities to seek federal rail freight dollars for this effort.



What rail infrastructure improvements could be sought in the Mahoning Valley

The Mahoning Valley's answer could be RESTORE, a public-private program offered by All Aboard Ohio after consulting with shippers, community leaders and business groups.

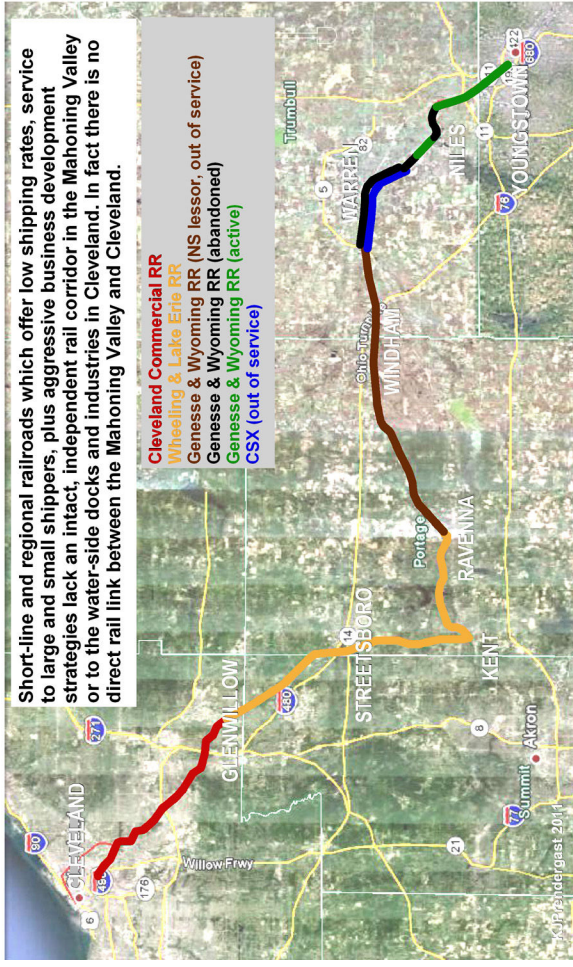
The following projects are ideas that could be part of a RESTORE program because they could enhance the Mahoning Valley's attractiveness as the nation's leading "toolbox" for tapping gas/oil from the Marcellus-Utica shale.

NOTE: the projects & capital costs shown herein are educated opinions to demonstrate the probable scale of a RESTORE program. These will likely change after detailed programmatic & project-level assessments are done.



RESTORE projects

Cleveland - Youngstown before

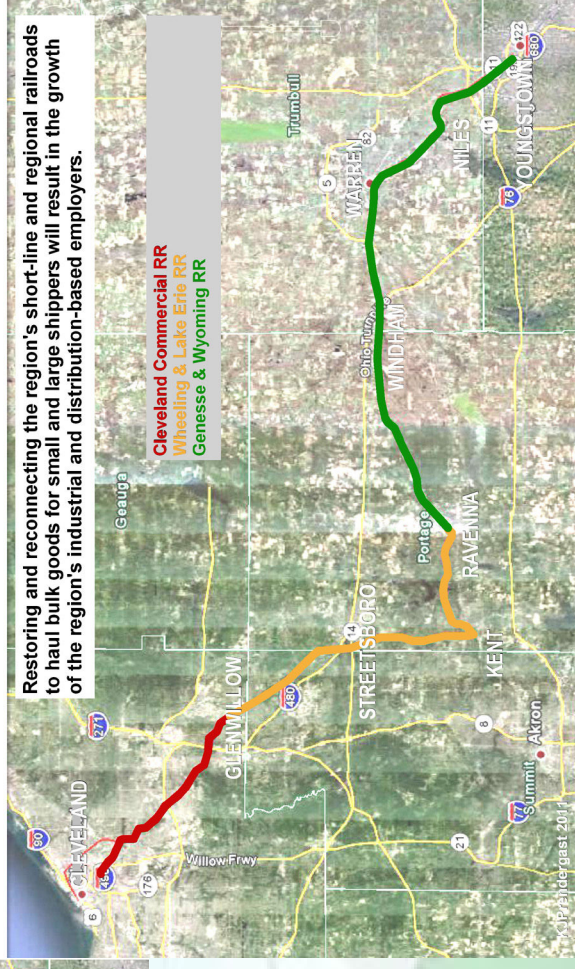


RESTORE Corridor

Phase 1 – re-establish rail corridor CLE-YGN: \$21 million

Phase 2 – upgrade rail corridor for more trains: \$16 million

Cleveland - Youngstown RESTORE

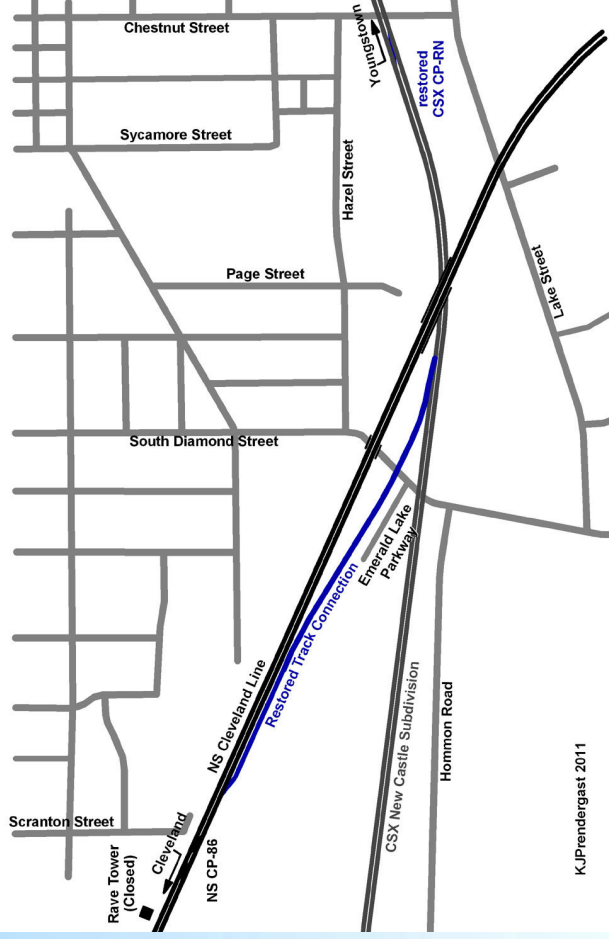


The RESTORE Corridor will provide Class II/III regional/short-line railroads with the means to serve local shippers and short-distance freight markets.

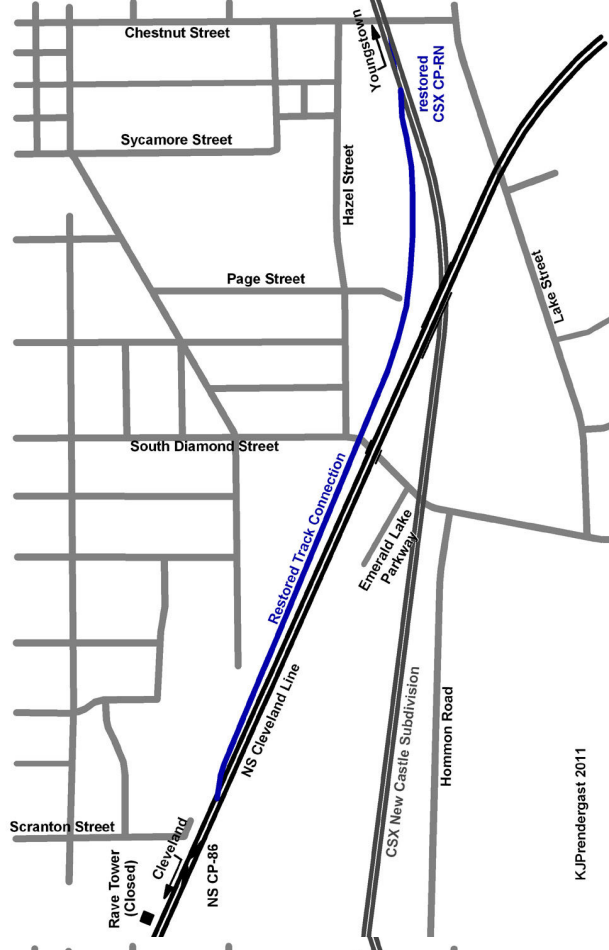
RESTORE

RESTORE projects

Ravenna, restore EB connection



Ravenna, restore WB connection



Restoring the “missing mile” track at Ravenna to link the CSX and NS mainlines will restore a direct YGN-CLE Class 1 freight route.

RESTORE Ravenna Connection

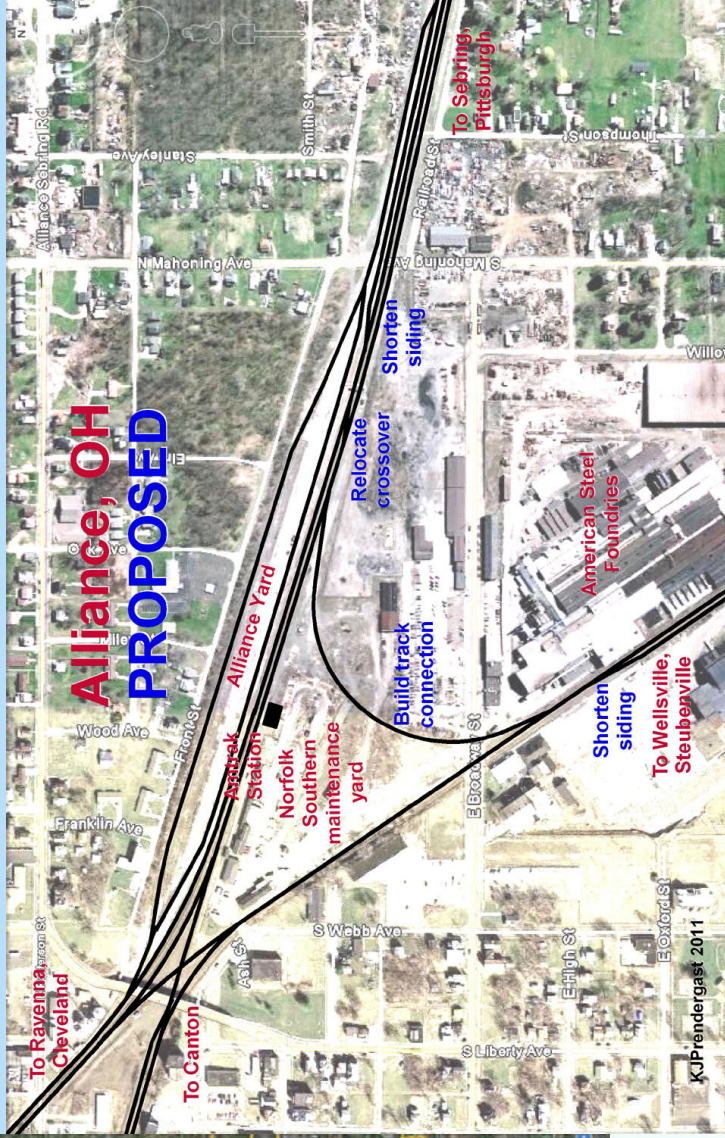
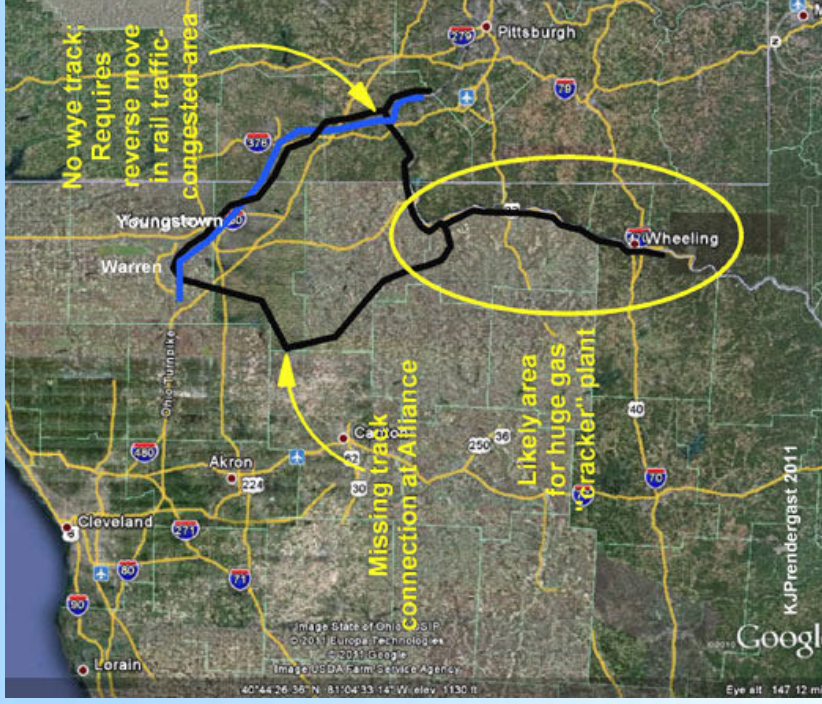
EB connection track – \$5.7 million

WB connection track – \$6.6 million

Note: only one connection track may be restored. The eastbound or westbound reference is the purpose each track served when both tracks were in operation. One track can serve both EB and WB traffic today.



RESTORE projects



A short connecting track on NS at Alliance would provide a direct rail link to the Ohio River port at Wellsville and downriver cities.

Alliance connection track

Construct track connection – \$4 million



RESTORE projects

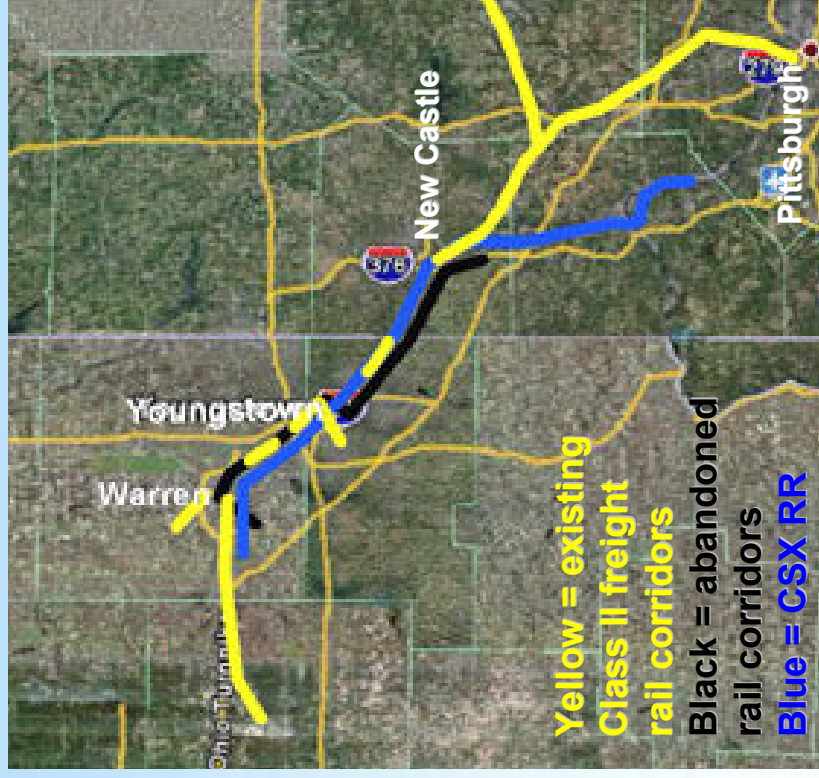
YGN-Marcellus Class II Rail

Phase 1 – acquire ROW, build track on former P&LE RR roadbed New Castle-Lowellville: \$14.5 million

Phase 2 – acquire ROWs, build track on former rail corridors & across existing RRs from

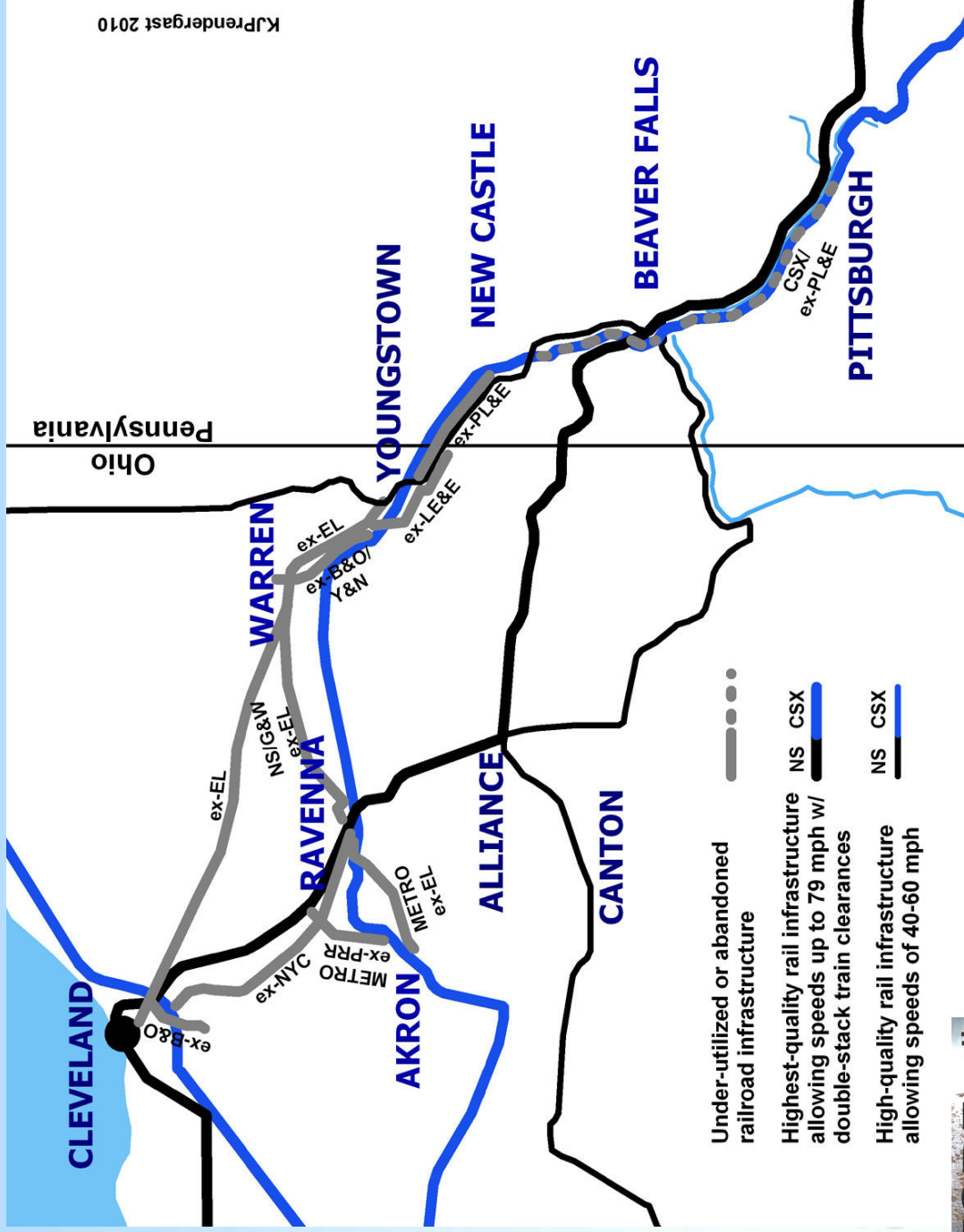
Lowellville-Brier Hill: \$11 million

Offers a direct Class II rail link between the Mahoning Valley and the Marcellus region. Class II regional railroads will carry lighter density freight loads over shorter distances than Class I RRs.



RESTORE

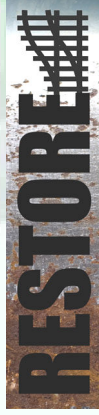
Gray rail lines are abandoned or downgraded



RESTORE

Possible next steps.....

- ☐ Organize stakeholders. Identify a stakeholder willing to conduct administrative oversight of RESTORE program.
- ☐ Develop RESTORE as a programmatic rail development plan for the Mahoning Valley to identify current and potential shipping needs, compare them with existing and former/potential rail rights of way and identify projects (such as those in this report) to address the region's needs.
- ☐ Identify project sponsor(s) and determine if projects can be financed entirely by private funds. If public funds are needed, then follow NEPA project development process where federal funds are involved.



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