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CMAP Freight Advisory Committee

Chicago, IL

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Definition of a Flyover

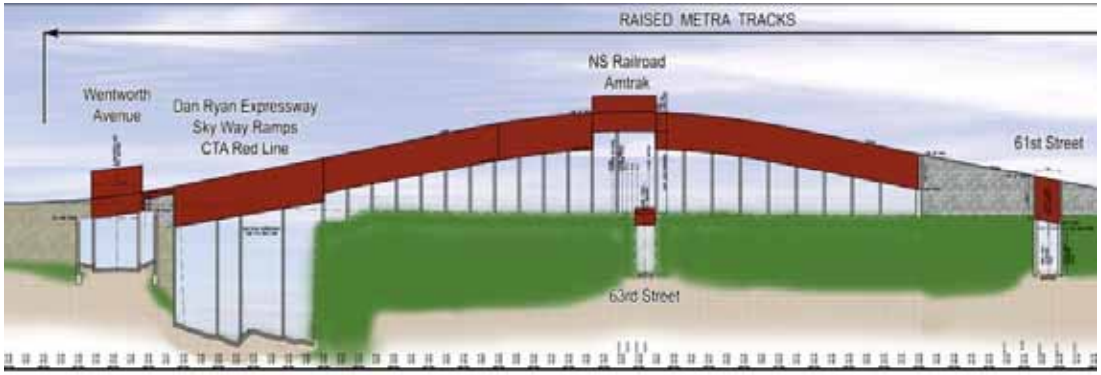
- Flyover: High-Level Overpass Railway Structure that Crosses Over Another Railway

TranSystems Flyover Experts

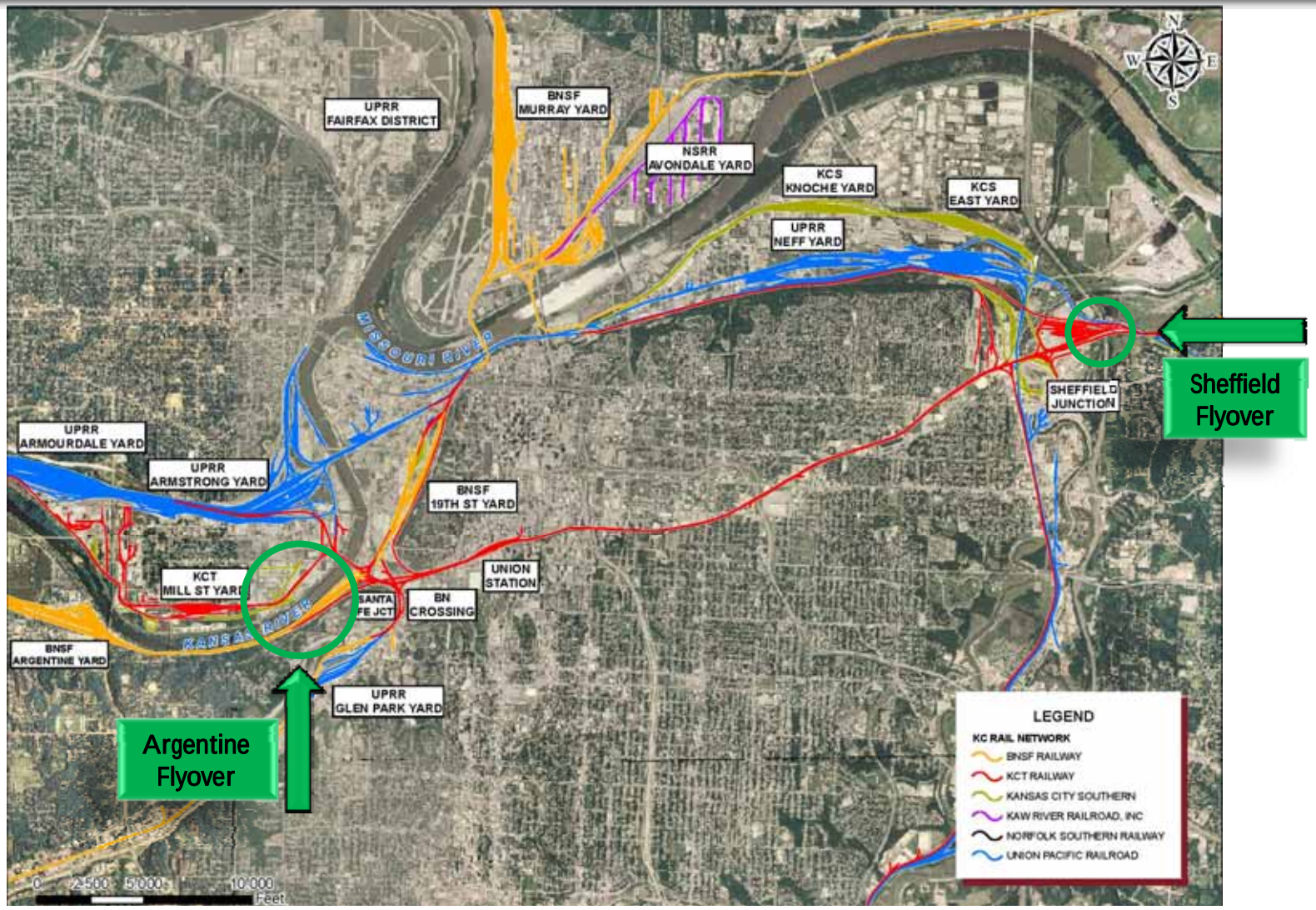
Sheffield Flyover – Kansas City, MO

Argentine Flyover – Kansas City, KS

CREATE P1– Chicago, IL



Kansas City Rail Layout



Kansas City History

- Kansas City grew up where the Kansas River flows into the Missouri River, straddles KC-MO state line.
- Rail lines were constructed along the bottom of river valleys in tight, confined areas.
- Nation's largest rail center by freight tonnage and second largest (after Chicago) by train volume.
  - 5 class ones meet here.
  - No commuter trains.

Kansas City Metropolitan Area

Kansas City Terminal Overview

- BNSF and UP operate mainlines "through" the terminal; other railroads terminate and interchange here.
- Kansas City Terminal Railway was formed in 1906 by the 12 original Kansas City railroads.
- Today owned by BNSF, CPR, KCS, NS and UP.
- Operates 87 miles of track
  - Kansas: 25 miles; Missouri: 62 miles

Sheffield Junction Overview

- Sheffield was a collection of crossings vs. a single interlocking (3.2-mile corridor).
- Busy BNSF (ex-Santa Fe) Transcon mainline crossed UP's KC-St. Louis mainline.
- Plus, crossings of KCS and UP mainlines south to Shreveport and Little Rock.
- Crossings of Rock Creek, Blue River and US Route 24 added to complexity.

Sheffield Junction Solution

- **Sheffield Flyover is actually 3 separate structures.**
  - From east to west, first is a 200 foot long span over Rock Creek.
  - Second is 1,000 foot long over UP and KCS mainlines to St. Louis (then under I-435).
  - Third, and largest, 6,000 feet, passes over KCS north-south mainline and UP mainline to Little Rock.

Sheffield Junction Solution

- First cooperative project among competitors.
- 32-month design and construction.
- Total cost of $74 million.
- Resembles CREATE's 75th Corridor Project in complexity.

Argentine Junction Overview

- Significant choke point where 3 heavily traveled, 80-million gross-ton-mile mainlines intersected.
- Busy BNSF (ex-Santa Fe) Transcon line crossed over pair of UP and BNSF north-south mainlines that primarily handled coal and grain unit trains.

Argentine Junction Solution

- Flyover elevates BNSF Transcon line over both the BNSF and UP north-south routes.
- Bridge is 2,496 ft. long and 80 ft. high at tallest point.
- Three levels of double-track mainlines crossing at one location.

Flyover Financing Package

- Funding solutions were as innovative as the engineering.
- Both projects were early examples of public-private partnerships.
- No federal involvement.
- Multiple local and state jurisdictions in partnership with multiple, competing rail carriers.
- Relied primarily on bonds issued by tax-exempt corporations, provided lower interest rates than railroads receive on their own.

Flyover Financing Package

- Sheffield Project financed by issuance of bonds by nonprofit corporation created under Missouri law.
- KCT created K.C. Intermodal Transportation Corporation for purpose of issuing debt for construction and assessing tax-exempt status from property tax.
- BNSF, UP and KCS responsible to pay back the bonds over a 20-year period.

Flyover Financing Package

- Argentine straddled the state border; two separate financing mechanisms required.
- Missouri portion ($46.3 million) financed by bonds issued the Westside Intermodal Transportation Corporation.
- For Kansas portion ($13.5 million) Unified Government of Kansas City/Wyandotte issued bonds; KCT responsible for debt service on those bonds.

CREATE P1: Englewood Flyover

CREATE P1 – Phase I and II

Englewood Junction Solution

- Englewood Junction, located on Chicago's south side, is an at-grade crossing of Metra's double-track Rock Island District mainline and Norfolk Southern's triple-track mainline, also used by Amtrak.
- Needed to eliminate this bottleneck to improve current reliability and allow for significant future growth by Metra, NS and Amtrak.
- Solution was to construct a flyover to take Metra's Rock Island District mainline up and over Norfolk Southern's mainline.

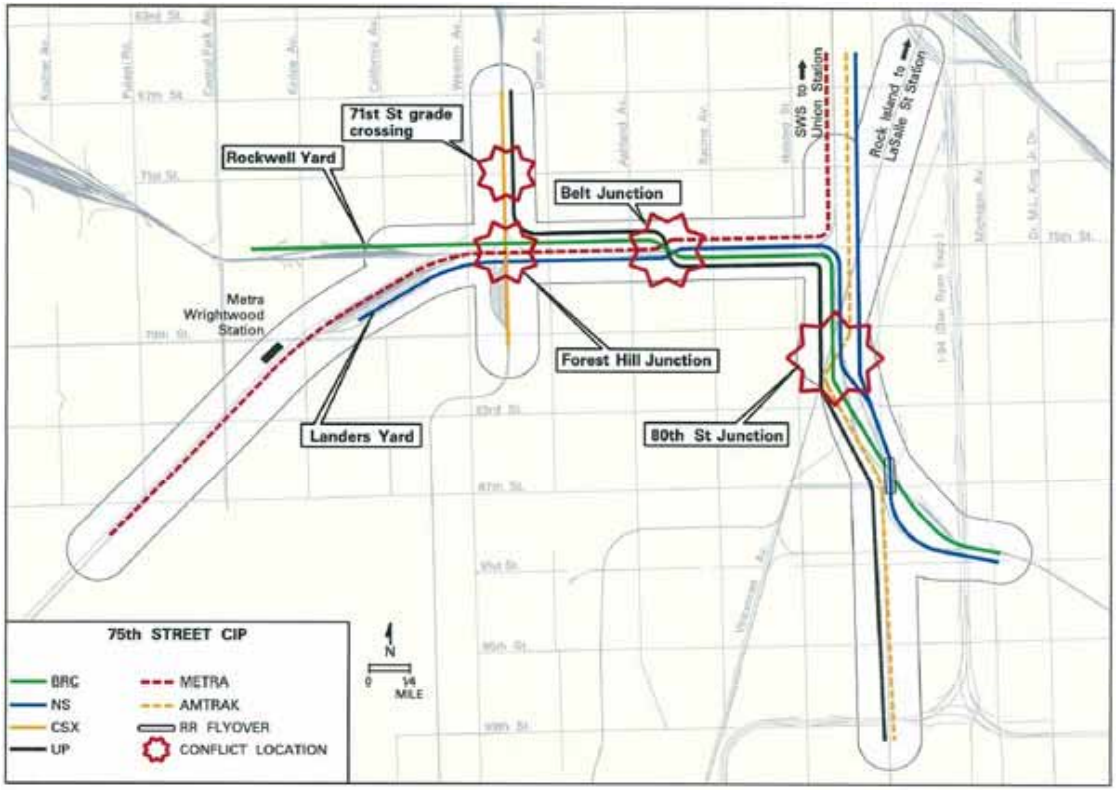
CREATE P1 : Englewood Junction

- Englewood Design

Englewood Design Challenges

- Project site is located adjacent to densely populated residential neighborhoods.
- South end of flyover structure spans Dan Ryan Expressway (I-94) and CTA Red Line.
- Cannot adversely impact rail operations on Metra's Rock Island District.
- Cannot adversely impact rail operations on NS mainline or at NS' Park Manor intermodal terminal located just east of the site.

75th Street Corridor Improvement Project (CIP)



Forest Hill Diamond Crossing

71st Street Highway Rail-Grade Crossing

Questions

Questions?

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