

# SCREEN 3 - Step 1: Alternatives Definition

## Heavy Rail Transit



**Halsted Street to Vermont Avenue**

**T** Elevated  
4 Stations / 5.0 Route Miles



**UP Railroad to 130th Street**

**T** Elevated  
4 Stations / 5.3 Route Miles

Corridors and stations and parking **P** are shown in generalized locations only.



# Evaluation Findings

Factor	Transportation System Management (Incorporates BRT)		Heavy Rail Transit 	
	Halsted Street to Vermont Avenue	Michigan Avenue to 130th Street	Halsted Street to Vermont Avenue	UP Railroad to 130th Street
Corridor	Halsted Street to Vermont Avenue	Michigan Avenue to 130th Street	Halsted Street to Vermont Avenue	UP Railroad to 130th Street
Profile	At-Grade No exclusive lanes	At-Grade No exclusive lanes	Elevated	Elevated
Physical Constraints	○	○	○	-
Public Support	○	○	○	+
Social / Economic	○	○	○	○
Environmental	○	○	○	○
Transportation	-	-	+	+
Capital Cost	+	+	○	○
Operating Cost	+	+	○	○
Ridership	○	○	+	+
Summary Rating	+1	+1	+2	+2
LPA Recommendation	NO	NO	YES	YES*

+ Better than other alternatives   
 ○ Comparable to other alternatives   
 - Worse than other alternatives

\* Subject to separation distance/ROW availability and cost-effectiveness requirements



# Preliminary Cost-Effectiveness Evaluation

FTA has cost-effectiveness thresholds

- Cost per hour of projected user benefits as measured by travel time savings.

Shorter versions of the HRT alternatives were investigated to see if the cost-effectiveness improved:

- HRT Halsted to 119th Street
- HRT UPRR to 115th Street

Initial results indicate up to 23% improvement in cost-effectiveness due to greater proportion of capital and O&M cost savings versus ridership reductions.

Factor *	HRT Halsted		HRT UPRR	
	Vermont Avenue	119th Street	130th Street	115th Street
Capital Costs (YOE)	\$1,100M	\$900M	\$1,100M	\$800M
O&M Costs (Annual)	\$21M	\$17M	\$24M	\$17M
Ridership (Annual)	11.6M	10.9M	12.7M	10.6M
YARD and Shop Costs (YOE)	\$200M	\$200M	\$200M	\$300M



The Halsted 119th Street alternative improves cost-effectiveness by 23%

The UPRR 115th Street alternative improves cost-effectiveness by 22%

\* Costs and ridership figures as of June 2009



# Preliminary Cost-Effectiveness Evaluation Shortened Alignments

## Heavy Rail Transit



**Halsted Street to 119th Street**

**T** Elevated  
4 Stations / 3.8 Route Miles



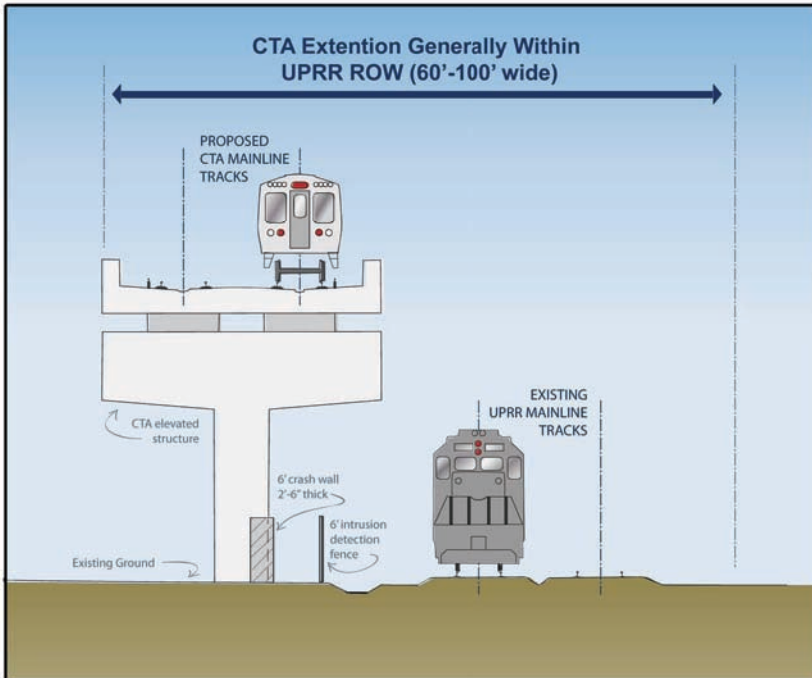
**UP Railroad to 115th Street**

**T** Elevated  
4 Stations / 3.3 Route Miles

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# Freight Railroad & Transit Shared Use Corridor



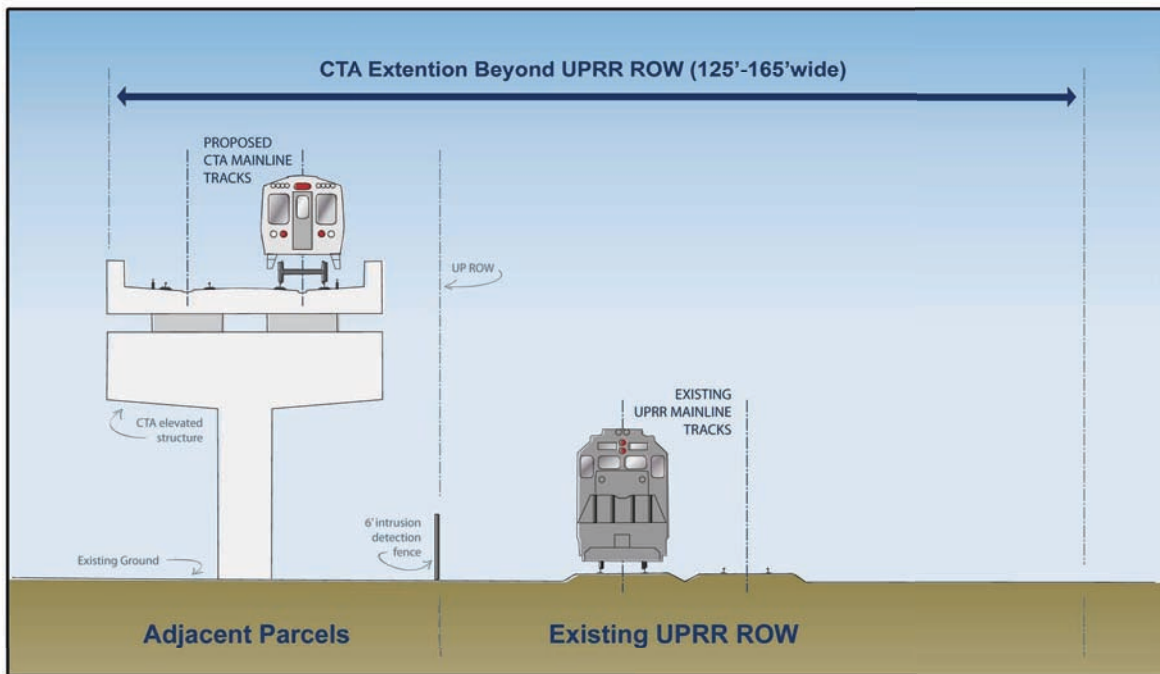
## Physical Constraints

### Freight Railroad & Transit Shared-Use Corridor

- Due to recent accidents, the transportation industry is adopting greater separation between freight railroad and transit operations for safety reasons
- For the HRT UPRR Elevated Alternative, 50-foot separation distance is desired

### Right-of-Way Constraints

- UPRR needs entire right-of-way for operational purposes
- With additional separation distance, CTA extension will require adjacent property acquisition
- East and west alignments immediately adjacent to the UPRR right-of-way are being investigated



# SCREEN 3 - Recommendation: Locally Preferred Alternative

## Heavy Rail Transit



### UP Railroad to 130th Street

**T** Elevated  
4 Stations / 5.3 Route Miles

Corridors and stations and parking **P** are shown in generalized locations only.

