



Corridor Advisory Group and Task Force Meeting #11

September 29, 2011



Agenda



■ Introductions	9:00	10 min
■ CAG/TF Format	9:10	10 min
■ Recap Meeting #10	9:20	10 min
■ Single Mode Alternatives Evaluation (Continued)	9:30	45 min
■ Tolling/HOT Lane Legislation	10:15	10 min
■ Combination Alternatives Discussion	10:25	30 min
■ Next Steps	10:55	5 min

CAG/TF Meeting Format



CAG/TF Meeting Document Review

4



- New materials introduced at CAG/TF meeting
 - Questions and discussions during meeting
- CAG/TF review materials prior to following meeting (approximately 2 months)
- Next CAG/TF meeting(s) forum continue/complete discussion



CAG/TF #10 Recap





- Public Meeting #2 Summary
- Round 1 Screening
 - Single Mode Alternatives Process
 - Alternatives Evaluated and Not Evaluated
 - Initial Single Mode Evaluation Results



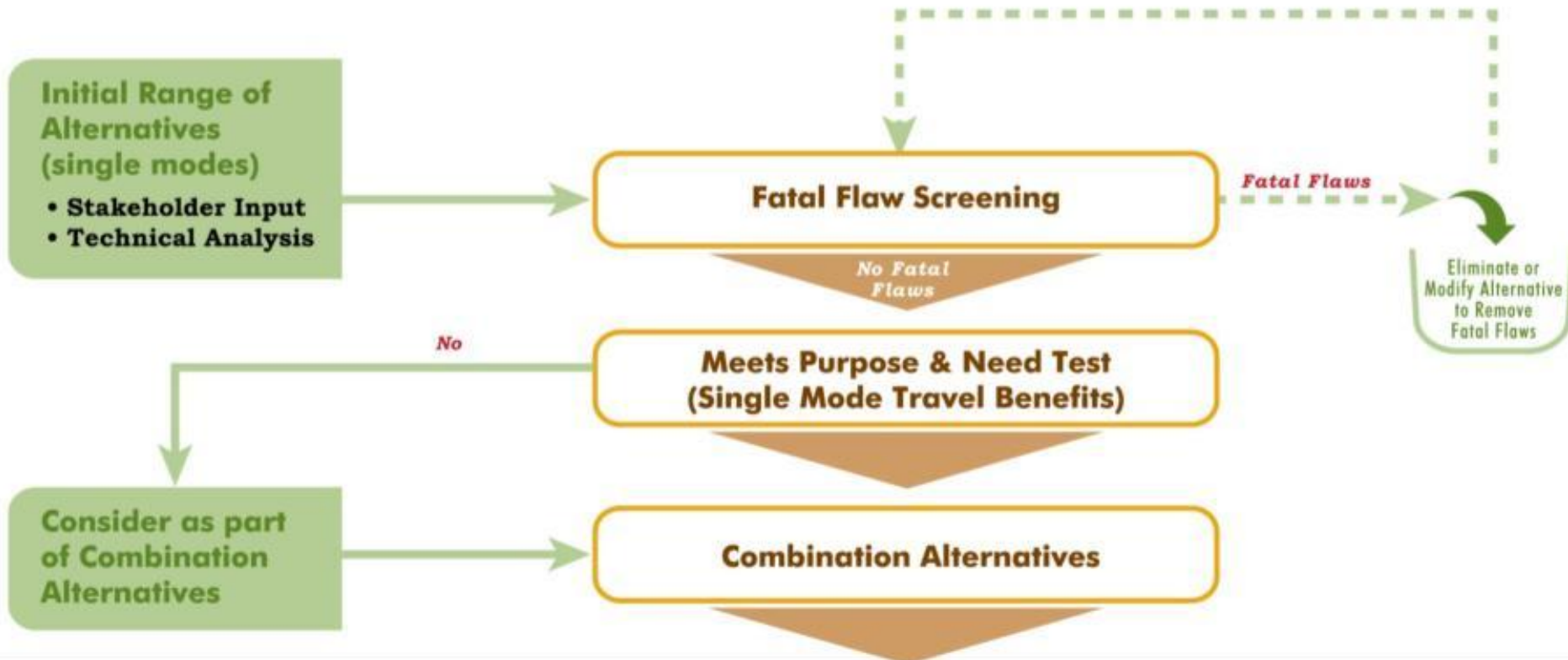
Round 1 Screening: Single Mode Alternatives Evaluation

(Continued from CAG/TF #10)



Alternatives Development & Evaluation Process

Round 1 Screening






- **Single Mode Alternative:**
 - An alternative that consists of changes to, or additions of, one type (mode) of travel

Round 1 Evaluation Process Overview






- Alternatives evaluated on how well the identified needs are addressed compared to the 2040 No-Build Scenario
- Relative changes of each measure compared
- Results summary handout:
 - Top 4 alternatives highlighted for each measure
 - Number of measures in top 4 summed for each alternative for comparison
 - Qualitative based measures not included in sum

Single Mode Transit Alternatives Evaluated - July

Blue Line Extension (HRT) 	Blue Line Extension - From Forest Park To Oak Brook Via IL Prairie Path & Butterfield Rd. (HRT 1)
	Blue Line Extension - From Forest Park To Oak Brook Via IL I-290 & I-88 (HRT 2)
Express Bus 	Various service from DuPage and Northwest Cook Counties to Forest Park CTA terminal (EXP)
Bus Rapid Transit (BRT) 	Oak Brook to Forest Park - Via Butterfield Road & IL Prairie Path (BRT 1)
	Oak Brook to Forest Park - Via I-88 & I-290 (BRT 2)
	Oak Brook to Cicero Avenue - Via I-88 & I-290 (BRT 3)
	Oak Brook to Ashland Ave - Via I-88 & I-290 – CTA Blue Line conversion (BRT 4)

Under Development

9 Single Mode Transit Alternatives Evaluated - Today

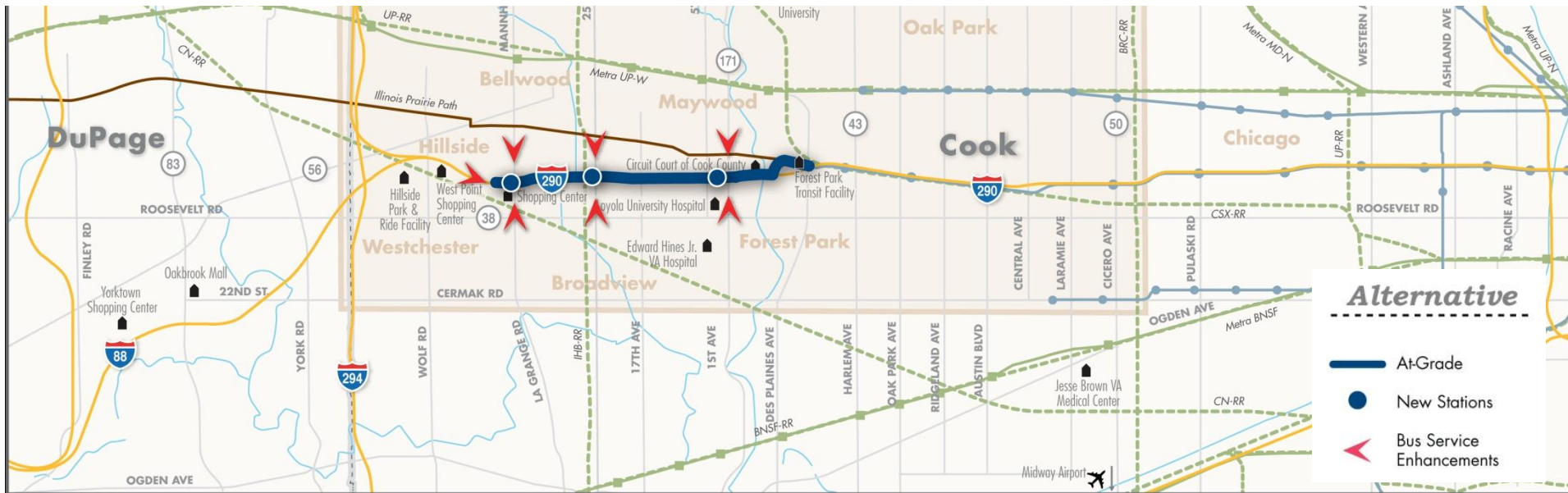
<p>Blue Line Extension (HRT)</p> 	Blue Line Extension - From Forest Park To Oak Brook Via IL Prairie Path & Butterfield Rd. (HRT 1)	
	Blue Line Extension - From Forest Park To Oak Brook Via IL I-290 & I-88 (HRT 2)	
	Blue Line Extension - From Forest Park To Mannheim Via I-290 (HRT 3)	New
<p>Express Bus</p> 	Various service from DuPage and Northwest Cook Counties to Forest Park CTA terminal (EXP)	
<p>Bus Rapid Transit (BRT)</p> 	Oak Brook to Forest Park - Via Butterfield Road & IL Prairie Path (BRT 1)	
	Oak Brook to Forest Park - Via I-88 & I-290 (BRT 2)	
	Oak Brook to Cicero Avenue - Via I-88 & I-290 (BRT 3)	Completed
	Oak Brook to Ashland Ave - Via I-88 & I-290 – CTA Blue Line conversion (BRT 4)	Completed
	Lombard to Forest Park - Via I-88 & I-290 (BRT 5)	New

Round 1 - Single Mode Alternatives



CTA Blue Line Extension

From Forest Park CTA Terminal to Mannheim Road
(HRT 3)



- Via I-290 Median (at-grade)
- 3.5 miles
- Local bus route enhancements
- No fatal flaws identified due to impacts










I-290 Phase I Study
Round 1 - Single Mode Alternatives
Purpose and Need Evaluation
Alternatives Measures
Initial Ranking Summary

September 29, 2011

DRAFT

This table summarizes the total number of top 4 ranked measures for each need point. *This is a draft document and may be updated as appropriate.*

Total # of Measures in each need point category *

		Blue Line Extension			Express Bus	Bus Rapid Transit (BRT)				
										
		Blue Line Ext. Along Prairie Path to Oak Brook	Blue Line Ext. Along I-290 to Oak Brook	Blue Line Ext. Along I-290 to Mannheim (Short)	Express Buses to Forest Park	BRT Along Prairie Path, Oak Brook to Forest Park	BRT Along I-290, Oak Brook to Forest Park	BRT - Oak Brook to Cicero Ave. (CTA Overlap)	BRT - Oak Brook to Ashland Ave. (Blue Line Conversion)	BRT - Forest Park CTA Terminal to Lombard
		HRT 1	HRT 2	HRT 3	EXP	BRT 1	BRT 2	BRT 3	BRT 4	BRT 5
Count of top 4 ranked measures	28	2	1	0	0	0	2	2	6	3
Improve Local And Regional Travel Measures	21	2	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	2	<i>0</i>
Improve Access to Employment Measures	3	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	1	1	2	1
Improve Safety Measures	3	<i>0</i>	1	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	1	1
Improve Modal Connections and Opportunities Measures	1	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	1	1	1	1
Improve Facility Deficiencies Measures	-									

Color Legend: Top 4 Performers
 1st 2nd 3rd 4th

* Total number of non-qualitative measures



BRT



HRT



EXP

Transit alternatives benefits:

- Improves access to jobs from study area
- Some improvement in regional congestion and safety
- Up to 11,600 auto person trip diversions
- Transit travel times improved



Blue Line Extension & BRT Alternatives:

- Best transportation performance of the transit alternatives
- Very similar overall transportation performance
- Large increase in transit access to jobs
- Similar auto person trip diversions (7,000 – 11,600 new transit trips)
- Local bus and some Metra service trip diversion



Blue Line Extension to Mannheim:

- 71% of new jobs are accessible by HRT extension to Mannheim compared to extension to Oak Brook
- 89% of new regional transit trips occur with Blue Line Extension to Mannheim Road compared to Oak Brook extension
- Shorter extension to Mannheim may be more cost-effective than longer extensions



BRT extension & conversion of existing Blue Line

- Performs similar to existing Blue Line extended
- Potential capacity issues with BRT conversion



Express Bus

- Minor improvements in travel performance
- Good increase in transit access to jobs



Transit alternatives do not improve I-290 travel performance versus 2040 Baseline alternative

- I-290 peak period volume-capacity ratio: no change
- I-290 peak period average speeds & travel times: no change
- I-290 hours of congestion: no change

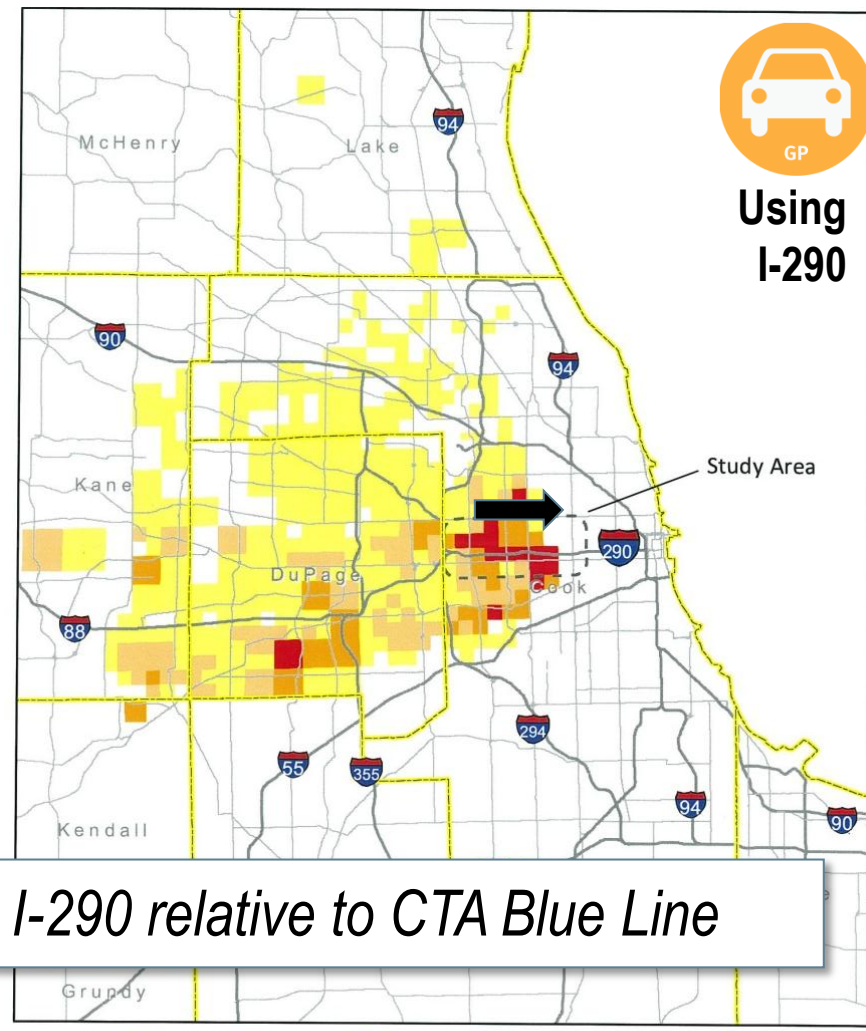
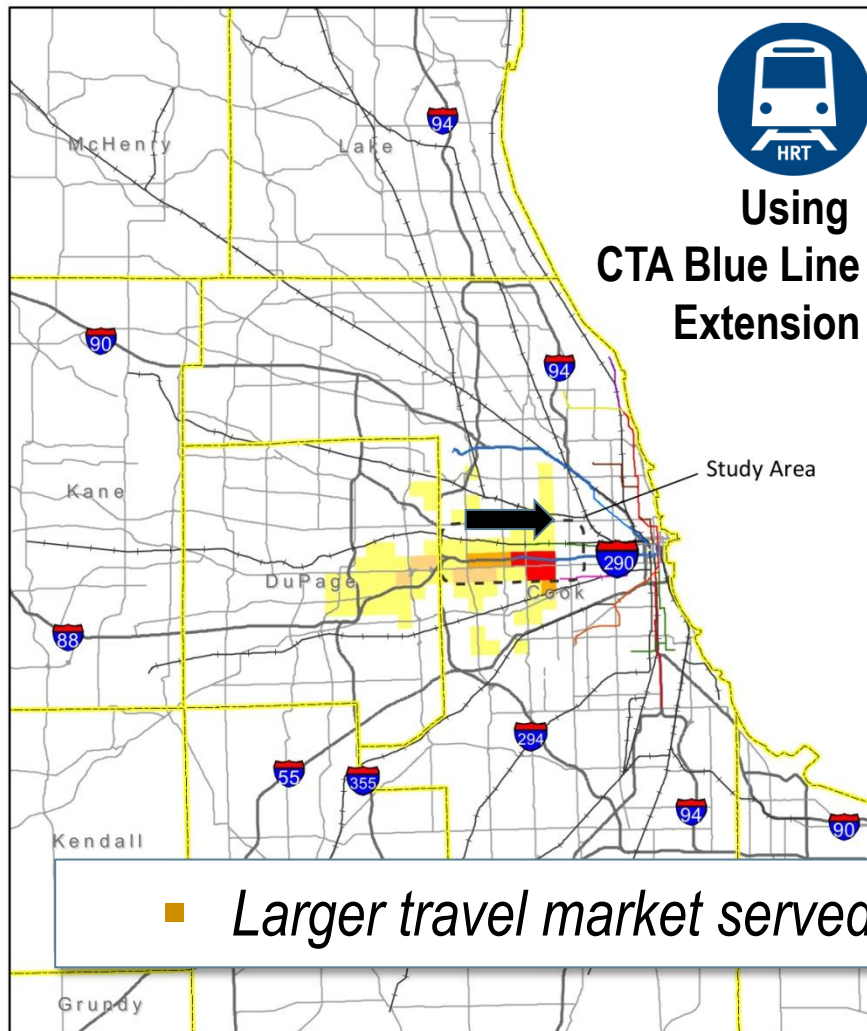
Reasons:

- Transit market is smaller and narrower than auto market
- Existing well established transit network in study area
- Mode shift to transit insufficient to offset demand





Traditional Commute Trip Origins



■ Larger travel market served by I-290 relative to CTA Blue Line

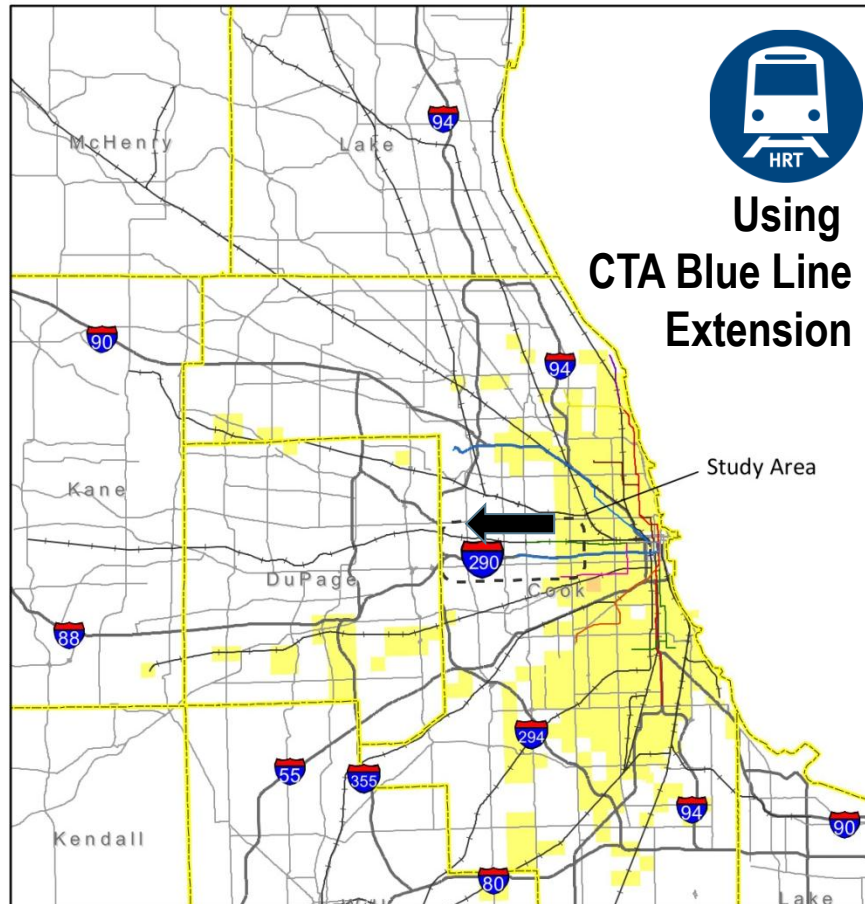




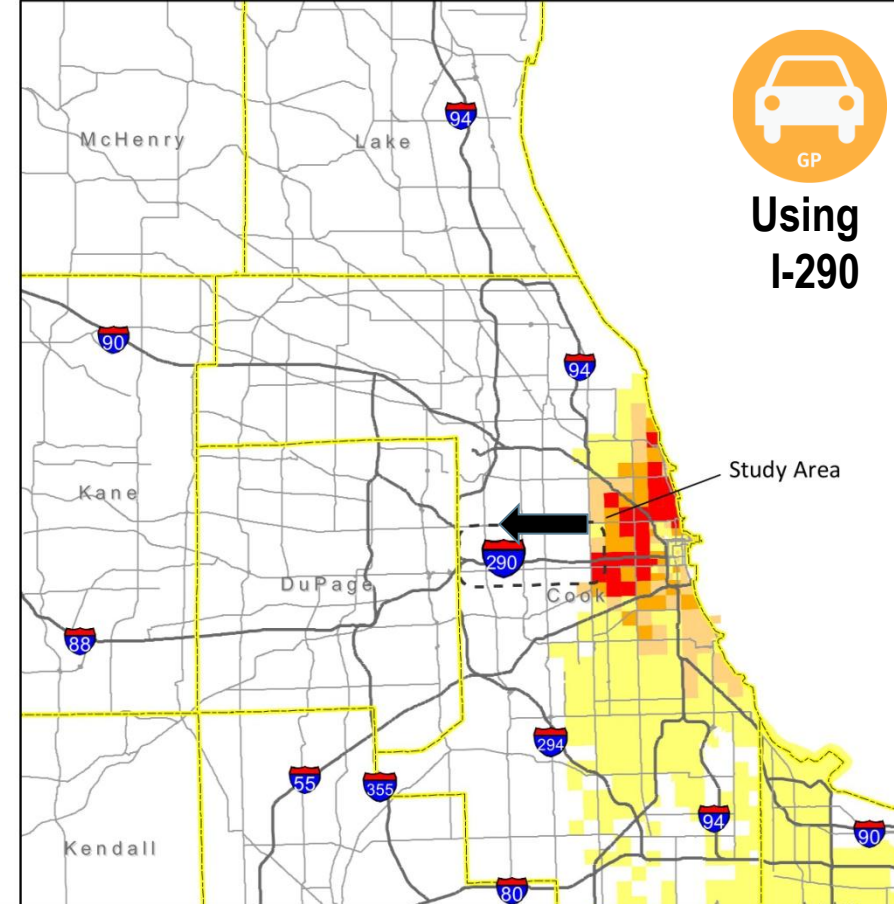
Reverse Commute Trip Origins



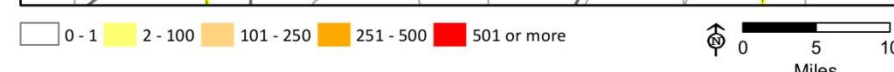
Using
CTA Blue Line
Extension



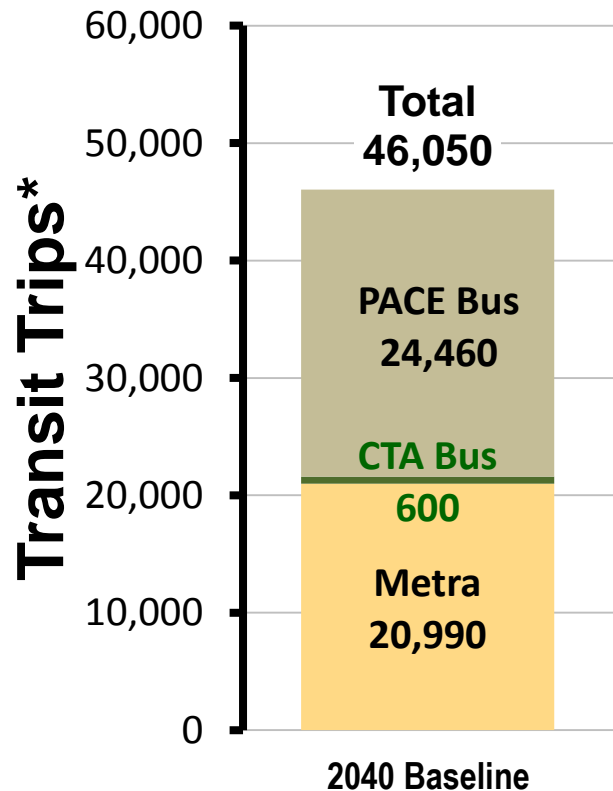
Using
I-290



■ *I-290 reverse commute market is approximately 10 times larger*



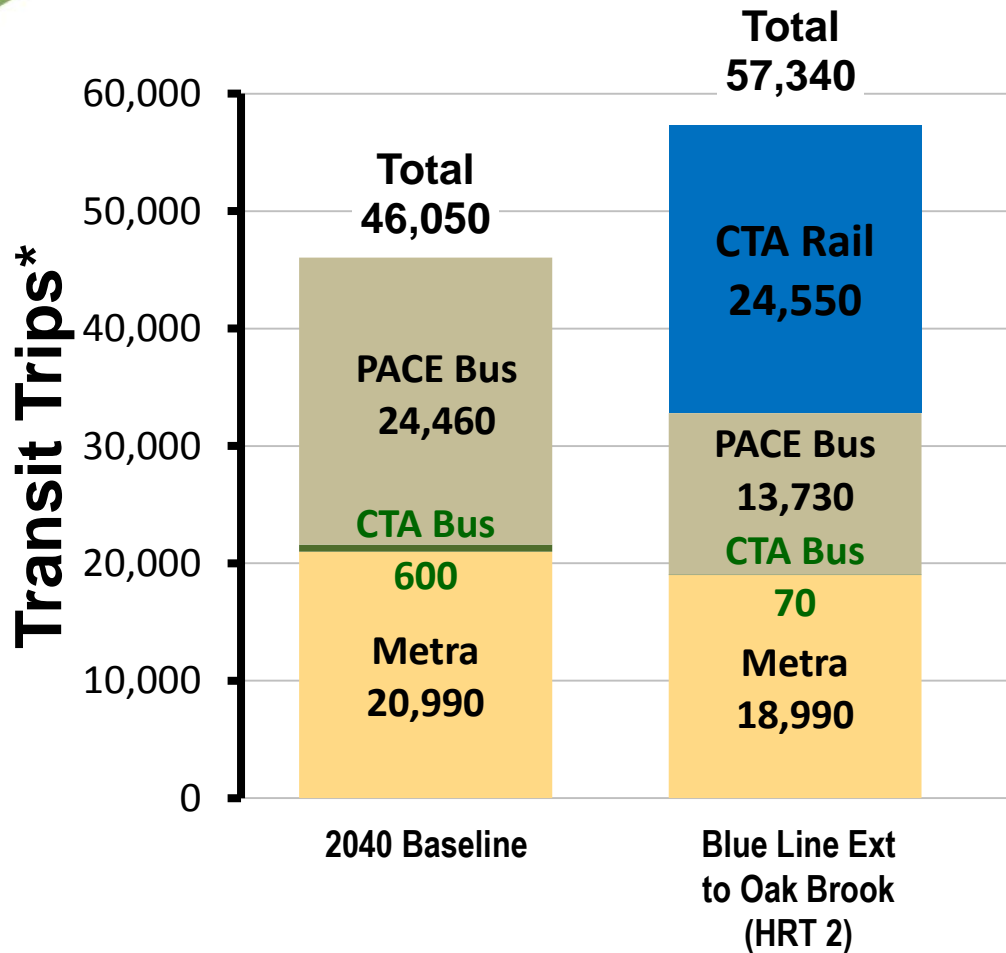
Transit Diversions (Study Area)



- *New transit services divert riders from existing transit services*

** East-west study area transit trips between 1st Avenue and DesPlaines Avenue.*

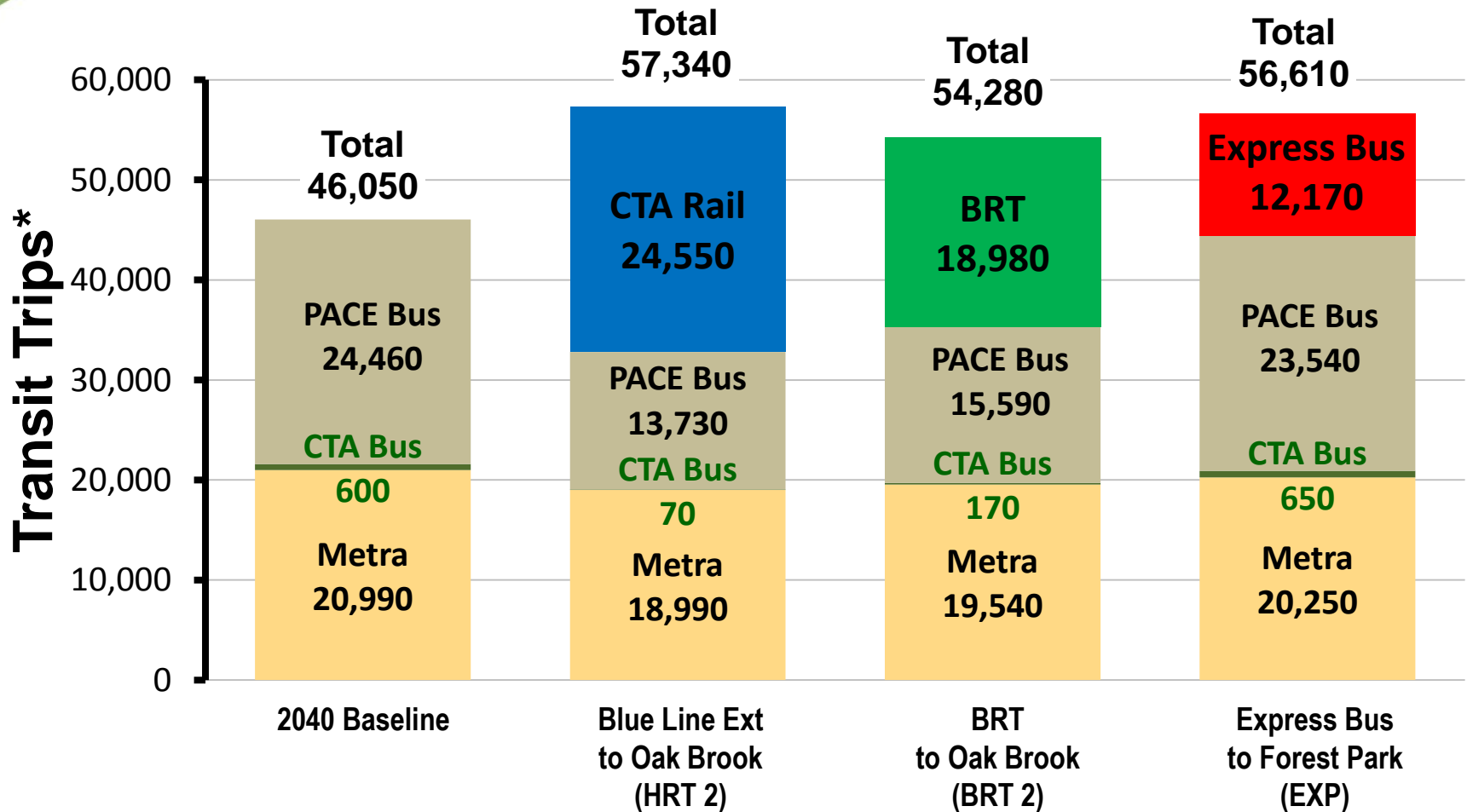
Transit Diversions (Study Area)



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** East-west study area transit trips between 1st Avenue and DesPlaines Avenue.*

Transit Diversions (Study Area)



■ *New transit services divert riders from existing transit services*




* East-west study area transit trips between 1st Avenue and DesPlaines Avenue.






Single Mode Transit Alternatives

- **Transit alternatives** - No improvement to I-290 travel performance, but have other benefits
- **Blue Line extension & BRT** - best performing transit alternatives with similar results
- **Blue Line extension to Mannheim** - may be more cost effective than longer extensions
- **BRT conversion** - similar performance as existing Blue Line (extended); potential capacity issues
- **Express bus** - minor local travel and job accessibility improvements

Single Mode Expressway Alternatives Evaluated - July

GP Add Lane 		General Purpose Add Lane from I-88 to Central Avenue (GP)	
Managed Lanes	HOV Lanes 	2+ riders	I-88 to Racine Ave (HOV 2L) ^{2,3} Oak Brook to Central Avenue (HOV 2W)
		3+ Riders	I-88 to Racine Ave (HOV 3L) Oak Brook to Central Avenue (HOV 3W)
	HOT Lanes 	Oak Brook to Central Avenue, 3+ Vehicles Free (HOT 1)	
		Oak Brook to Racine, 3+ Vehicles Free (HOT 2)	

11 Single Mode Expressway Alternatives Evaluated - Today

GP Add Lane				General Purpose Add Lane from I-88 to Central Avenue (GP)
Managed Lanes	HOV Lanes	2+ riders	Oak Brook to Racine Ave (HOV 2LL)	New
			I-88 to Racine Ave (HOV 2L) ^{2,3}	
			Oak Brook to Central Avenue (HOV 2W)	
		3+ Riders	Oak Brook to Racine Ave (HOV 3LL)	New
			I-88 to Racine Ave (HOV 3L)	
			Oak Brook to Central Avenue (HOV 3W)	
	HOT Lanes		Oak Brook to Central Avenue, 3+ Vehicles Free (HOT 1)	
			Oak Brook to Racine, 3+ Vehicles Free (HOT 2)	
	Toll Lanes		Toll Existing I-290 Lanes, I-88 to Cicero Ave. (TOLL 1)	New
			Toll I-290 with Add Lanes , I-88 to Cicero Ave. (TOLL 2)	New

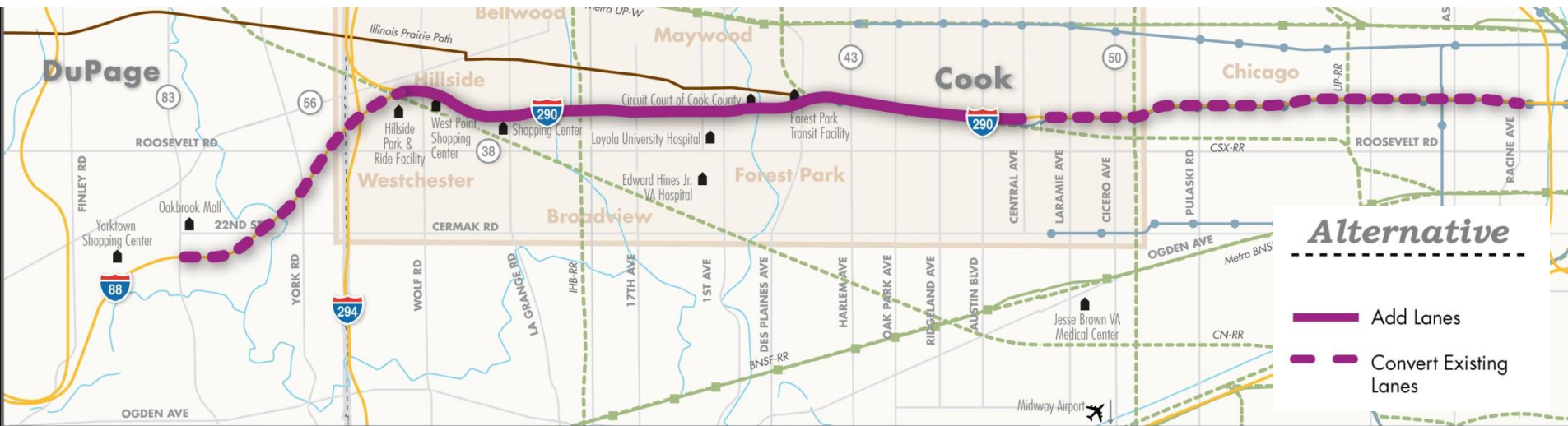
Round 1 - Single Mode Alternatives



High Occupancy Vehicle (HOV) Lanes

2+ and 3+ Occupants

Oak Brook to Racine Avenue
(HOV 2LL & HOV 3LL)

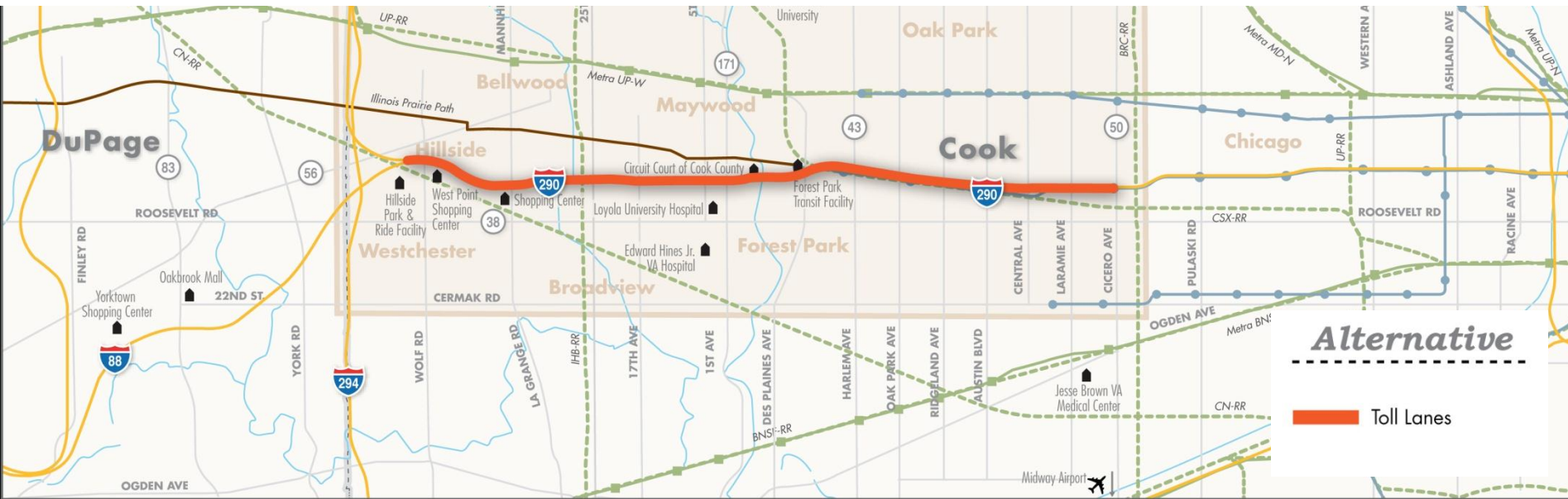


- 16.5 miles
- Add lanes on I-290 between I-88 and Central Avenue
- Convert lanes on I-290 east of Central Avenue
- Convert lanes on I-88
- No fatal flaws identified due to impacts

Round 1 - Single Mode Alternatives



Toll Existing I-290 Lanes I-88 to Cicero Avenue (TOLL 1)



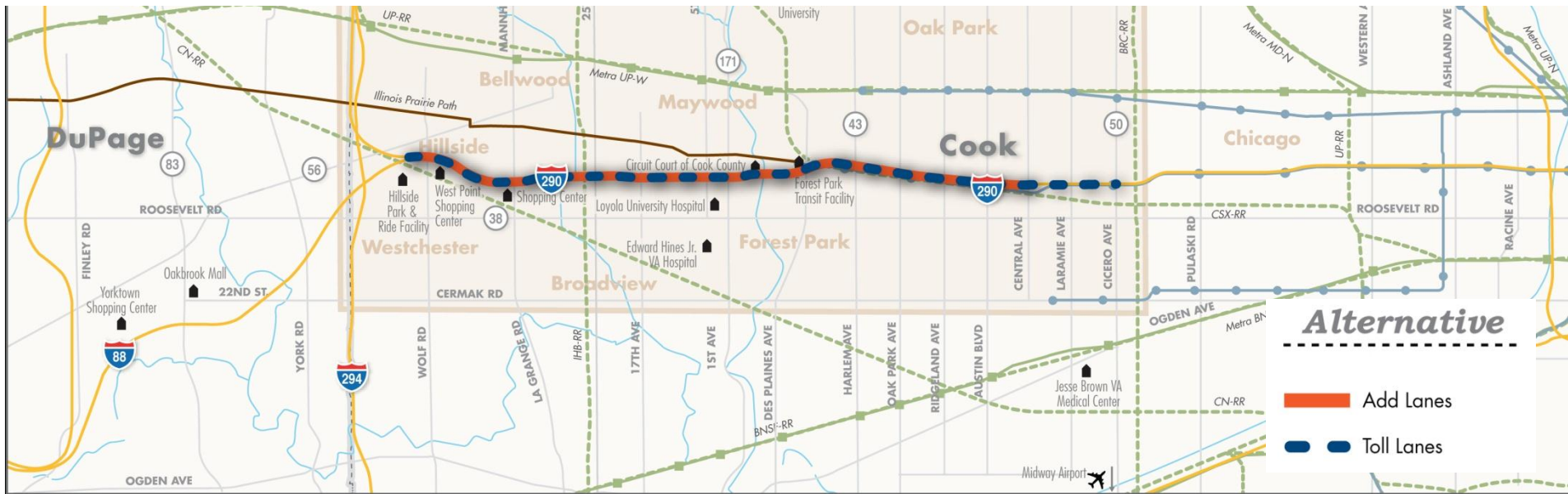
- 8.5 miles
- Toll all existing lanes between I-88 and Cicero Avenue
- No new lanes
- No fatal flaws identified due to impacts

Round 1 - Single Mode Alternatives



Add Lane and Toll all I-290 Lanes

I-88 to Cicero Avenue
(TOLL 2)



- 8.5 miles
- Add 4th lane each direction between I-88 and Central Avenue
- Toll all lanes between I-88 and Cicero Avenue
- No fatal flaws identified due to impacts

Round 1 Screening – Observations



I-290 Phase I Study
Round 1 - Single Mode Alternatives
Purpose and Need Evaluation
Alternatives Measures
Initial Ranking Summary
 September 29, 2011
DRAFT

This table summarizes the total number of top 4 ranked measures for each need point. *This is a draft document and may be updated as appropriate.*

Total # of Measures in each need point category *

GP Add Lane	HOV Lanes						HOT Lanes		Toll Lanes		
	2+ Occupants			3+ Occupants			HOT 1	HOT 2	TOLL 1	TOLL 2	
General Purpose Add Lane	HOV 2+ I-88 to Racine Ave (Long)	HOV 2+ Oak Brook to Central Ave.	HOV 2+ Oak Brook to Racine Ave.	HOV 3+ from I-88 to Racine (Long)	HOV 3+ Oak Brook to Central Ave.	HOV 3+ Oak Brook to Racine Ave.	HOT 3+ Oak Brook to Central Ave.	HOT 3+ Oak Brook to Racine	Toll Existing I-290 Lanes (I-88 to Cicero)	Toll I-290 with an Add Lane (I-88 to Cicero)	
GP LANE	HOV 2L	HOV 2W	HOV 2LL	HOV 3L	HOV 3W	HOV 3LL	HOT 1	HOT 2	TOLL 1	TOLL 2	
Count of top 4 ranked measures	8	3	7	9	12	7	14	4	12	8	12
Improve Local And Regional Travel Measures	7	2	7	9	10	5	11	4	10	6	9
Improve Access to Employment Measures	0	0	0	0	0	0	1	0	2	2	2
Improve Safety Measures	1	1	0	0	2	2	2	0	0	0	1
Improve Modal Connections and Opportunities Measures	0	0	0	0	0	0	0	0	0	0	0
Improve Facility Deficiencies Measures	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Color Legend: Top 4 Performers
 1st 2nd 3rd 4th

* Total number of non-qualitative measures



General Purpose Add Lanes

- Best study area peak period arterial performance improvement



HOV Lanes

- Best overall regional performance improvement
- Best overall job accessibility improvement



HOV and HOT

- Best overall performance and person throughput



Toll and HOV Lanes

- Best I-290 travel performance improvements:
 - peak period volume-capacity improvement
 - peak period average speed increase: 12% to 26%
 - hours of congestion reductions: -1 to -4 hours

Toll and HOT Lanes

- Best auto safety improvement
- Best regional truck performance improvement



TOLL



HOV



TOLL








HOT

Highway Alternatives Summary



Managed Lane Performance






Study Area Performance					
	2+ HOV Oak Brook to Racine HOV 2LL	3+ HOV Oak Brook to Racine HOV 3LL	3+ HOT Oak Brook to Racine HOT 2	General Purpose Add Lane GP LANE	Toll I-290 Existing Lanes I-88 to Cicero TOL 1
General Purpose Lanes Daily Volume **	-8%	-7%	-7%	14%	-10%
HOV/ HOT Lanes	Daily Volume	31,000	17,600	43,700	** As compared to the 2040 baseline
	Peak Hr. Volume	2,940	1,970	3,730	
	Peak Hr. Speed **	67%	112%	17%	

■ *Managed Lanes and Toll Lanes show improved performance*

Highway Alternatives Summary



Managed Lane Performance

Study Area Performance						
		2+ HOV Oak Brook to Racine HOV 2LL	3+ HOV Oak Brook to Racine HOV 3LL	3+ HOT Oak Brook to Racine HOT 2	General Purpose Add Lane GP LANE	Toll I-290 Existing Lanes I-88 to Cicero TOL 1
General Purpose Lanes Daily Volume **		-8%	-7%	-7%	14%	-10%
HOV/ HOT Lanes	Daily Volume	31,000	17,600	43,700	** As compared to the 2040 baseline	
	Peak Hr. Volume	2,930	1,970	3,730		
	Peak Hr. Speed **	67%	112%	17%		

■ *Managed Lanes and Toll Lanes show improved performance*



Single Mode Highway Alternatives

- **Highway** - best improvement to I-290, local, regional travel
- **HOV & HOT Lane** - best overall performance
- **HOV Lane** - best regional performance & job accessibility
- **Toll & HOV Lane** - best improvement in I-290 performance
- **Toll & HOT Lane** - best regional truck performance
- **Toll** – least in arterial performance
- **General Purpose Add Lane** - best improvement in study area peak period arterial performance



Questions?

Tolling/HOT Lane Conversion Legislation



HOV/HOT/Toll Legislation Summary



39



- 4 federal and 1 state program
- General purpose (GP) lanes may be converted to HOV Lanes
- New lanes may be tolled under specific program
- Limited program to convert all of I-290 to a toll facility
 - *(1 of 3 slots available)*
- HOV to HOT Lane conversion under specific program
- New State Legislation allows IDOT & Tollway to enter into Public-Private Partnerships (P3)
- GP to Toll/HOT Lane conversion *(research on-going)*
- SAFTEA-LU reauthorization anticipated early 2012

Initial Combination Alternatives



High Capacity Transit (HCT)



OR



=



- **High Capacity Transit (HCT) includes:**
 - Blue Line Extensions
 - BRT
- **Blue Line Extensions & BRT alternatives have similar:**
 - ROW requirements
 - Transportation performance



10 Initial combination alternatives assembled based on:

- Agency & stakeholder input to date
- Single mode evaluation results
- Combine Expressway with Transit modes

Expressway

+

Transit



General Purpose Add Lane



HOV Lanes



HOT Lanes



Tolling



Express Bus



HCT

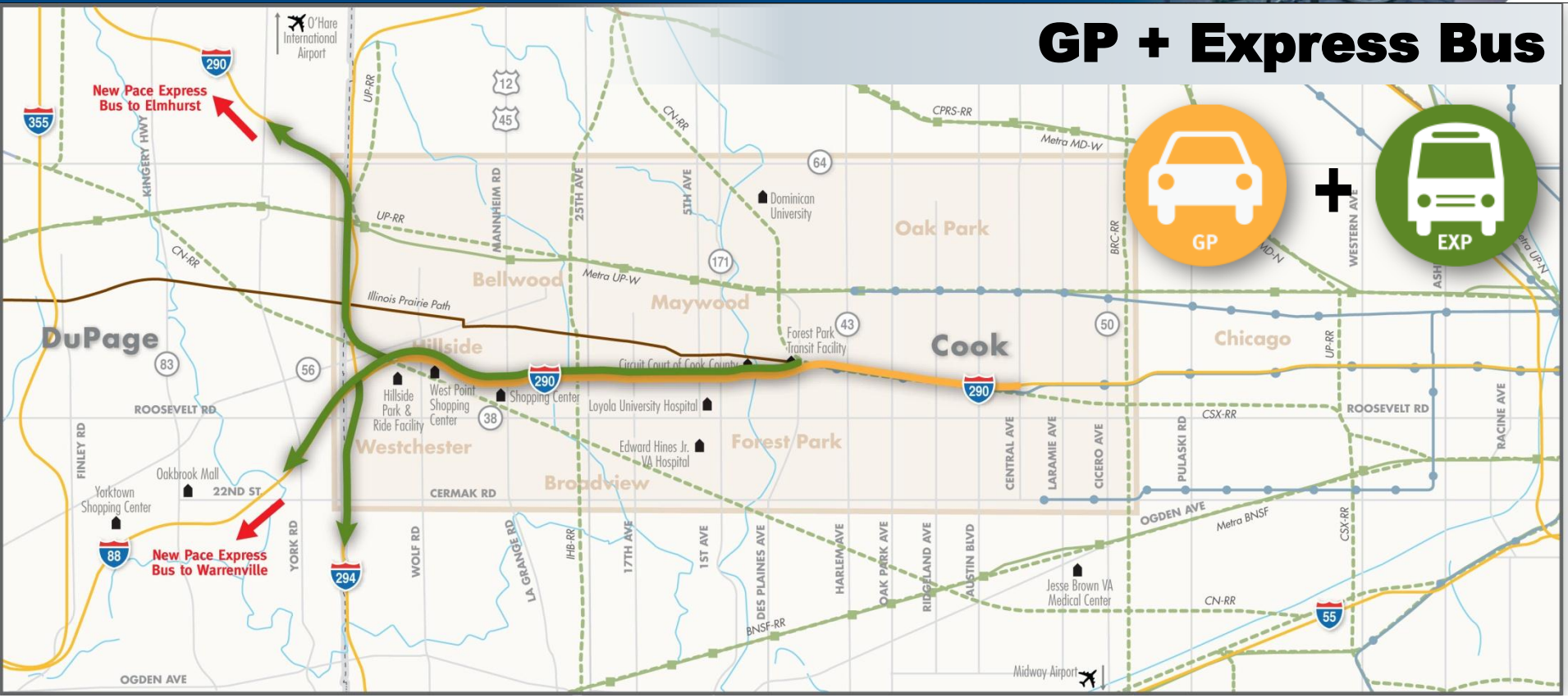


- **Express Bus assumed in all combination alternatives:**
 - Express Bus to Forest Park or Mannheim Rd.
 - Shares expressway facilities
- **HCT from Forest Park CTA to Mannheim Road**
 - Blue Line Extension results indicate majority of HCT performance improvements achieved out to Mannheim Rd.
 - HCT to Mannheim Rd. would not preclude further extensions west

Initial Combination Mode Alternatives



GP + Express Bus



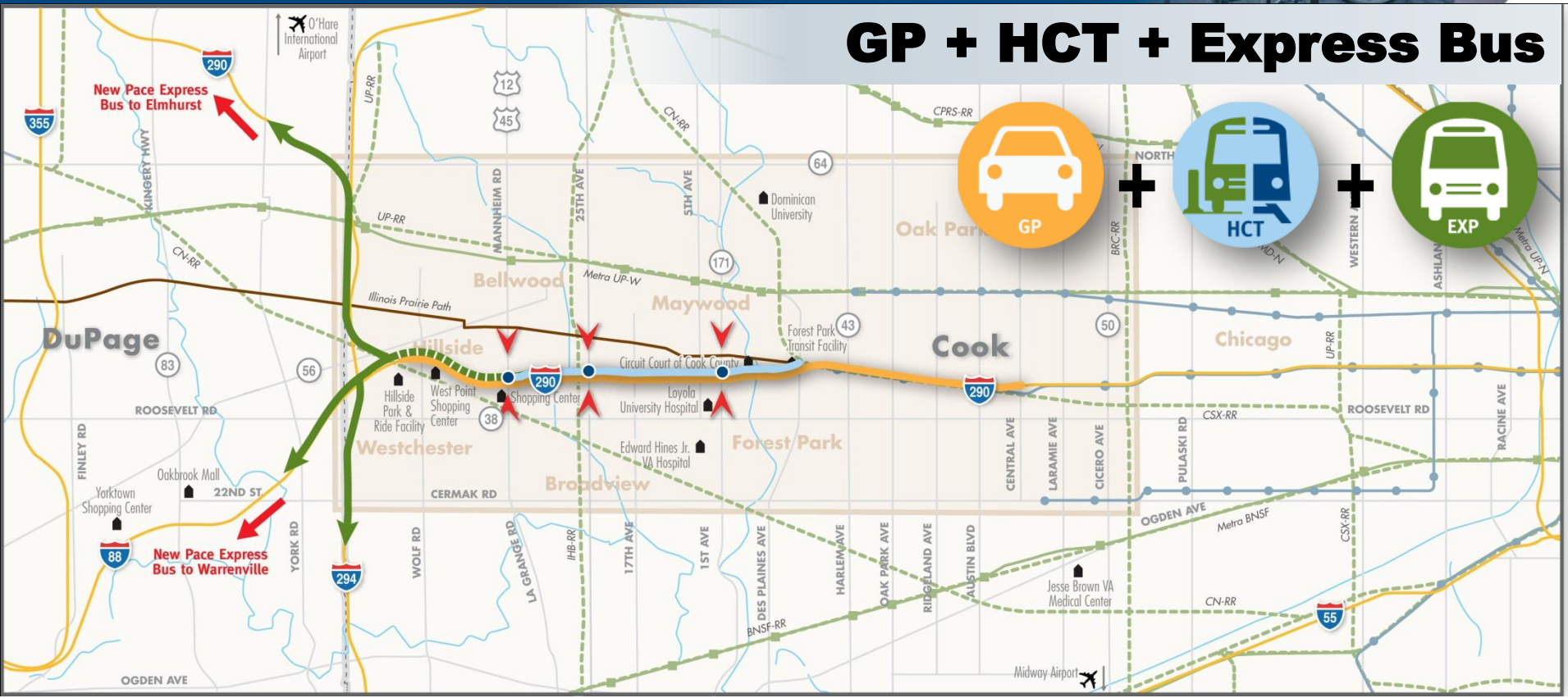
- **GP Add Lane (I-88 to Central)**
 - Good arterial performance
 - Good safety performance

- **Express Bus (to CTA Forest Park Terminal)**
 - Operates on I-290 shoulder
 - Good access to jobs

Initial Combination Mode Alternatives



GP + HCT + Express Bus

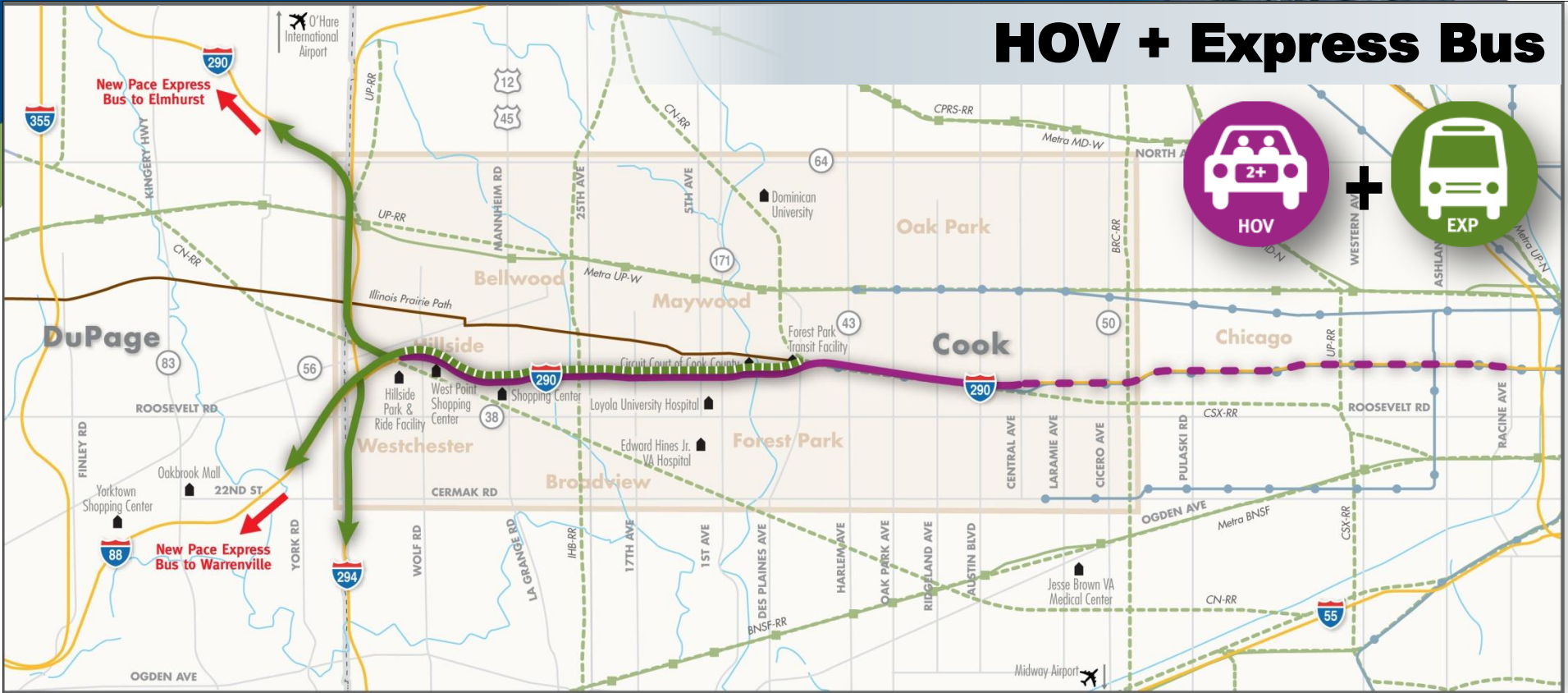


- **GP Add Lane (I-88 to Central)**
 - Good arterial performance
 - Good safety performance
- **Express Bus (to Mannheim Road/HCT)**
 - Connects to HCT Mannheim terminal station
 - Good access to jobs
- **HCT (Forest Park to Mannheim Road)**
 - New transit trips
 - Does not preclude western extensions

Initial Combination Mode Alternatives

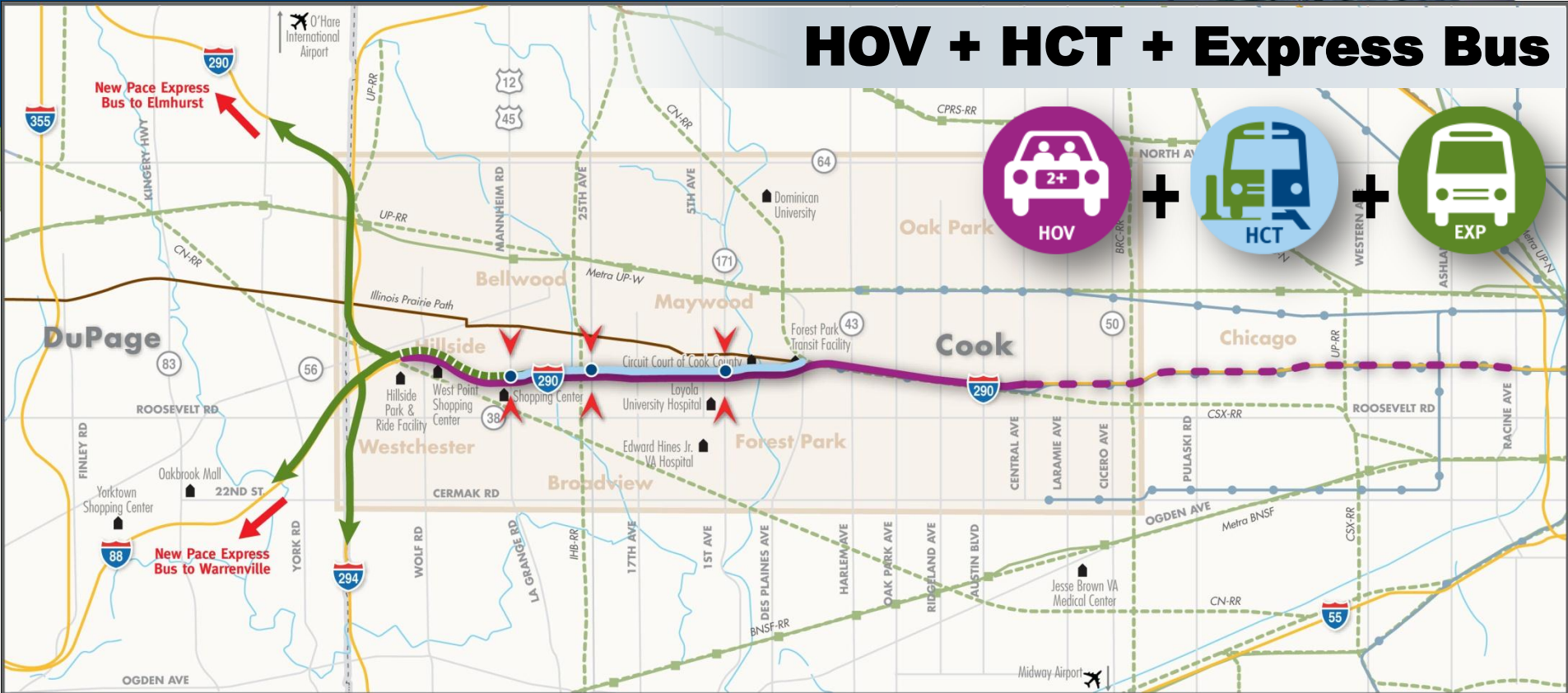


HOV + Express Bus



- **HOV Lane (I-88 to Racine Ave)**
 - Good arterial performance
 - Good safety performance
- **Express Bus (to Forest Park CTA Terminal)**
 - Compatible implementation with HOV Lane
 - Good access to jobs
- **HCT (Forest Park to Mannheim Road)**
 - New transit trips
 - Does not preclude western extensions

Initial Combination Mode Alternatives

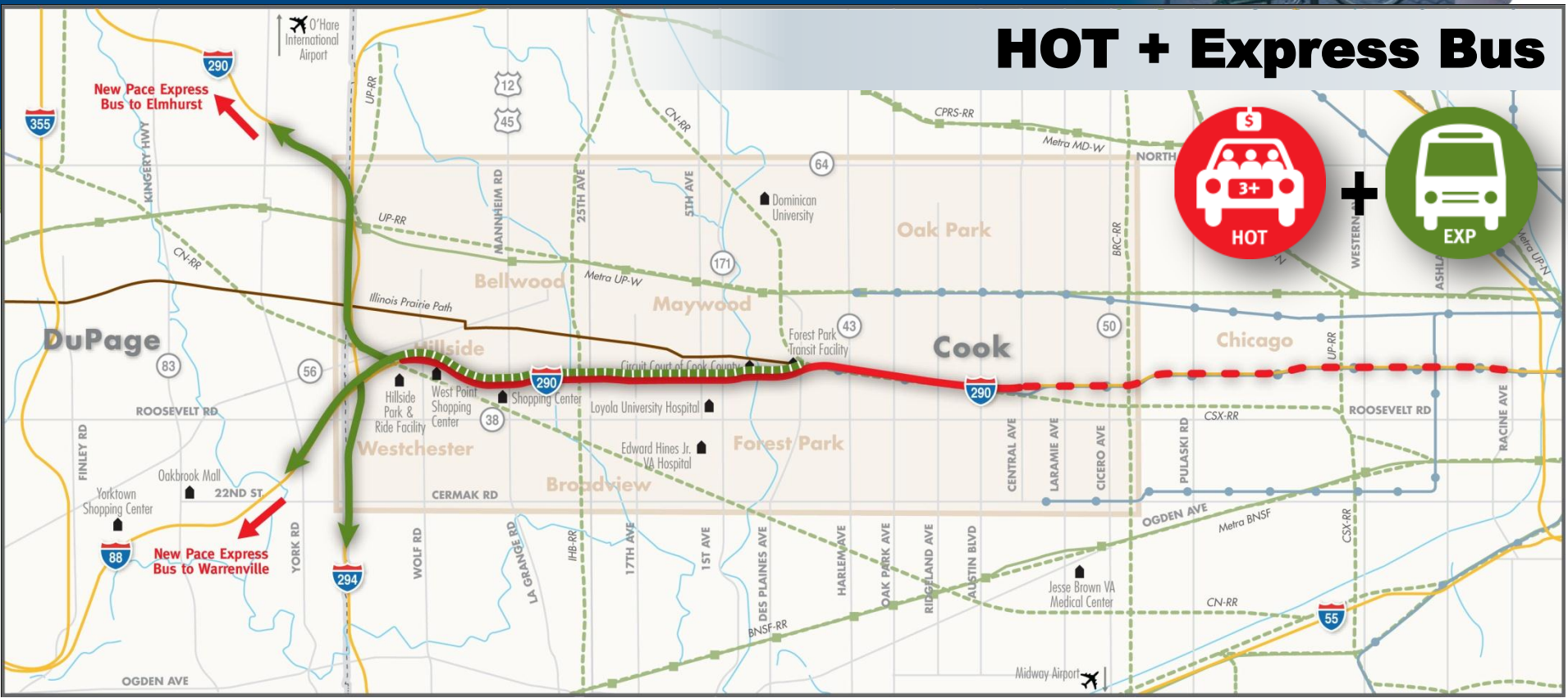


- **HOV Lane (I-88 to Racine Ave)**
 - Good arterial performance
 - Good safety performance
- **Express Bus (to Mannheim Road/HCT)**
 - Connects to HCT Mannheim terminal station
 - Good access to jobs
- **HCT (Forest Park to Mannheim Road)**
 - New transit trips
 - Does not preclude western extensions

Initial Combination Mode Alternatives



HOT + Express Bus

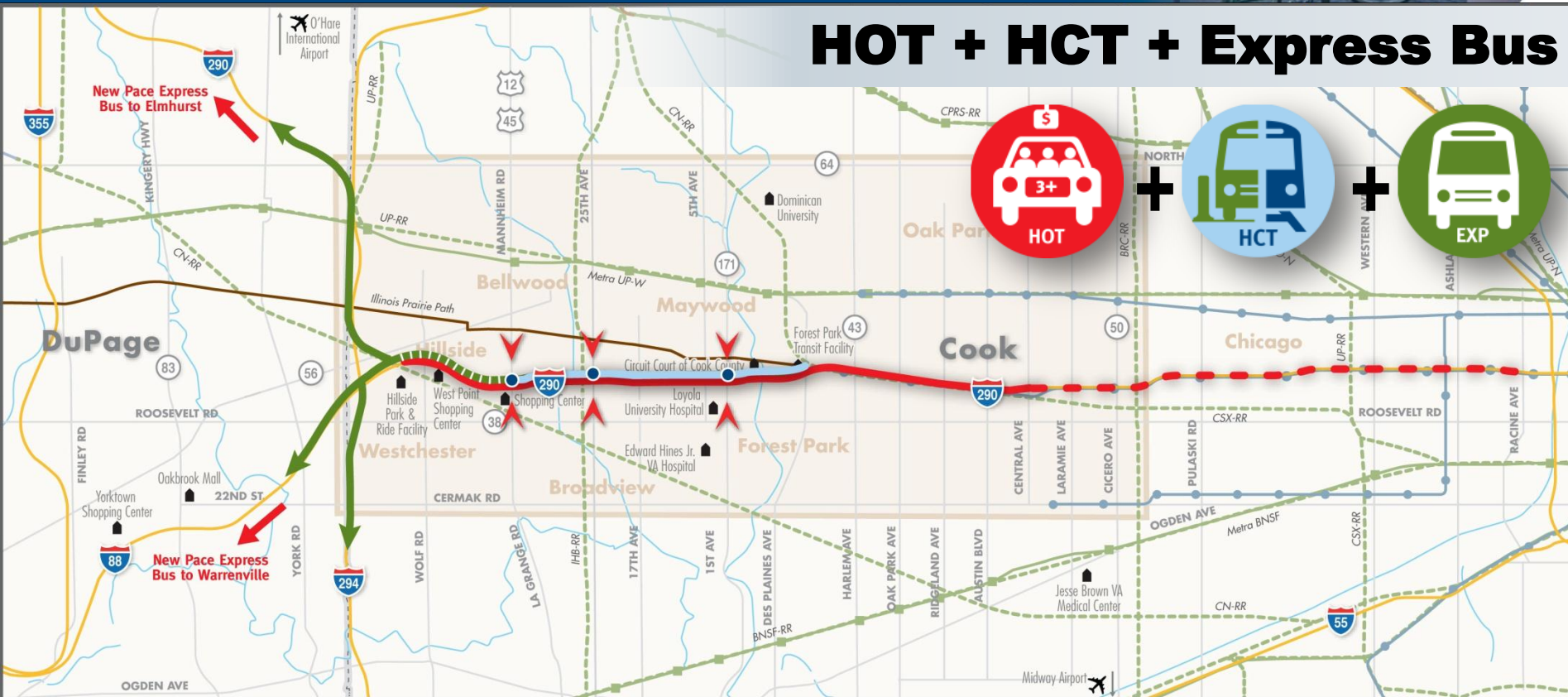


- **HOT Lane (I-88 to Racine Ave)**
 - Good arterial performance
 - Good safety performance

- **Express Bus (to Forest Park CTA Terminal)**
 - Compatible implementation with GP Lane
 - Good access to jobs

Initial Combination Mode Alternatives

HOT + HCT + Express Bus



- **HOT Lane (I-88 to Racine Ave)**
 - Good arterial performance
 - Good safety performance
- **Express Bus (to Mannheim Road/HCT)**
 - Connects to HCT Mannheim terminal station
 - Good access to jobs
- **HCT (Forest Park to Mannheim Road)**
 - New transit trips
 - Does not preclude western extensions

Initial Combination Mode Alternatives



Toll + Express Bus



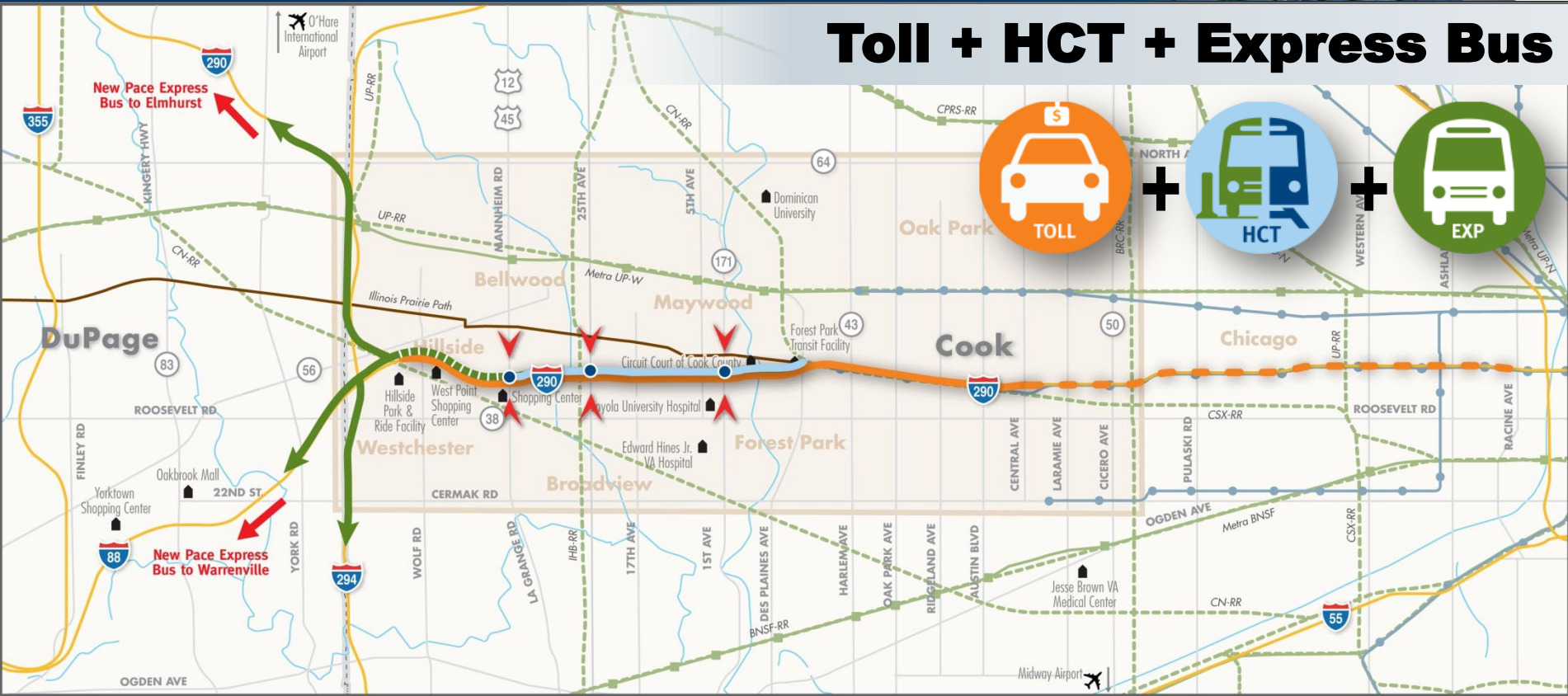
- **HOT Lane (I-88 to Racine Ave)**
 - Good arterial performance
 - Good safety performance

- **Express Bus (to Forest Park CTA Terminal)**
 - Compatible operation with Toll Lane
 - Good access to jobs

Initial Combination Mode Alternatives



Toll + HCT + Express Bus



■ Toll Add Lane & Lane Conversion

- Good arterial performance
- Good safety performance

■ Express Bus (to Mannheim Road/HCT)

- Connects to HCT Mannheim terminal station
- Good access to jobs

■ HCT (Forest Park to Mannheim Road)

- New transit trips
- Does not preclude western extensions

Initial Combination Mode Alternatives



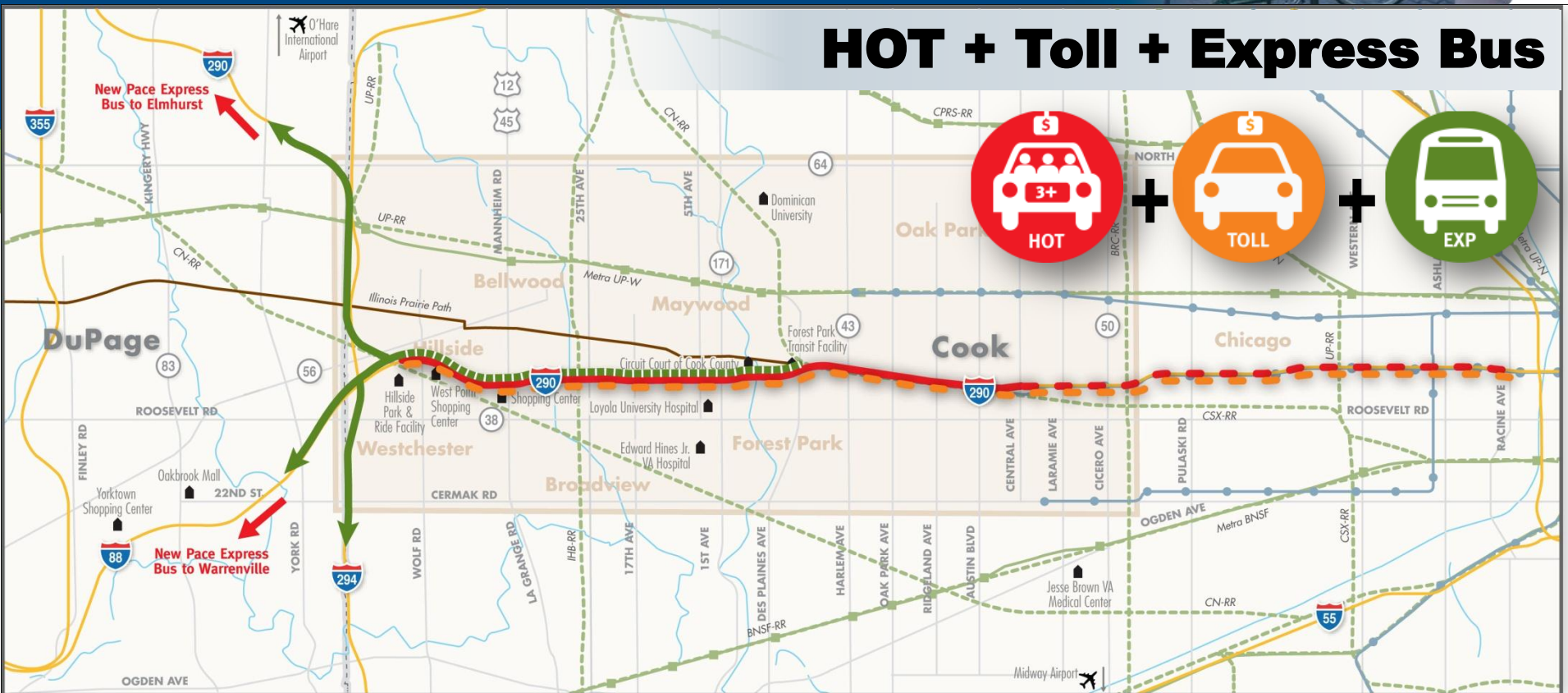
HOT + Toll + Express Bus



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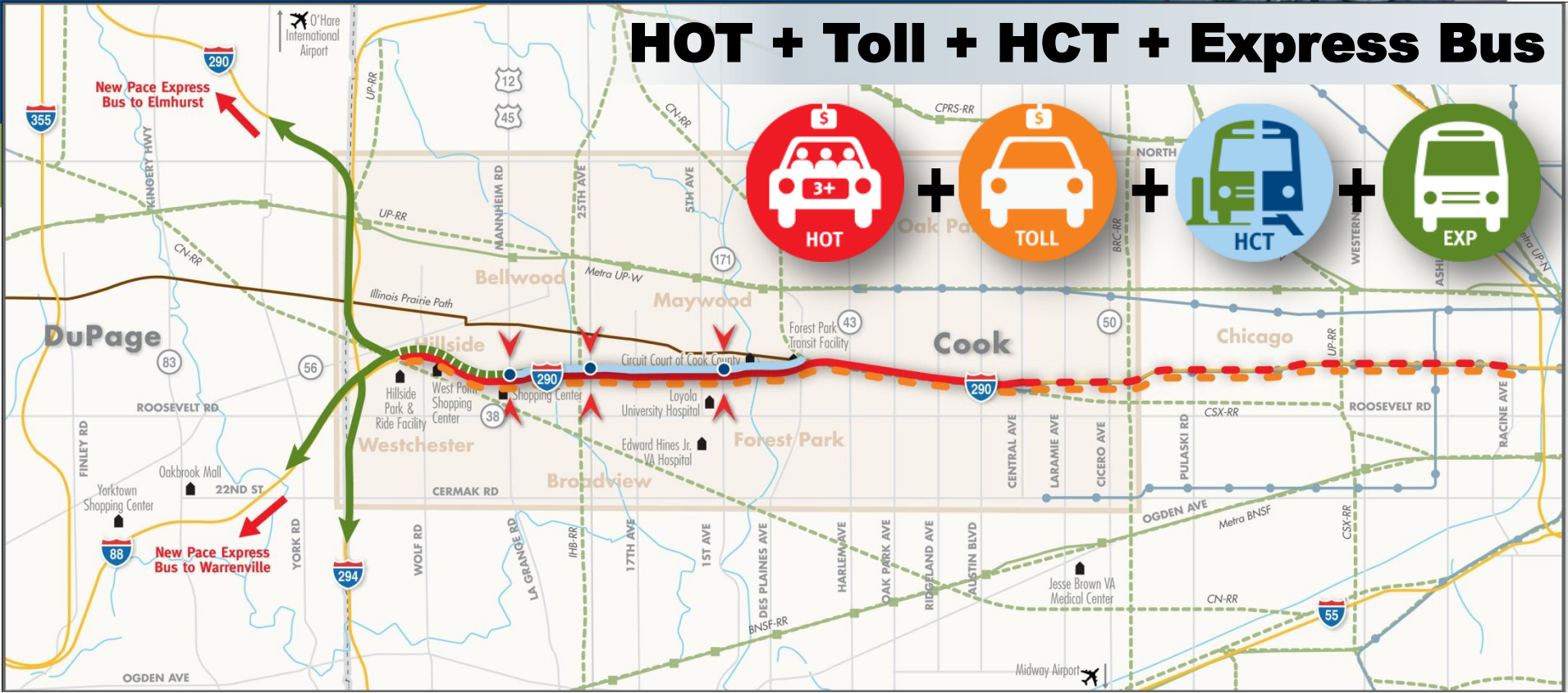
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- **HOT Lane (I-88 to Racine Ave)**
 - Compatible operation with Toll Lane
 - Good arterial and safety performance
- **Toll Lanes (I-88 to Racine Ave.)**
 - Good I-290 performance
 - Good access to jobs

- **Express Bus (to Forest Park CTA Terminal)**
 - Compatible operation with HOT Lane
 - Good access to jobs
















Initial Combination Mode Alternatives



- **HOT Lane (I-88 to Racine Ave)**
 - Compatible operation with Toll Lane
 - Good arterial and safety performance
- **Toll Lanes (I-88 to Racine Ave.)**
 - Good I-290 performance
 - Good access to jobs
- **HCT (Forest Park to Mannheim Road)**
 - New transit trips
 - Does not preclude western extensions
- **Express Bus (to Mannheim Road/HCT)**
 - Connects to HCT Mannheim terminal station
 - Good access to jobs













10 Initial Combination Alternatives - Summary

Note: HCT is 'High Capacity Transit' - may be either BRT or Blue Line Extension (HRT)

GP Add Lane	 	General Purpose Add Lane from I-88 to Central Ave. with shoulder riding Express Bus from Forest Park to the west
	  	General Purpose Add Lane from I-88 to Central Avenue, HCT from Forest Park to Mannheim Rd., Express Bus from Mannheim Rd. to the west
HOV 2+	 	HOV 2+ from I-88 to Racine Ave., Express Bus operating in HOV Lane from Forest Park to the west
	  	HOV 2+ from I-88 to Racine Ave., HCT from Forest Park to Mannheim Rd, Express Bus from Mannheim Rd. to the west
HOT 3+	 	HOT 3+ from I-88 to Racine Ave., Express Bus operating in HOT Lane from Forest Park to the west
	  	HOT 3+ from I-88 to Racine Ave., HCT from Forest Park to Mannheim Rd., Express Bus from Mannheim Rd. to the west

10 Initial Combination Alternatives - Summary (Continued)

Note: HCT is 'High Capacity Transit' - may be either BRT or Blue Line Extension (HRT)

TOLL	 	<p>Add lane from I-88 to Central Ave., Toll 1 lane in each direction from I-88 to Racine Ave., and Express Bus operating in Toll lane from Forest Park to the west</p>
	  	<p>Add lane from I-88 to Central Ave., Toll 1 lane in each direction from I-88 to Racine Avenue, HCT to Mannheim Road, and Express Bus from Mannheim Rd. to the west</p>
HOT 3+ & TOLL	  	<p>Add HOT 3+ lane from I-88 to Central Ave., convert 1 existing lane in each direction to HOT 3+ lanes from Central Ave. to Racine Ave. , Toll remaining lanes from I-88 to Racine Ave., and Express Bus operating in HOT Lane from Forest Park to the west</p>
	   	<p>Add HOT 3+ lane from I-88 to Central Ave., convert 1 existing lane in each direction to HOT 3+ lanes from Cent to Racine Ave., Toll remaining lanes from I-88 to Racine Ave., HCT from Forest Park to Mannheim, and Express Bus from Mannheim Rd. to the west</p>



Questions?

Next Steps





Corridor Advisory Group and Task Force Meeting #12

TBD

The Carleton Hotel
of Oak Park

- Complete single mode alternative evaluations
- Fully develop range of combination mode alternatives
- Initial combination mode alternative results

