

# Clinton/Hell's Kitchen Neighborhood Traffic Study Project Advisory Committee Meeting May 31, 2011



# Objectives of Meeting

- Update on progress to date
- New analyses of base year (2008) conditions
- Results from analysis of improvements

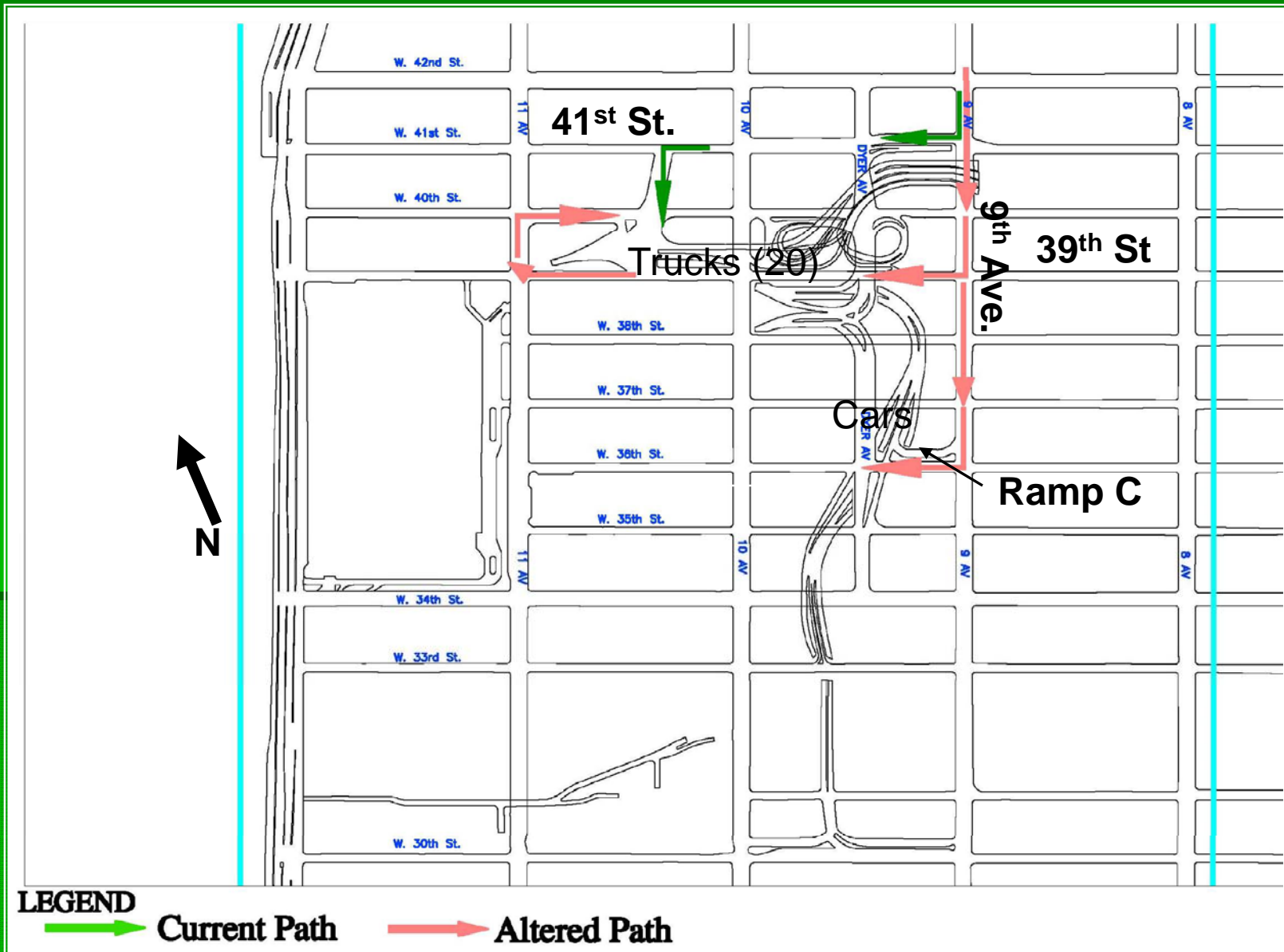
# Progress Since June 2010

- Further improved the customized analysis tool.
- Prepared future traffic volumes with known street network changes.
- Analyzed traffic effects of various improvement scenarios.

# Existing Conditions Analysis

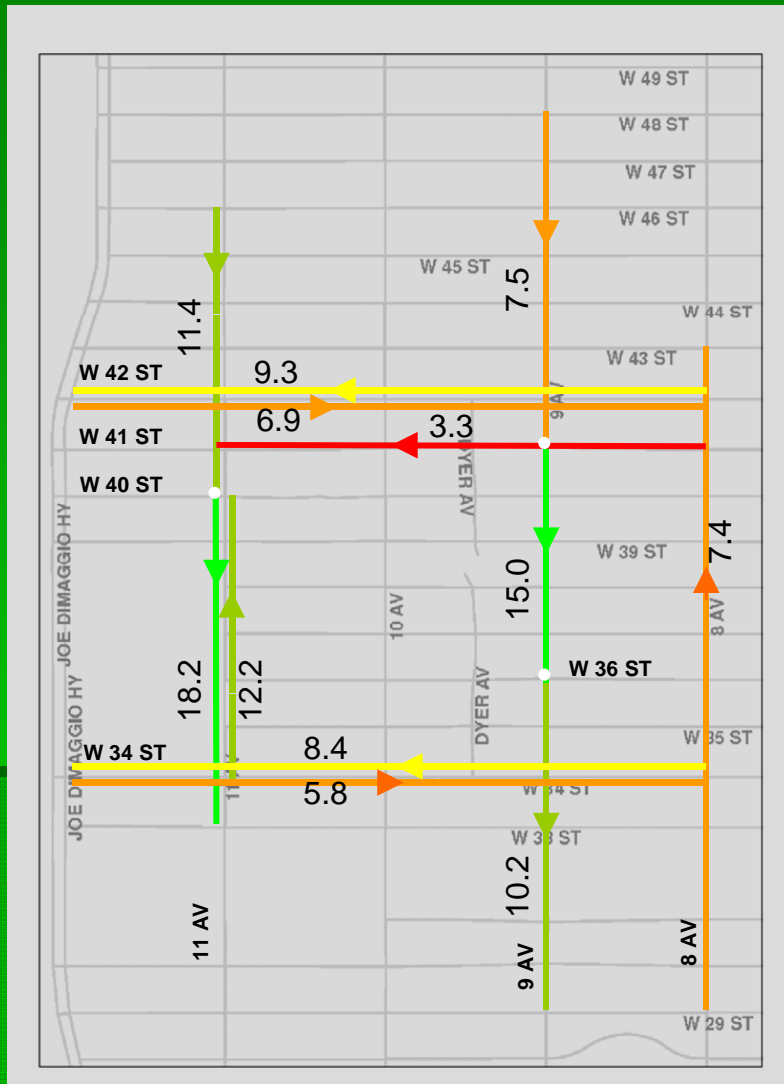
- Traffic Volume
- Traffic Speed and Delay
- Observed Queue Length
- Safety
- Pedestrian Volumes and Level of Service
- Truck Volumes and Loading Zones
- Transit Ridership
- Bicycle Volumes
- On-Street and Off-Street Parking

# Enforce PM prohibition of right-turns from 9<sup>th</sup> Ave onto 41<sup>st</sup> St, except buses

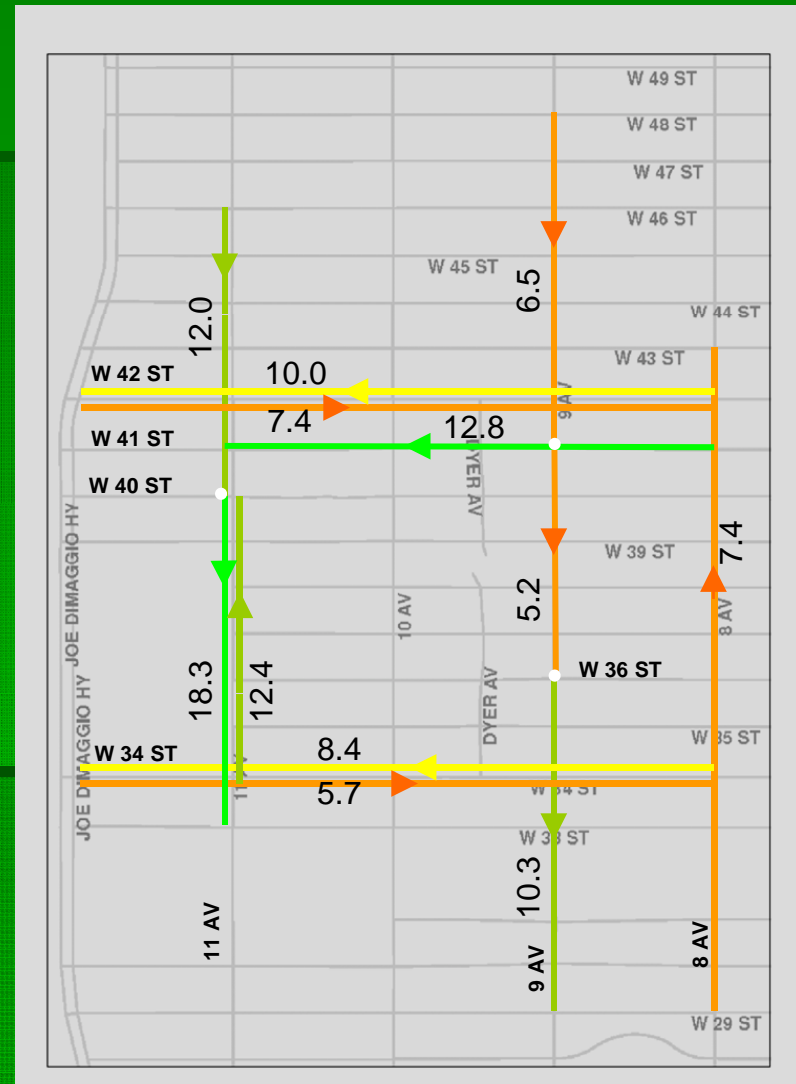


# 2008 PM Peak Hour Speed

— ≤ 5 mph   
 — 5.1 - 7.5 mph   
 — 7.6 - 10.0 mph   
 — 10.1 - 12.5 mph   
 — > 12.5 mph



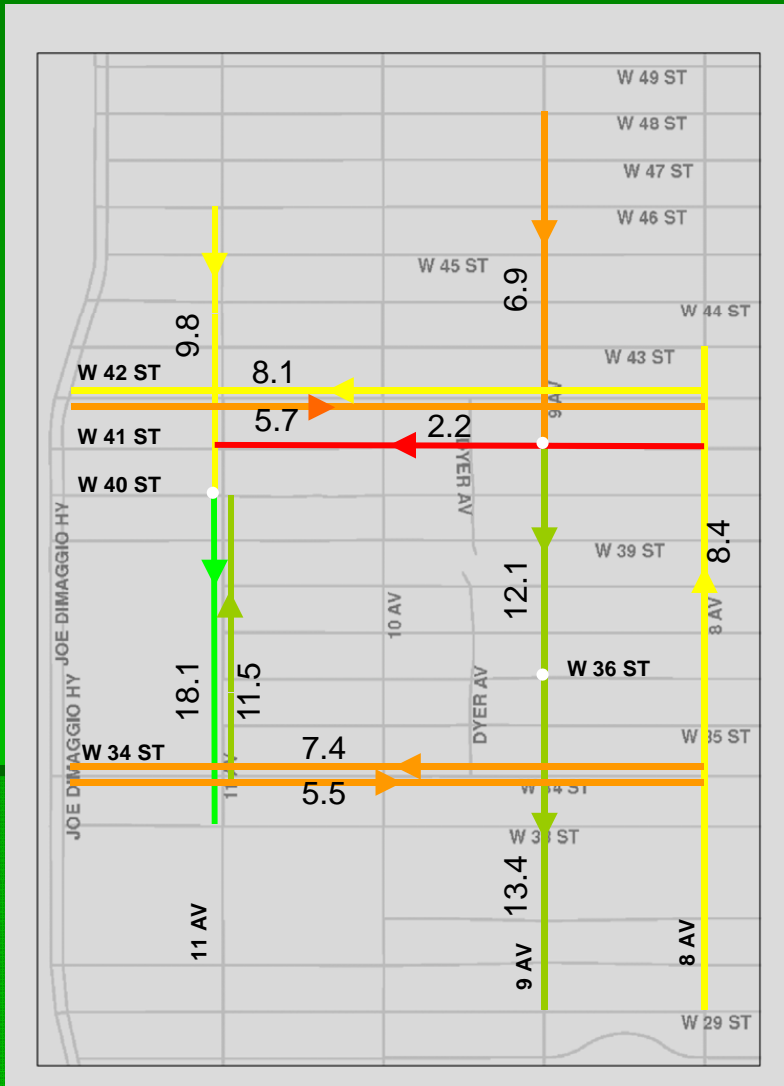
SB RIGHT-TURN FROM 9 AV TO W 41 ST  
BAN NOT ENFORCED



SB RIGHT-TURN FROM 9 AV TO W 41 ST  
BAN ENFORCED

# 2015 PM Peak Hour Speed Without Improvements

— ≤ 5 mph   
 — 5.1 - 7.5 mph   
 — 7.6 - 10.0 mph   
 — 10.1 - 12.5 mph   
 — > 12.5 mph

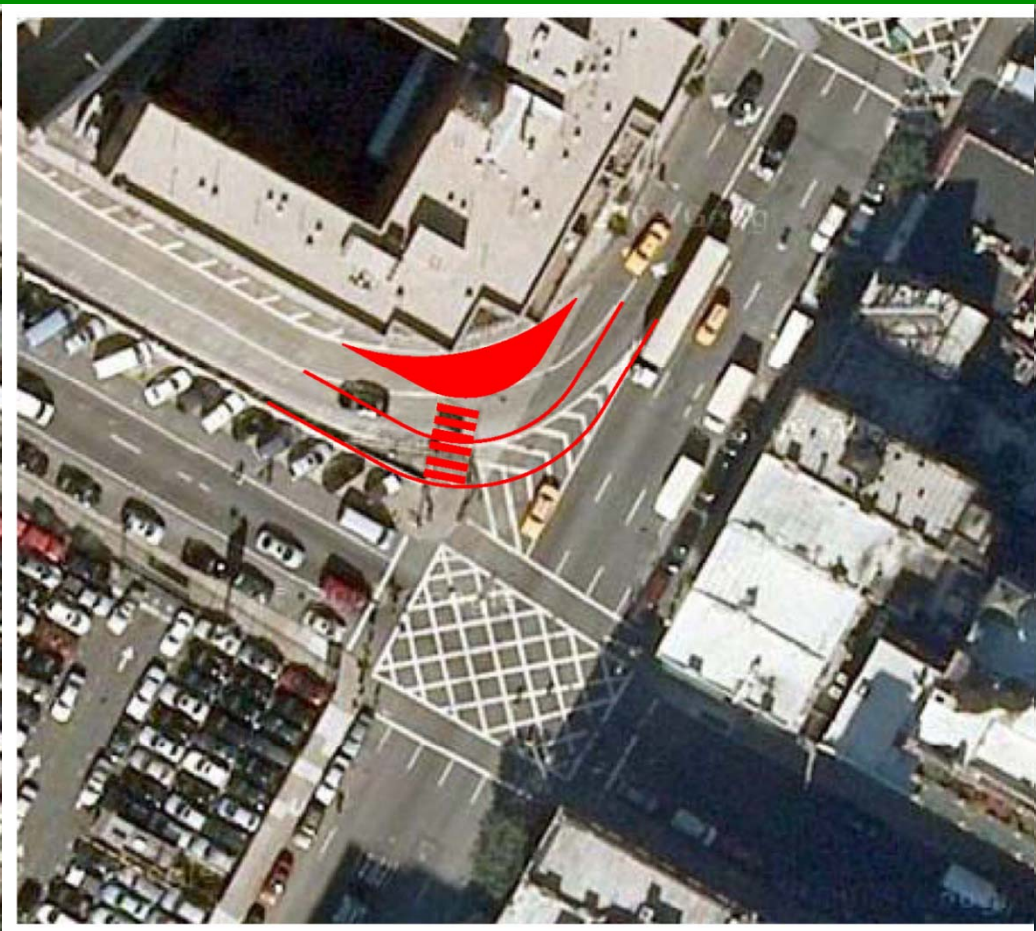


SB RIGHT-TURN FROM 9 AV TO W 41 ST  
BAN NOT ENFORCED



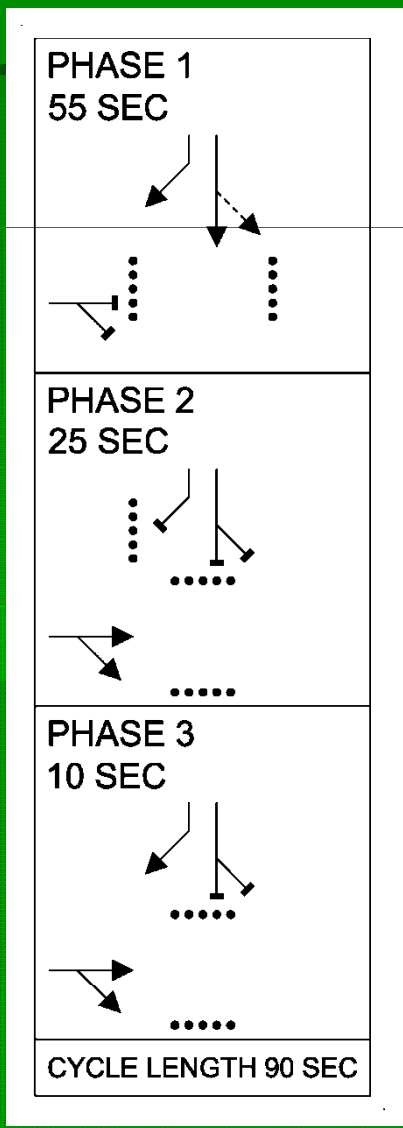
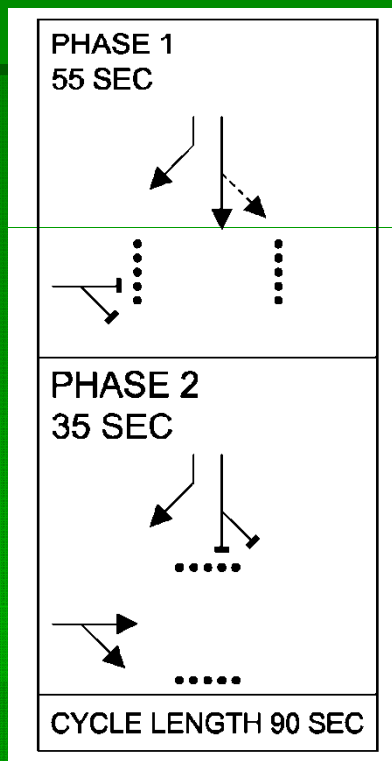
SB RIGHT-TURN FROM 9 AV TO W 41 ST  
BAN ENFORCED

# 2015 With Improvements Signalize Ramp C



**EXISTING**

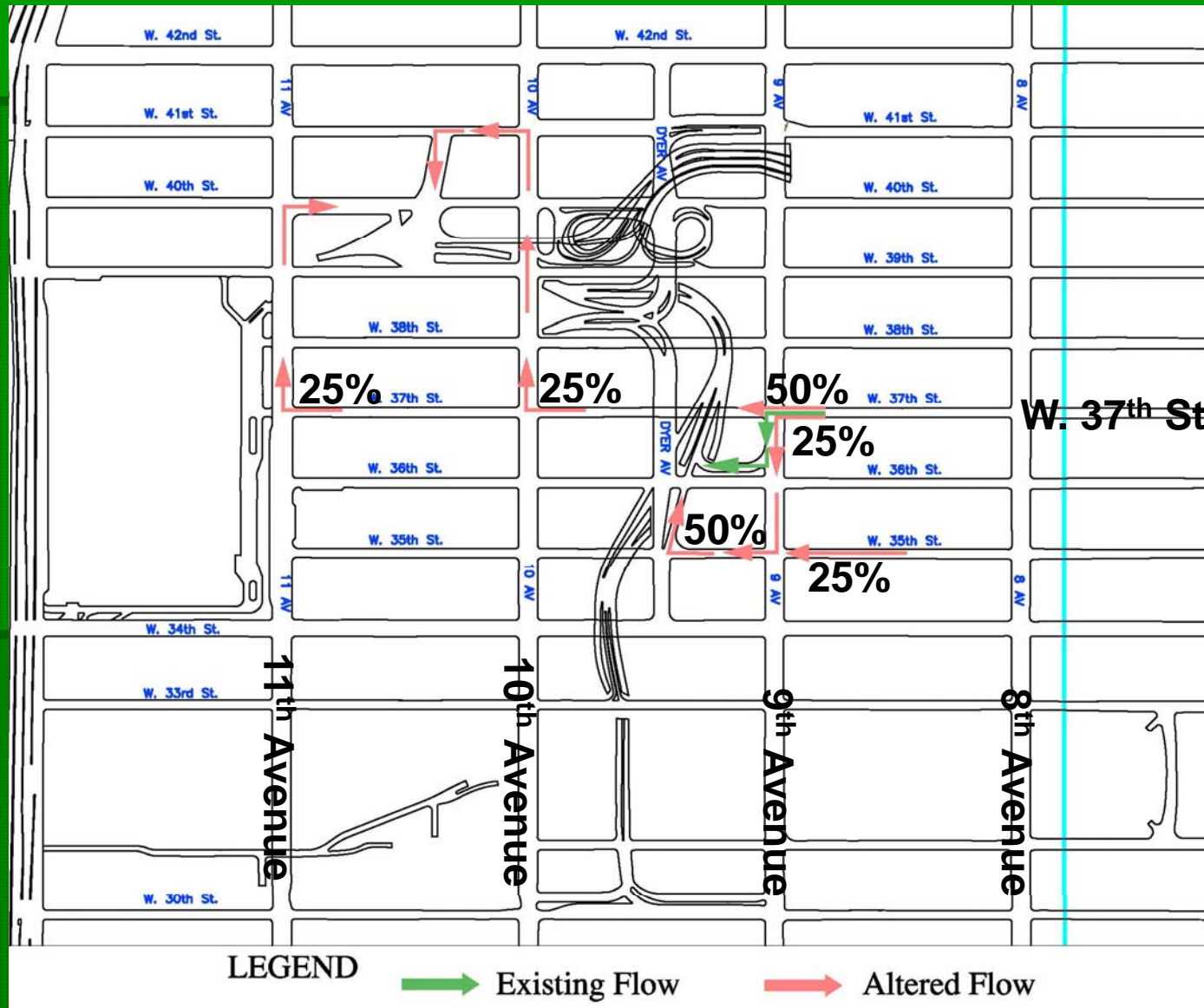
**SIGNALIZED**





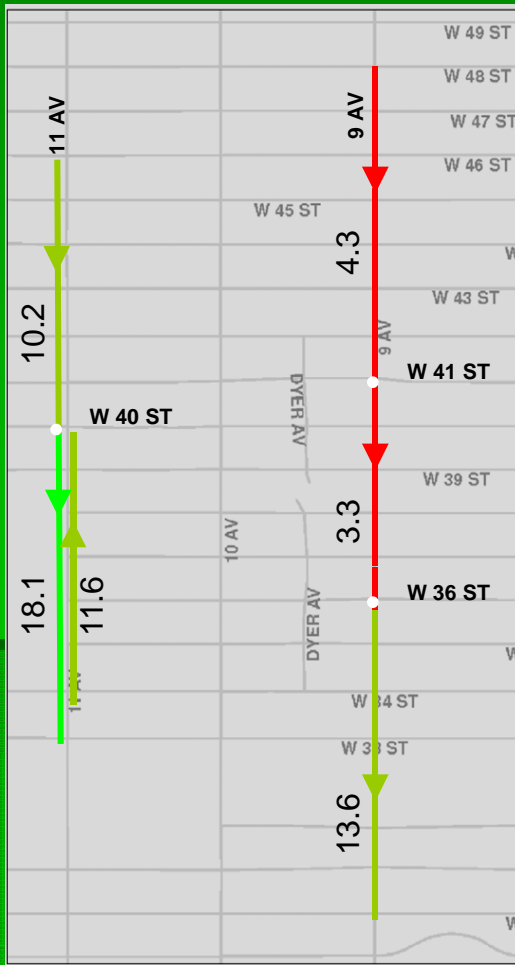
# 2015 With Improvements

## Ban left-turn PM from 37<sup>th</sup> St. to Ramp C

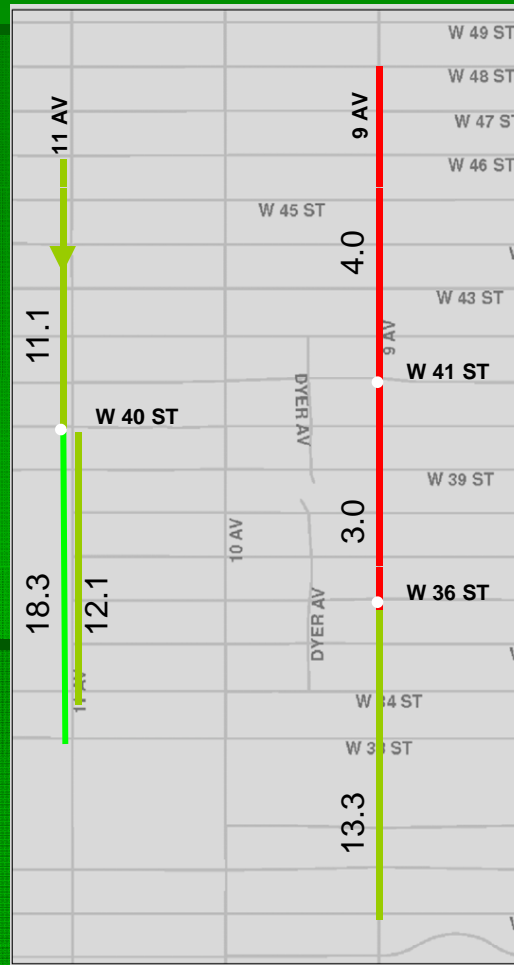


# 2015 With Improvements Ramp C Signalized

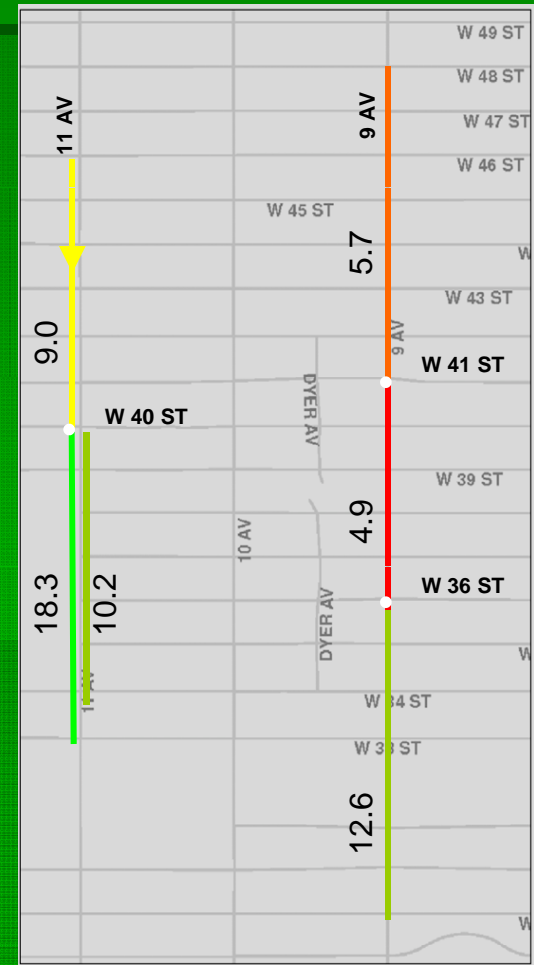
— ≤ 5 mph   
 — 5.1 - 7.5 mph   
 — 7.6 - 10.0 mph   
 — 10.1 – 12.5 mph   
 — > 12.5 mph



NO IMPROVEMENT



SIGNALIZE RAMP C



SIGNALIZE RAMP C  
AND PROHIBIT TURNS  
FROM W 37 ST

# 2015 with Improvements

- Signal Timing Changes to Improve Pedestrian Safety
  - Leading Pedestrian Intervals (LPI's)
  - Split-Phase Protection

## LPI'S IMPLEMENTED AS EARLY ACTION ITEMS

- 47<sup>th</sup> & 9<sup>th</sup> crossing 9<sup>th</sup> Avenue
- 42<sup>nd</sup> & 9<sup>th</sup> crossing 42<sup>nd</sup> Street
- 41<sup>st</sup> & 9<sup>th</sup> crossing 41<sup>st</sup> Street
- 38<sup>th</sup> & 9<sup>th</sup> crossing 38<sup>th</sup> Street
- 30<sup>th</sup> & 9<sup>th</sup> crossing 9<sup>th</sup> Avenue
- 34<sup>th</sup> & 8<sup>th</sup> crossing 8<sup>th</sup> Avenue

## ADDITIONAL LPI'S REQUESTED FOR CROSSING CROSS STREETS

- 46<sup>th</sup> & 10<sup>th</sup>
- 52<sup>nd</sup> & 9<sup>th</sup>
- 51<sup>st</sup> & 9<sup>th</sup> (not in network)
- 49<sup>th</sup> & 9<sup>th</sup> (not in network)
- 37<sup>th</sup> & 8<sup>th</sup>
- 29<sup>th</sup> & 8<sup>th</sup>

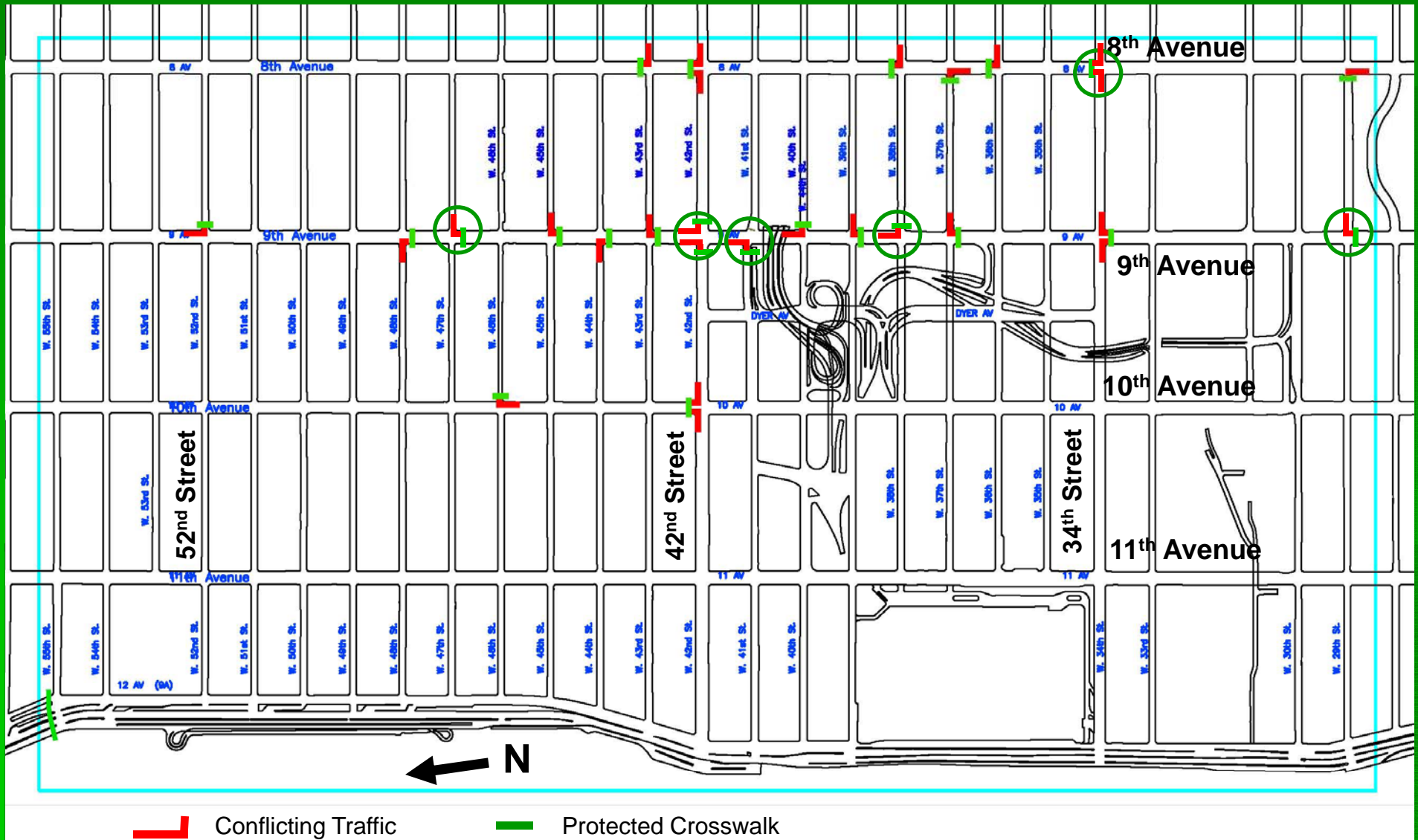
## SPLIT PHASING REQUESTED FOR CROSSING AVENUES

- 48<sup>th</sup> & 9<sup>th</sup>
- 45<sup>th</sup> & 9<sup>th</sup>
- 44<sup>th</sup> & 9<sup>th</sup>
- 43<sup>rd</sup> & 9<sup>th</sup>
- 39<sup>th</sup> & 9<sup>th</sup>
- 37<sup>th</sup> & 9<sup>th</sup>
- 43<sup>rd</sup> & 8<sup>th</sup>

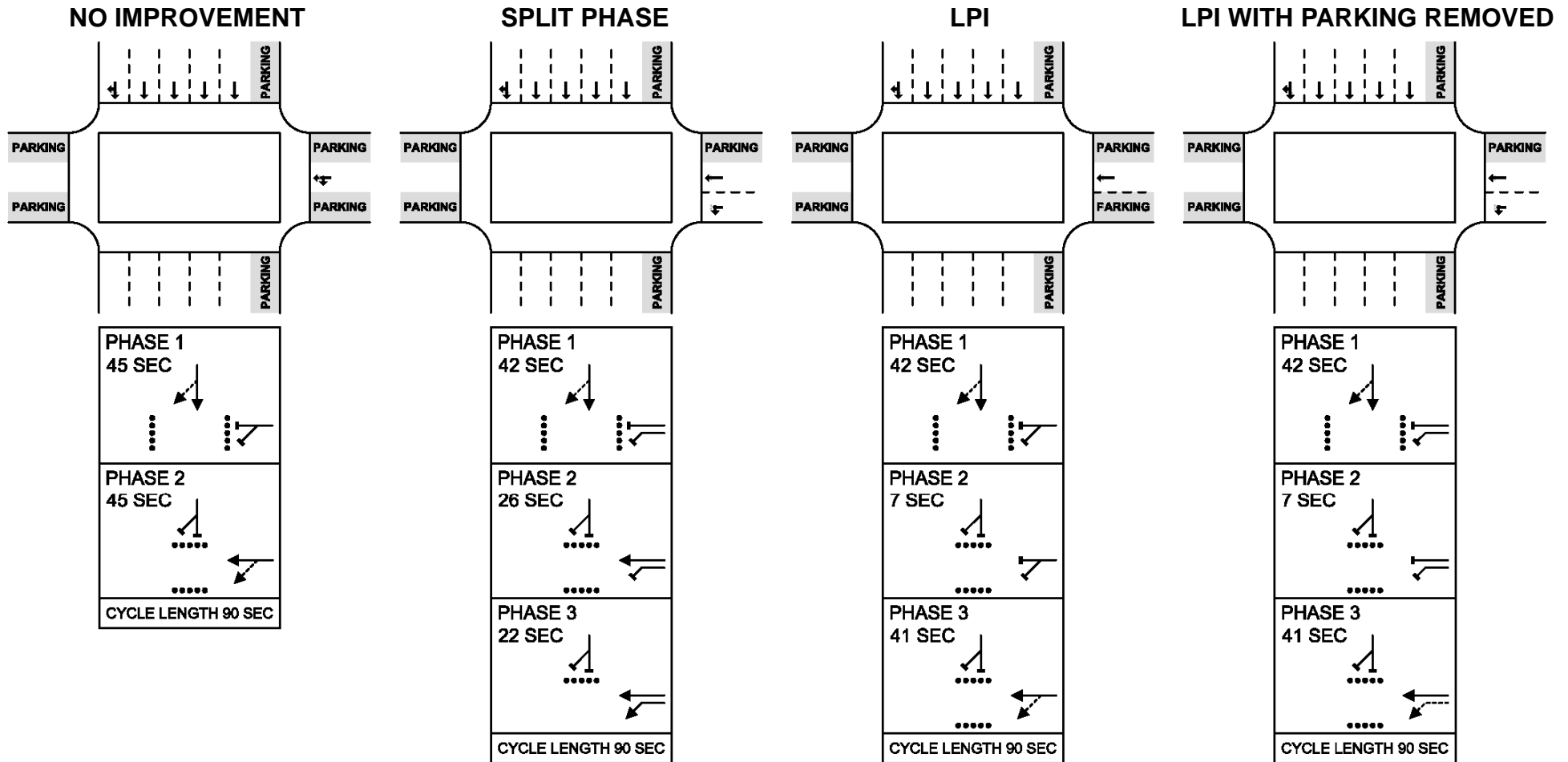
## ADDITIONAL LPI'S PROPOSED FOR CROSSING AVENUES

- 42<sup>nd</sup> & 10<sup>th</sup>
- 34<sup>th</sup> & 9<sup>th</sup>
- 42<sup>nd</sup> & 8<sup>th</sup>

# 2015 with Improvements LPI and Split-Phase Locations



# CROSSWALK PROTECTION OPTIONS



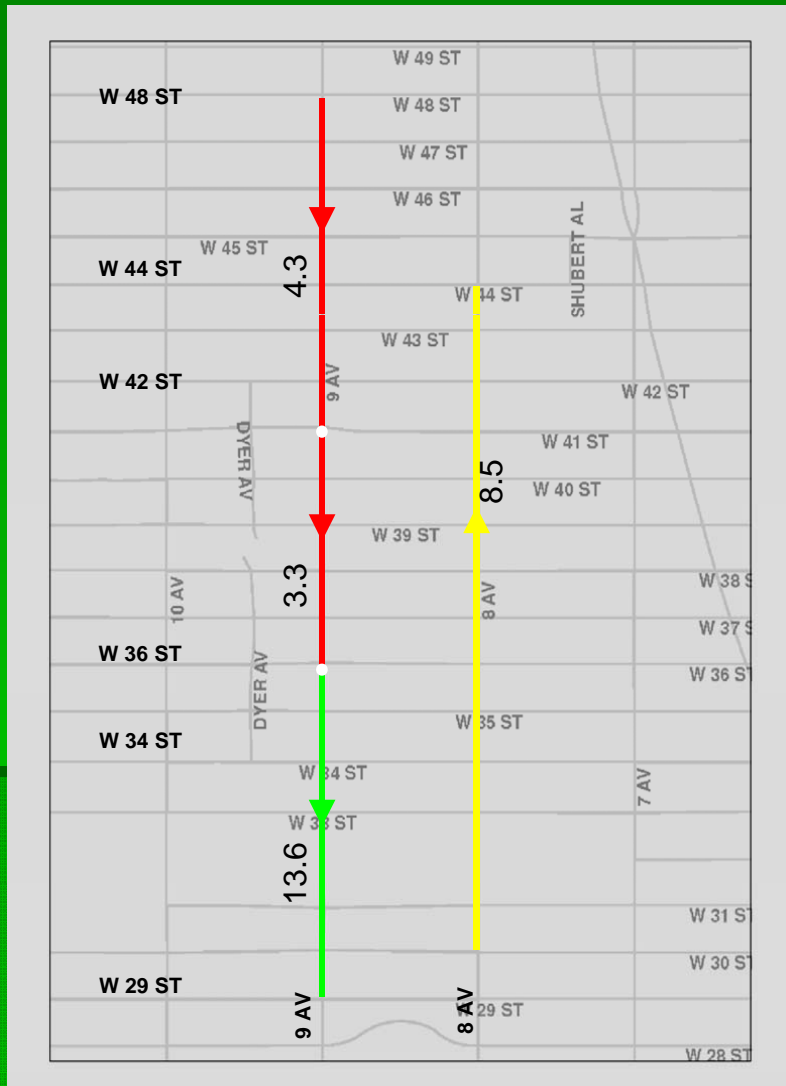
- Reduced crossing time (but protected)
- Loss of parking
- High non-compliance rate (peds and vehicles)

- More crossing time (but with conflict)
- Adverse effect on traffic

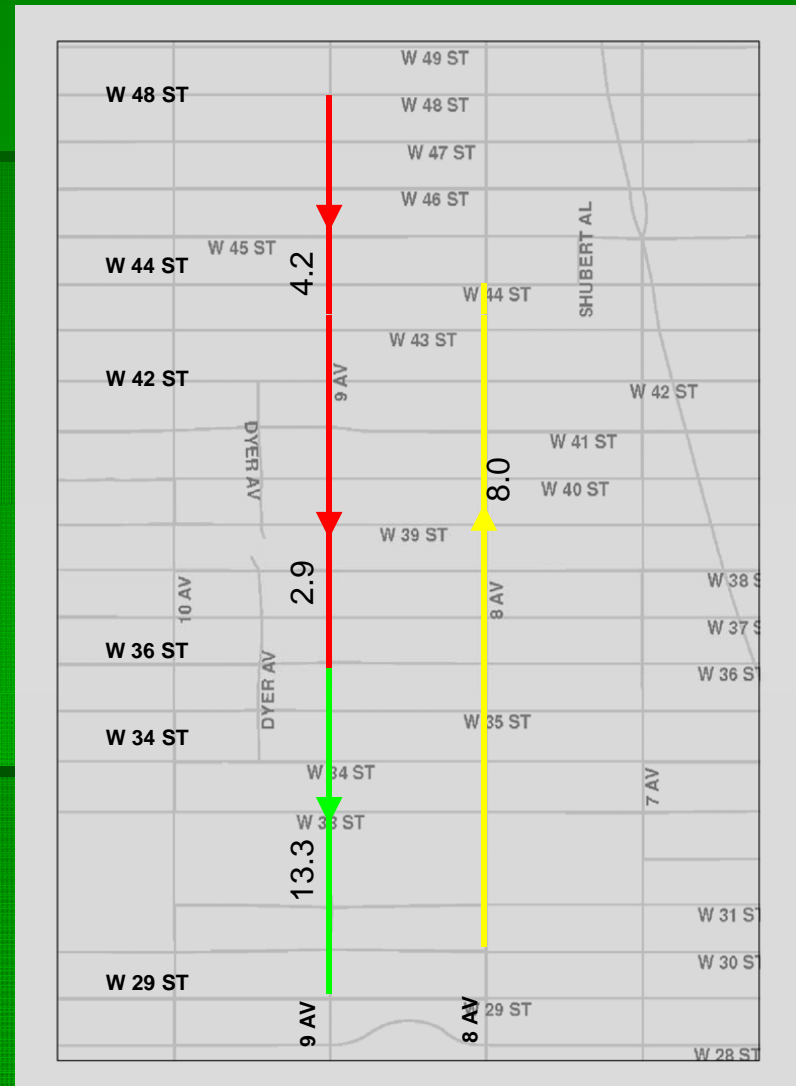
- More crossing time (but with conflict)
- Loss of parking

# 2015 PM Peak Hour Speed with Pedestrian Signal Improvements

— ≤ 5 mph   
 — 5.1 - 7.5 mph   
 — 7.6 - 10.0 mph   
 — 10.1 – 12.5 mph   
 — > 12.5 mph

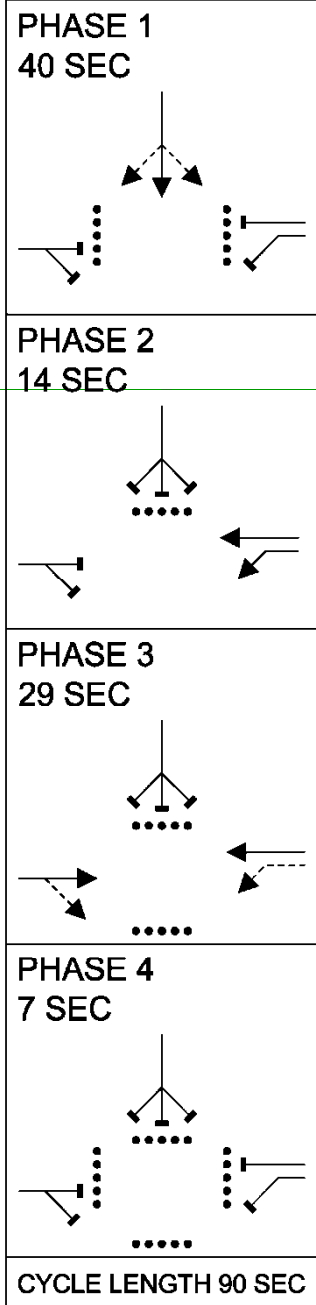


WITHOUT IMPROVEMENTS



LPI AND SPLIT PHASES FOR PEDESTRIANS

# 9 AV AND W 42 ST SIGNAL TIMING



## EXISTING

### East & West Crosswalks

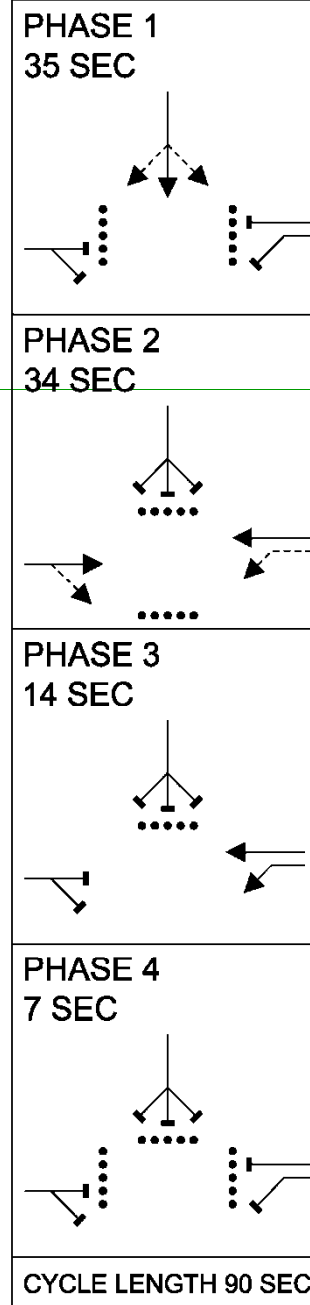
<b>PHASES 4 AND 1</b>	<b>47 sec</b>
WALK	25
Flash DONT WALK	17
Steady DONT WALK	5

### North Crosswalk

<b>PHASES 2, 3 AND 4</b>	<b>50 sec</b>
WALK	26
Flash DONT WALK	20
Steady DONT WALK	4

### South Crosswalk

<b>PHASES 3 AND 4</b>	<b>36 sec</b>
WALK	12
Flash DONT WALK	20
Steady DONT WALK	4



## CHANGE WB- LEFT FROM LEADING TO LAGGING

### East & West Crosswalks

<b>PHASES 4 AND 1</b>	<b>42 sec</b>
WALK	20
Flash DONT WALK	17
Steady DONT WALK	5

### North Crosswalk

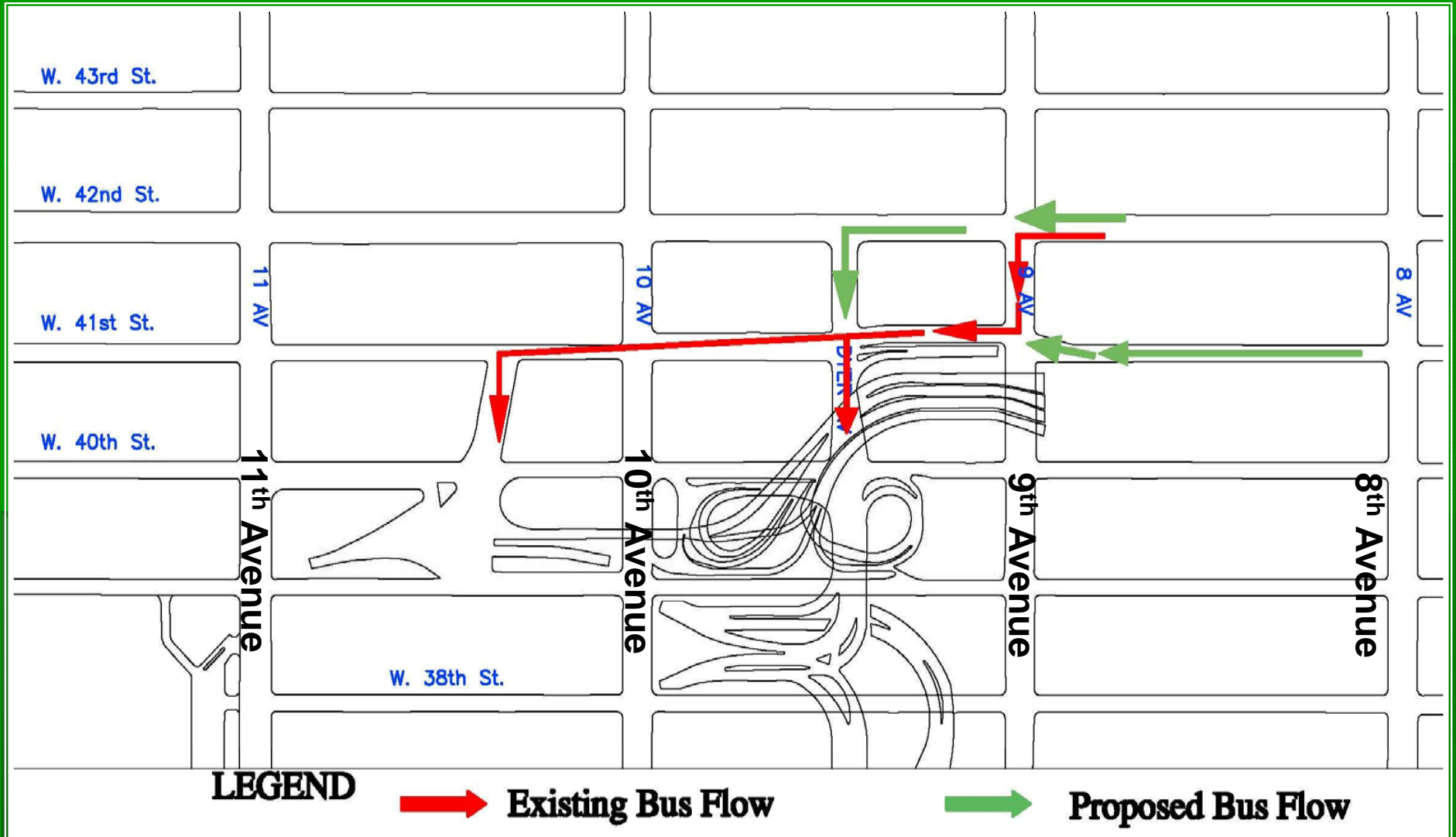
<b>PHASES 2, 3 AND 4</b>	<b>55 sec</b>
WALK	31
Flash DONT WALK	20
Steady DONT WALK	4

### South Crosswalk

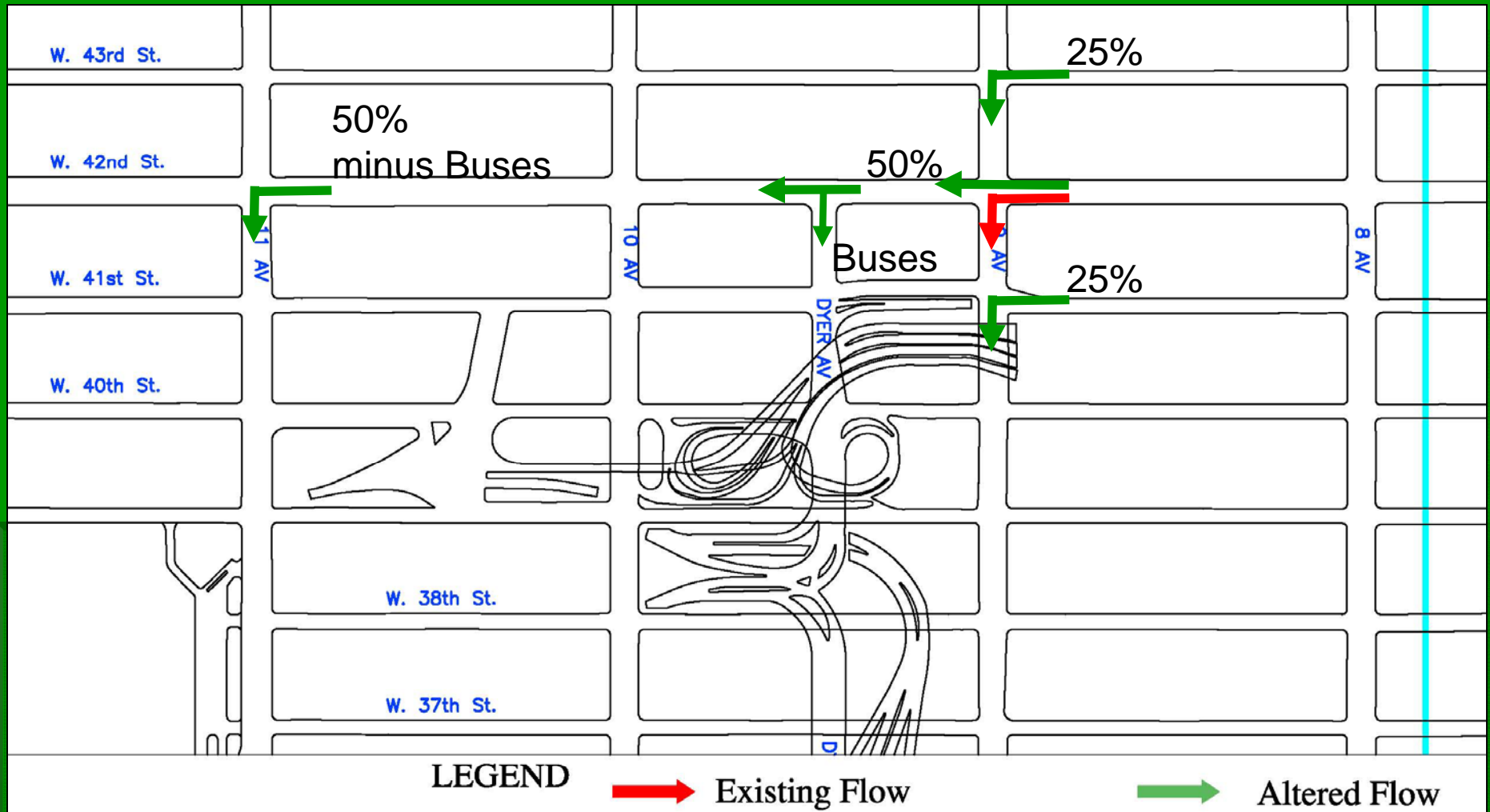
<b>PHASE 2</b>	<b>34 sec</b>
WALK	10
Flash DONT WALK	20
Steady DONT WALK	4



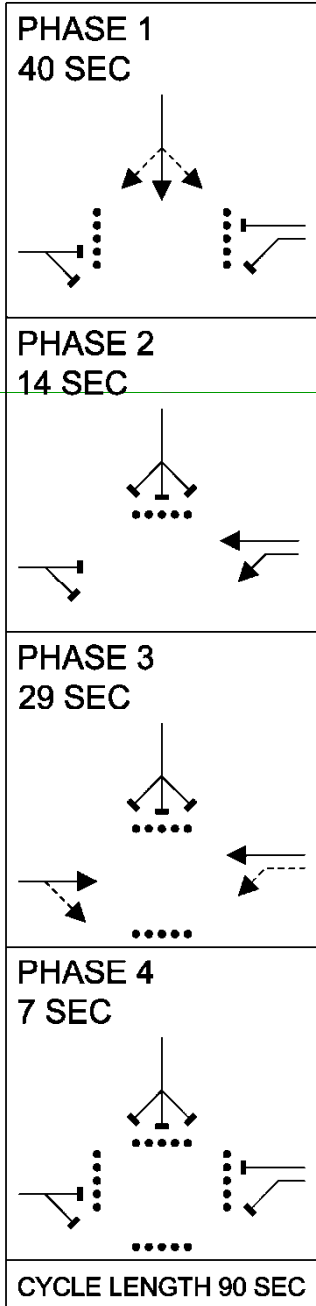
# 2015 with Improvements: Prohibit buses turning left from WB 42<sup>nd</sup> St. onto 9<sup>th</sup> Ave.



# 2015 with Improvements: Prohibit all left turns from WB 42<sup>nd</sup> St. onto 9<sup>th</sup> Ave.



# 9 AV AND W 42 ST SIGNAL TIMING



## EXISTING

### East & West Crosswalks

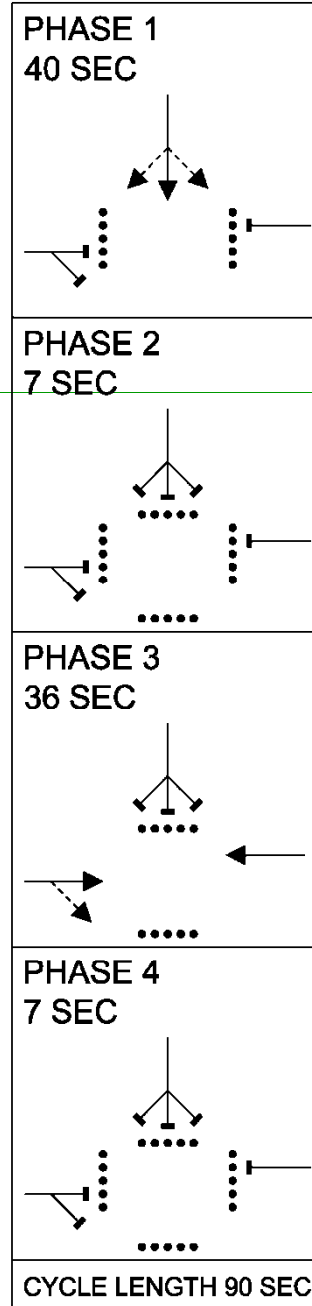
<b>PHASES 4 AND 1</b>	<b>47 sec</b>
WALK	25
Flash DONT WALK	17
Steady DONT WALK	5

### North Crosswalk

<b>PHASES 2, 3 AND 4</b>	<b>50 sec</b>
WALK	26
Flash DONT WALK	20
Steady DONT WALK	4

### South Crosswalk

<b>PHASES 3 AND 4</b>	<b>36 sec</b>
WALK	12
Flash DONT WALK	20
Steady DONT WALK	4



## BAN WESTBOUND LEFT TURNS

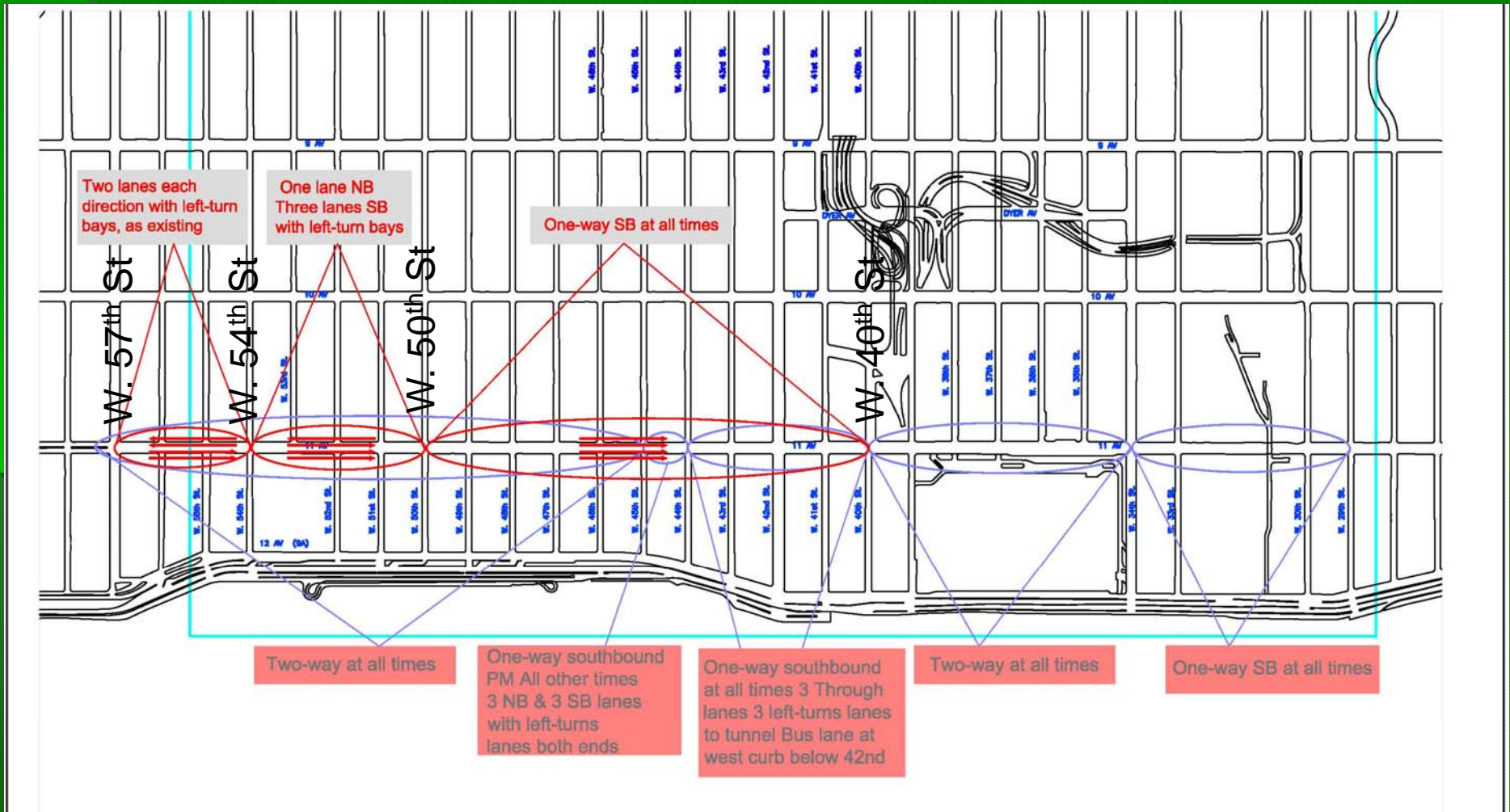
### East & West Crosswalks

<b>PHASES 4, 1 AND 2</b>	<b>54 sec</b>
WALK	32
Flash DONT WALK	17
Steady DONT WALK	5

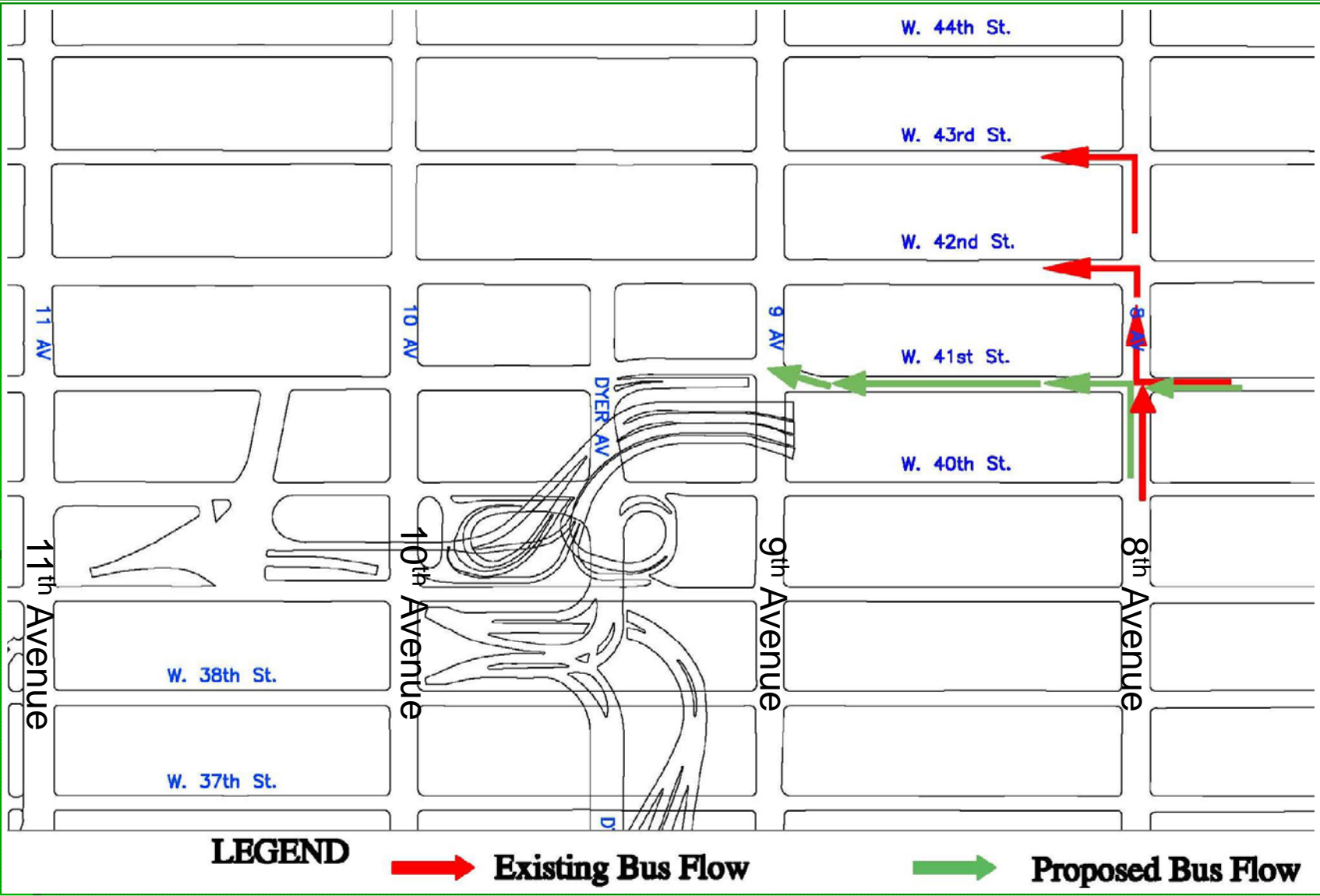
### North & South Crosswalks

<b>PHASES 2, 3 AND 4</b>	<b>50 sec</b>
WALK	26
Flash DONT WALK	20
Steady DONT WALK	4

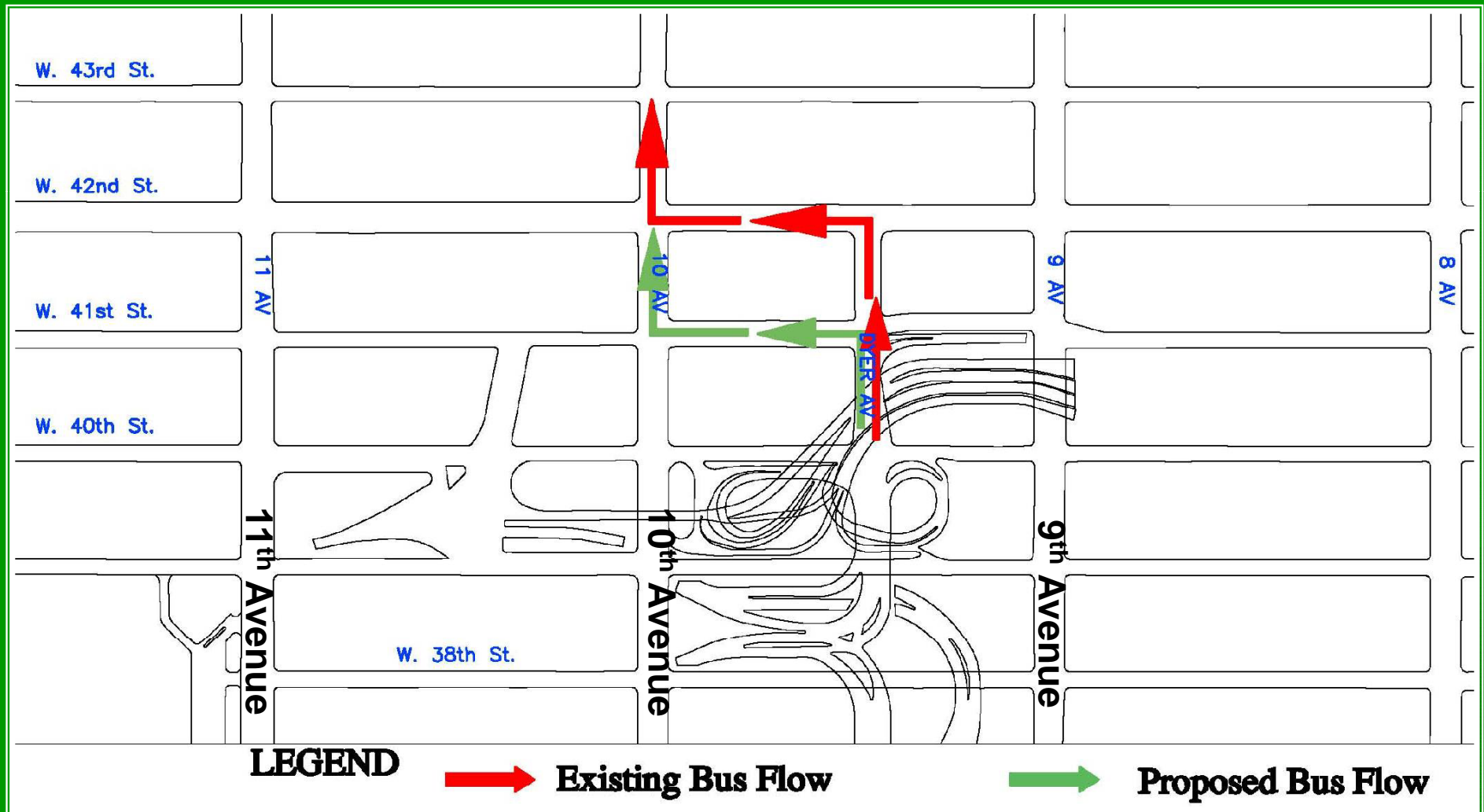
# Other Alternatives: 11<sup>th</sup> Avenue Transition to One-Way Southbound from 50<sup>th</sup> to 40<sup>th</sup> Street



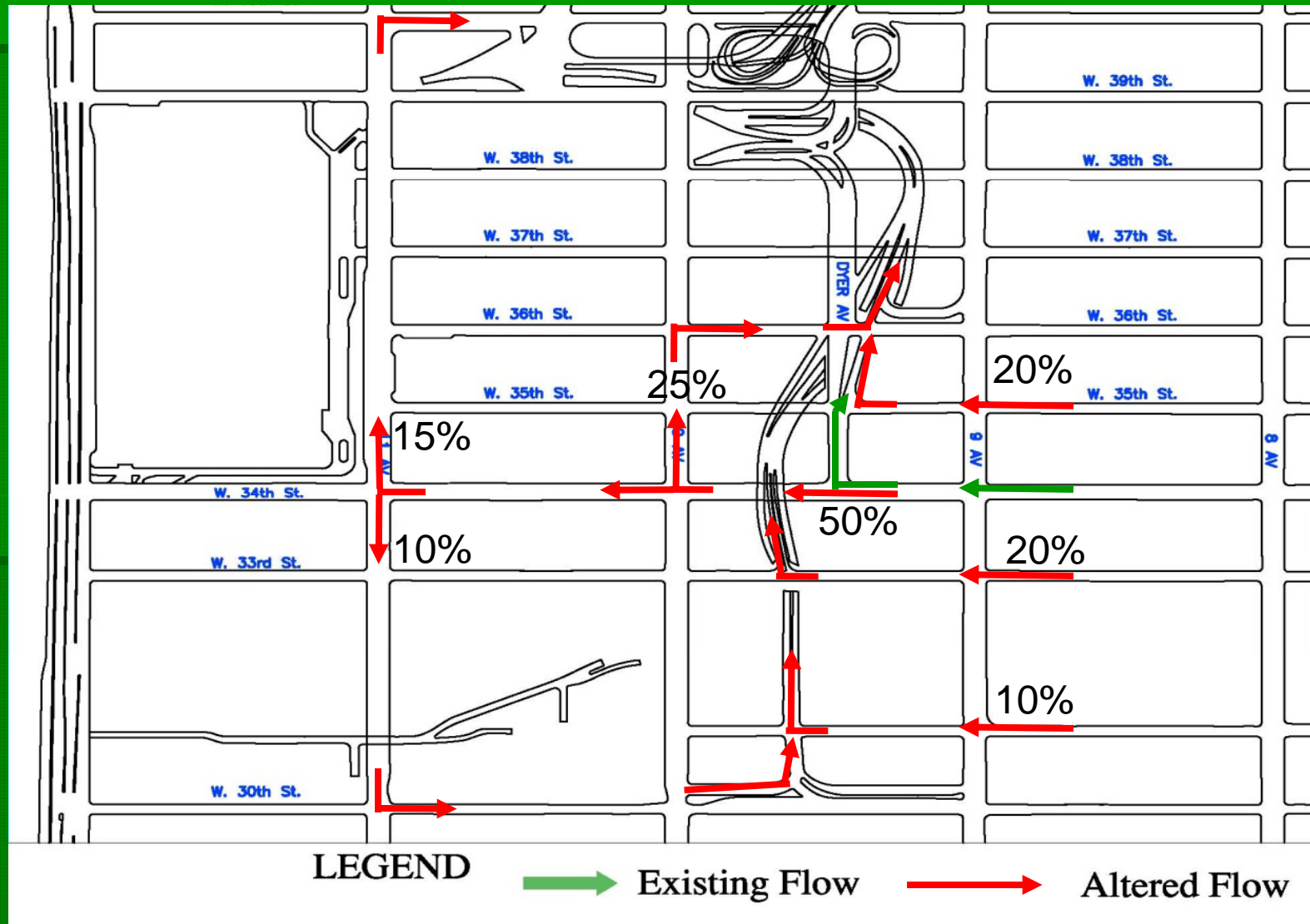
# Other Alternatives: Direct Lincoln Tunnel-bound buses from 8<sup>th</sup> Ave. and points east to use 41<sup>st</sup> St



# Other Alternatives: Direct buses exiting tunnel for 10<sup>th</sup> Ave. to use 41<sup>st</sup> St



# Other Alternatives: Close Northbound Dyer Avenue from 34<sup>th</sup> to 35<sup>th</sup> Street



# Next Steps

- Release *Technical Memorandum on Existing (2008) Conditions* – Mid July
- Complete analysis of packages of improvement alternatives – June 30
- Recommendations for Short-Term and Long-Term Improvements – July
- Draft Final Report - September
- Final Public Meeting – September
- Final Report - December