



MIDTOWN CORRIDOR ALTERNATIVES ANALYSIS

Universe of Alternatives and Initial Screening Results

Community Advisory Committee Meeting

April 23, 2013

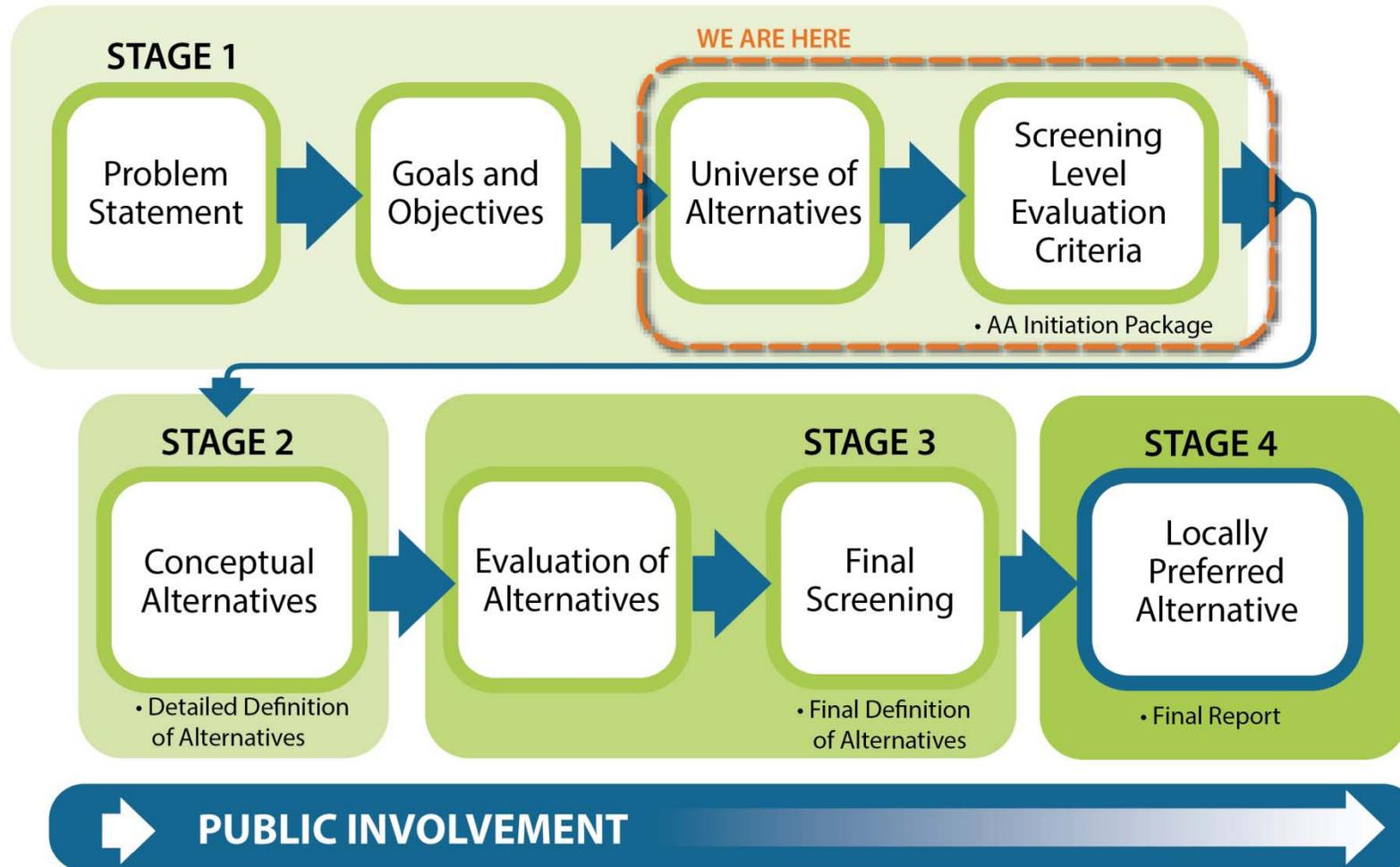


Today's Agenda

- Introductions
- Purpose & Need Update
- Community Updates
- Initial Screening Analysis Results
- Upcoming Public Open Houses
- Study Next Steps
- Community Perspective on Screening Analysis Results and Next Steps
- Adjourn



Study Process





Study Area





Arterial Bus Rapid Transit (BRT)



Arterial Bus Rapid Transit in Kansas City, MO

- Runs in mixed traffic
- Diesel or diesel electric hybrid vehicles



Streetcar



Streetcar in Seattle, WA

- Runs on rails in mixed traffic
- Electrically powered vehicles with overhead wires



Dedicated Busway



Dedicated busway in Cleveland, OH

- Runs in a dedicated guideway
- Diesel or diesel electric hybrid vehicles



Light Rail Transit (LRT)



Hiawatha LRT in Minneapolis, MN

- Runs on rails in a dedicated guideway
- Electrically powered vehicles with overhead wires

Commuter Rail



Northstar Commuter rail in Minnesota

- Runs on rails in a dedicated guideway
- Vehicles powered by diesel electric locomotives

Personal Rapid Transit (PRT)



Prototype PRT vehicle

- Completely automated and on-demand service
- Runs on rails in a dedicated guideway
- Must be completely grade separated
- No large scale systems in operation



Universe of Alternatives

Lake Street

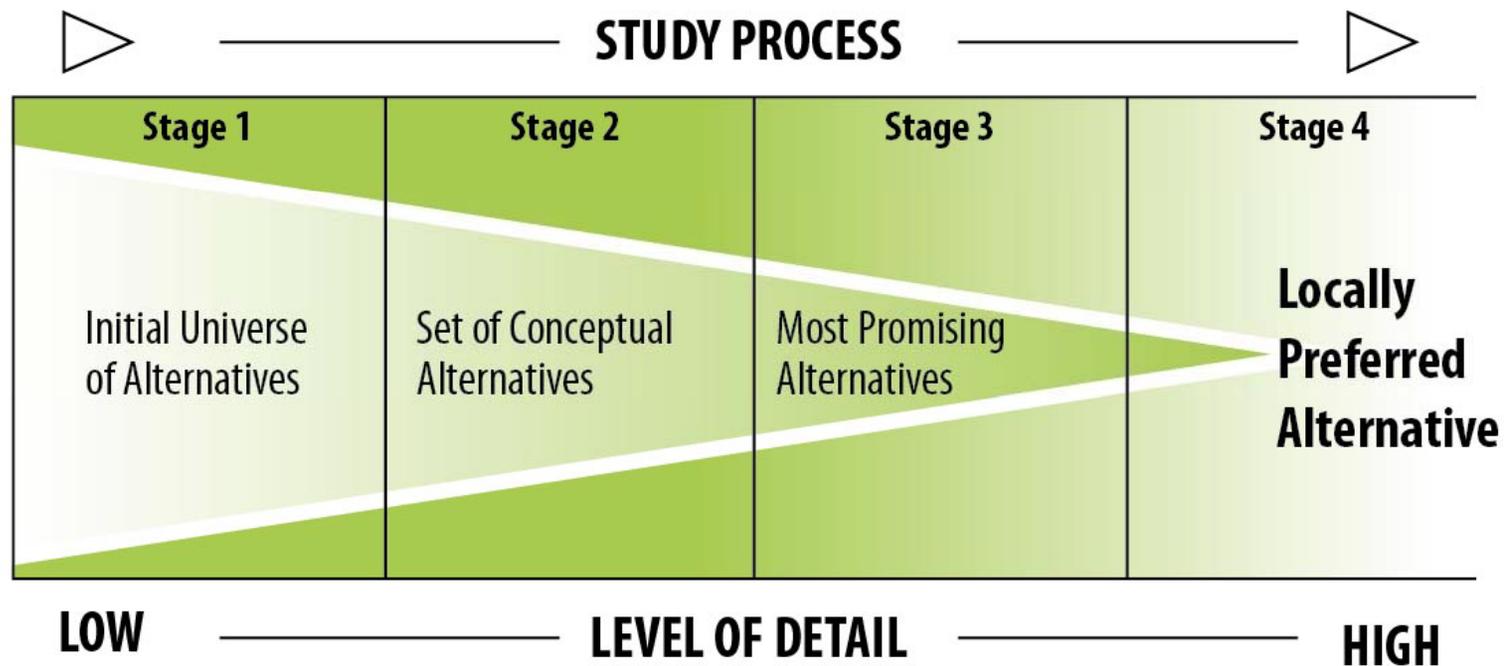
1. Arterial BRT
2. Streetcar
3. LRT
4. Dedicated Busway

Midtown Greenway

5. Double/Single-Track Streetcar
6. Full Double-Track LRT/Streetcar
7. Dedicated Busway
8. Personal Rapid Transit
9. Commuter Rail
10. Streetcar Lake Street/Greenway Loop

Purpose of Initial Screening

- To evaluate the full range of alternatives against project development criteria.
- Only alternatives that meet the overall project purpose and need will be advanced to the next level of analysis





Initial Screening Summary Table

Screening Criteria	Lake Street				Midtown Greenway			Both
	Arterial BRT	Streetcar	LRT	Dedicated Busway	Double / Single-Track	Full Double-Track	Dedicated Busway	Streetcar Loop
1 Consistency with regional and local plans	Very Good	Fair	Good	Good	Very Good	Good	Good	Good
2 Level of access provided to jobs and residents	Fair	Good	Fair	Fair	Fair	Fair	Fair	Poor
3 Ability to provide desired transit capacity and speed increases	Good	Good	Good	Good	Good	Very Good	Good	Fair
4 Compatibility with existing transportation modes and infrastructure	Very Good	Good	Poor	Poor	Good	Poor	Good	Fair
5 Potential ROW impacts	Very Good	Fair	Poor	Poor	Good	Good	Good	Poor
6 Community and stakeholder sentiment	Good	Fair	Poor	Poor	Very Good	Poor	Poor	Fair
Overall rating	Good	Fair	Poor	Poor	Good	Fair	Fair	Poor

Alternative Advanced

Alternative Advanced

Arterial BRT on Lake Street

	Arterial BRT
1 Consistency with regional and local plans	Very Good
2 Level of access provided to jobs and residents	Fair
3 Ability to provide desired transit capacity and speed increases	Good
4 Compatibility with existing transportation modes and infrastructure	Very Good
5 Potential ROW impacts	Very Good
6 Community and stakeholder sentiment	Good
Overall rating	Good

- One of the best performing corridors in the *Arterial Transitway Corridors Study*
- Allows for modest speed and capacity increases
- Least impact and is most compatible with all existing and planned transportation infrastructure
- Least ROW impacts of all alternatives
- Bus is only felt to have ‘some potential’ instead of ‘high potential’ to spur economic development

**Recommendation:
Advance for further study**

Streetcar on Lake Street

	Streetcar
1 Consistency with regional and local plans	Fair
2 Level of access provided to jobs and residents	Good
3 Ability to provide desired transit capacity and speed increases	Good
4 Compatibility with existing transportation modes and infrastructure	Good
5 Potential ROW impacts	Fair
6 Community and stakeholder sentiment	Fair
Overall rating	Fair

- Provides best access for jobs and residents
- Allows for modest speed and capacity increases
- Requires additional infrastructure at both ends for layover and turnaround, requiring some right-of-way
- Possible clearance issue under I-35W bridge
- Lack of strong community support
- Is felt to have high potential to spur economic development

Recommendation:
Do not advance for further study

LRT on Lake Street

	LRT
1 Consistency with regional and local plans	Good
2 Level of access provided to jobs and residents	Fair
3 Ability to provide desired transit capacity and speed increases	Good
4 Compatibility with existing transportation modes and infrastructure	Poor
5 Potential ROW impacts	Poor
6 Community and stakeholder sentiment	Poor
Overall rating	Poor

- Major impacts to parking and vehicular and pedestrian traffic on Lake Street
- Requires additional infrastructure at both ends for layover and turnaround, requiring some right-of-way
- Possible clearance issue under I-35W bridge
- Lack of strong community support due to concerns about reconstruction of Lake Street and impacts to existing vehicular traffic

Recommendation:
Do not advance for further study

Dedicated Busway on Lake Street

	Dedicated Busway
1 Consistency with regional and local plans	Good
2 Level of access provided to jobs and residents	Fair
3 Ability to provide desired transit capacity and speed increases	Good
4 Compatibility with existing transportation modes and infrastructure	Poor
5 Potential ROW impacts	Poor
6 Community and stakeholder sentiment	Poor
Overall rating	Poor

- Major impacts to parking and vehicular and pedestrian traffic on Lake Street
- Requires a significant amount of ROW
- Lack of strong community support due to concerns about reconstruction of Lake Street and impacts to existing vehicular traffic

Recommendation:
Do not advance for further study

Double/Single-Track Streetcar in the Greenway

	Double / Single Track
1 Consistency with regional and local plans	Very Good
2 Level of access provided to jobs and residents	Fair
3 Ability to provide desired transit capacity and speed increases	Good
4 Compatibility with existing transportation modes and infrastructure	Good
5 Potential ROW impacts	Good
6 Community and stakeholder sentiment	Very Good
Overall rating	Good

- The *Minneapolis Streetcar Feasibility Study* recommends streetcar in the Greenway
- Speeds could be affected by the use of a single track and passing sidings
- Minimal impacts on bicycle and pedestrian facilities in the Greenway
- Requires some ROW
- Consistent with broad community sentiment and specific comments made at stakeholder engagement sessions
- Is felt to have high potential to spur economic development

**Recommendation:
Advance for further study**

Full Double-Track LRT/Streetcar in the Greenway

	Full Double Track
1 Consistency with regional and local plans	Good
2 Level of access provided to jobs and residents	Fair
3 Ability to provide desired transit capacity and speed increases	Very Good
4 Compatibility with existing transportation modes and infrastructure	Poor
5 Potential ROW impacts	Good
6 Community and stakeholder sentiment	Poor
Overall rating	Fair

- Fastest operating speeds of any alternative
- Modest impacts to existing bicycle and pedestrian facilities in the Greenway
- Likely requires rebuild of bridges over the Greenway
- Requires some ROW
- Is inconsistent with broad community sentiment and specific comments made at stakeholder engagement sessions regarding impacts to Greenway resources

Recommendation:
Do not advance for further study

Dedicated Busway in the Greenway

	Dedicated Busway
1 Consistency with regional and local plans	Good
2 Level of access provided to jobs and residents	Fair
3 Ability to provide desired transit capacity and speed increases	Good
4 Compatibility with existing transportation modes and infrastructure	Good
5 Potential ROW impacts	Good
6 Community and stakeholder sentiment	Poor
Overall rating	Fair

- Double/single-lane operation could affect speeds
- Minimal impacts on bicycle and pedestrian facilities in the Greenway
- Requires some ROW
- Is inconsistent with broad community sentiment and specific comments made at stakeholder engagement sessions

Recommendation:
Do not advance for further study

Streetcar Loop

	One-way Loop
1 Consistency with regional and local plans	Good
2 Level of access provided to jobs and residents	Poor
3 Ability to provide desired transit capacity and speed increases	Fair
4 Compatibility with existing transportation modes and infrastructure	Fair
5 Potential ROW impacts	Poor
6 Community and stakeholder sentiment	Fair
Overall rating	Poor

- May be confusing and inconvenient for users
- Lake Street speeds affected by operations in mixed traffic and signalized intersections, resulting in imbalanced eastbound and westbound travel time
- Possible clearance issue under I-35W bridge
- Requires a significant amount of ROW to transition between alignments
- Higher capital and operating cost

Recommendation:
Do not advance for further study

Commuter Rail and PRT on the Greenway

	Commuter Rail	PRT
1 Consistency with regional and local plans	Fatal Flaw	Fatal Flaw
2 Level of access provided to jobs and residents	-	-
3 Ability to provide desired transit capacity and speed increases	-	-
4 Compatibility with existing transportation modes and infrastructure	-	-
5 Potential ROW impacts	-	-
6 Community and stakeholder sentiment	-	-
Overall rating	Fatal Flaw	Fatal Flaw

- Commuter rail and PRT on the Greenway are not consistent with the Metropolitan Council recommendations stated in the *Transportation Policy Plan* and in the *Regional Transitway Guidelines*.

Recommendation:
Do not advance for further study



Screening Conclusions

Recommended for Further Study

- Arterial BRT on Lake Street
- Single/double-track streetcar in Midtown Greenway
- Potential alignment combinations

Not Recommended for Further Study

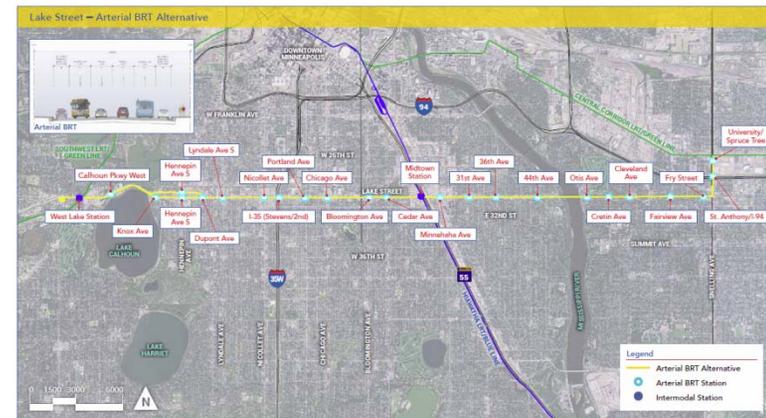
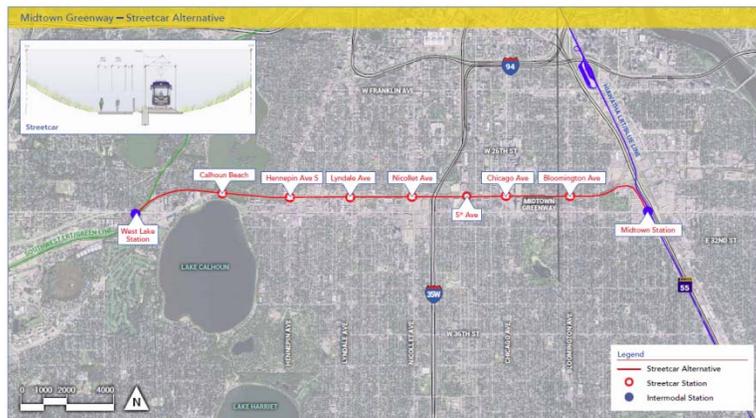
- Streetcar on Lake Street
- LRT on Lake Street
- Dedicated busway on Lake Street
- Full double-track in Midtown Greenway
- Dedicated busway in Midtown Greenway
- Streetcar loop in Midtown Greenway and Lake Street
- Commuter rail in Midtown Greenway
- PRT in Midtown Greenway



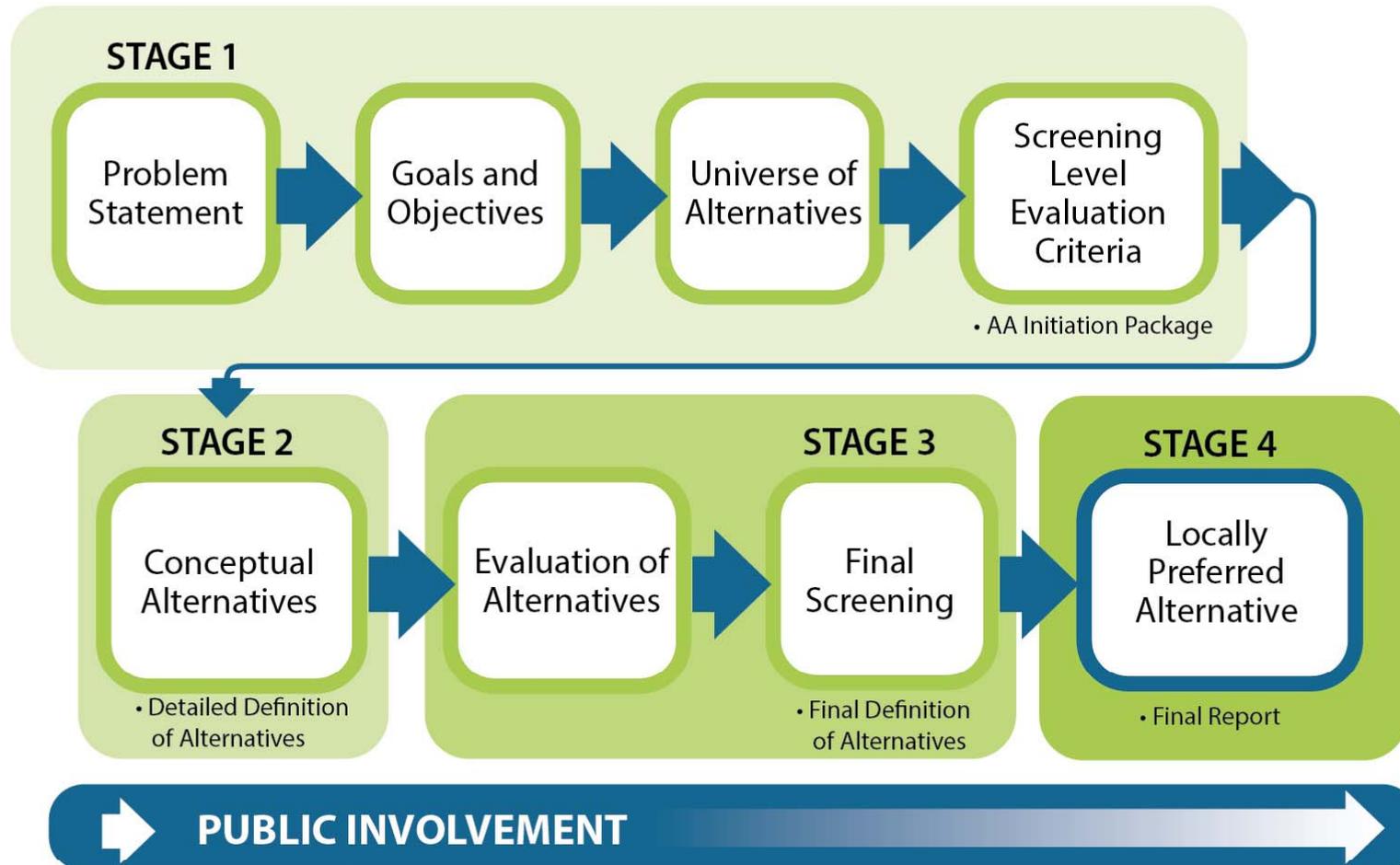
Combinations of Alternatives

Streetcar on Greenway and bus rapid transit on Lake St.

- Streetcar within study area, BRT on Lake St with potential to extend east of Hiawatha
- Responding to public interest in transit improvements along entire length Lake Street
- Allows for possible phased implementation
- Evaluate market demand for both alignments



Next Steps



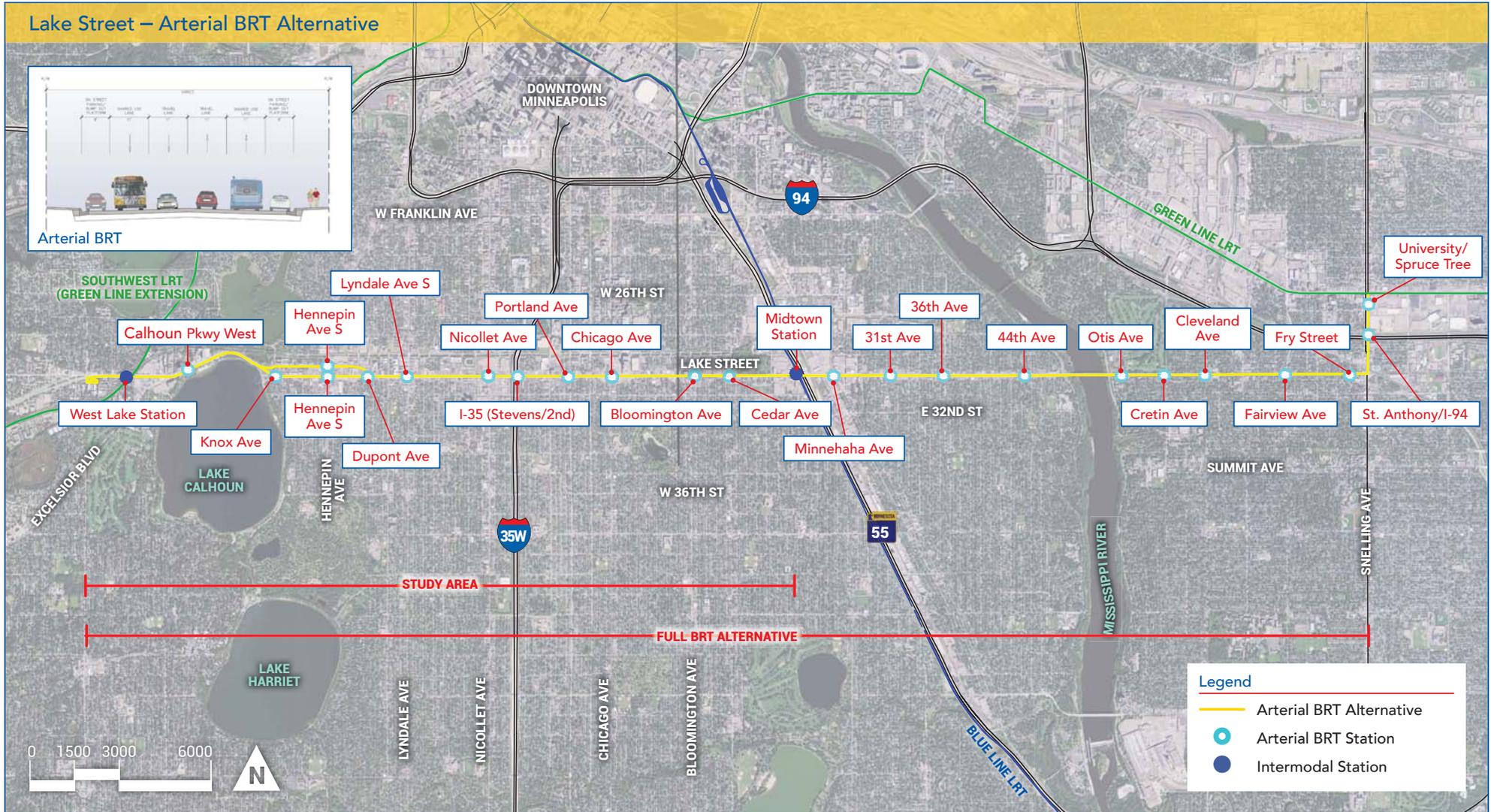
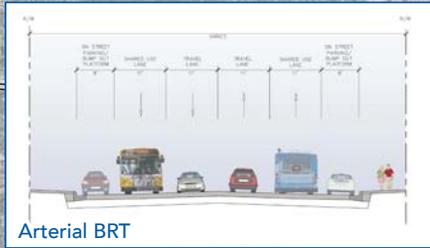


Upcoming Public Meetings

- Present initial screening results to the public
- Two meetings in the study area:
 - May 21, 6-8 p.m. at the Colin Power Center
 - May 23, 6-8 p.m. at the Whittier Clinic
- Metro Transit will be sending out meeting notifications
- Please publicize the meetings to your networks



Lake Street – Arterial BRT Alternative



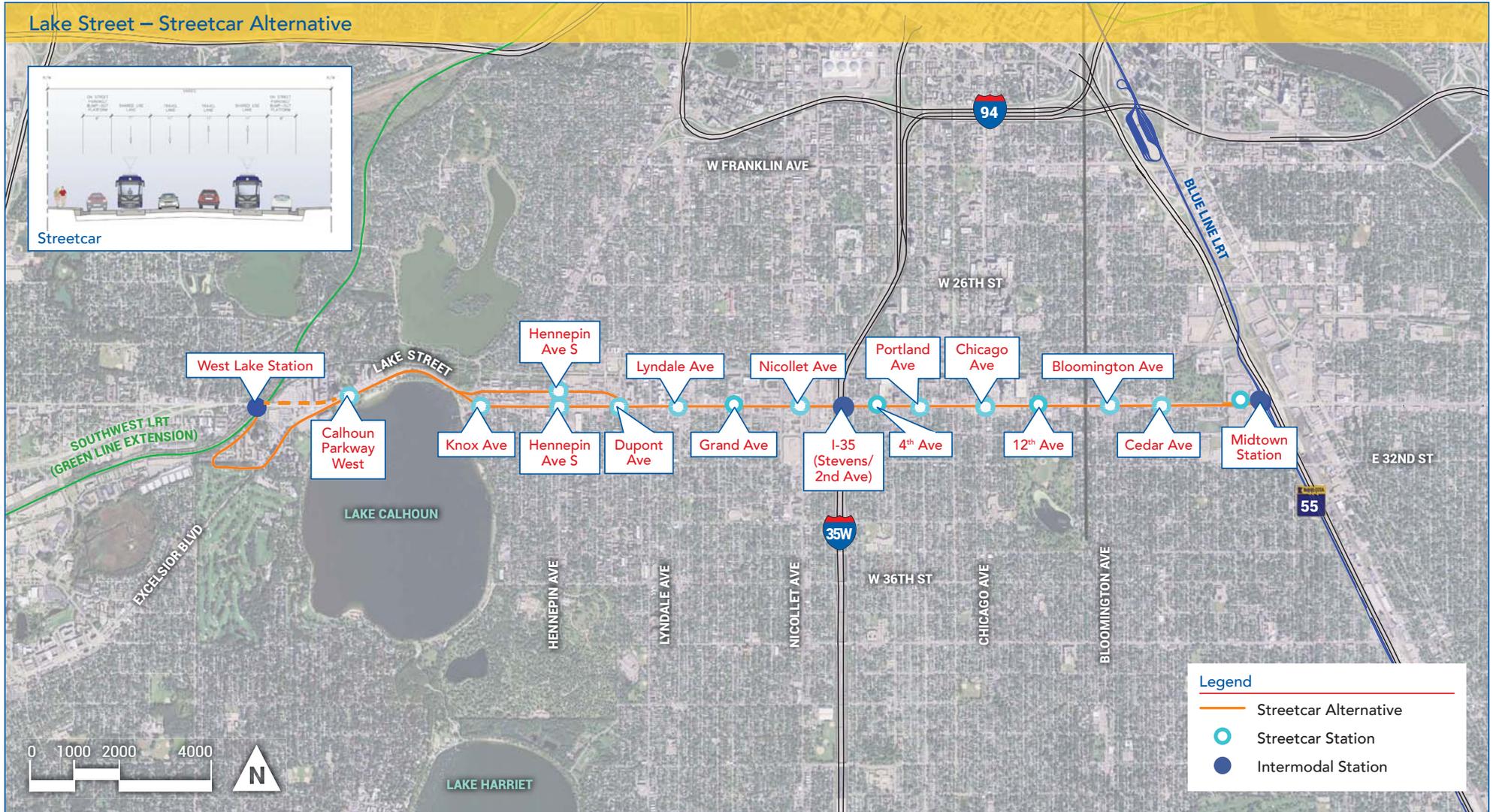
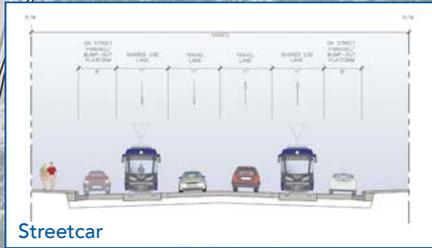
Legend

- Arterial BRT Alternative
- Arterial BRT Station
- Intermodal Station

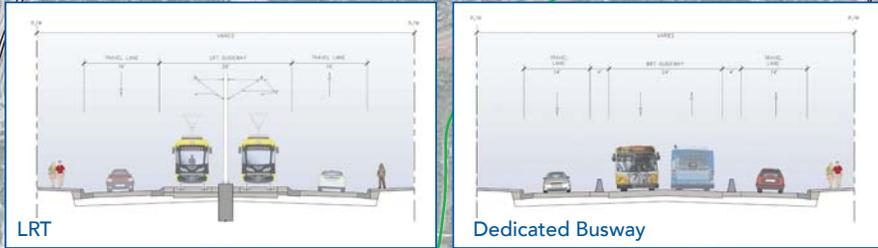




Lake Street – Streetcar Alternative



Lake Street – LRT/Dedicated Busway Alternatives



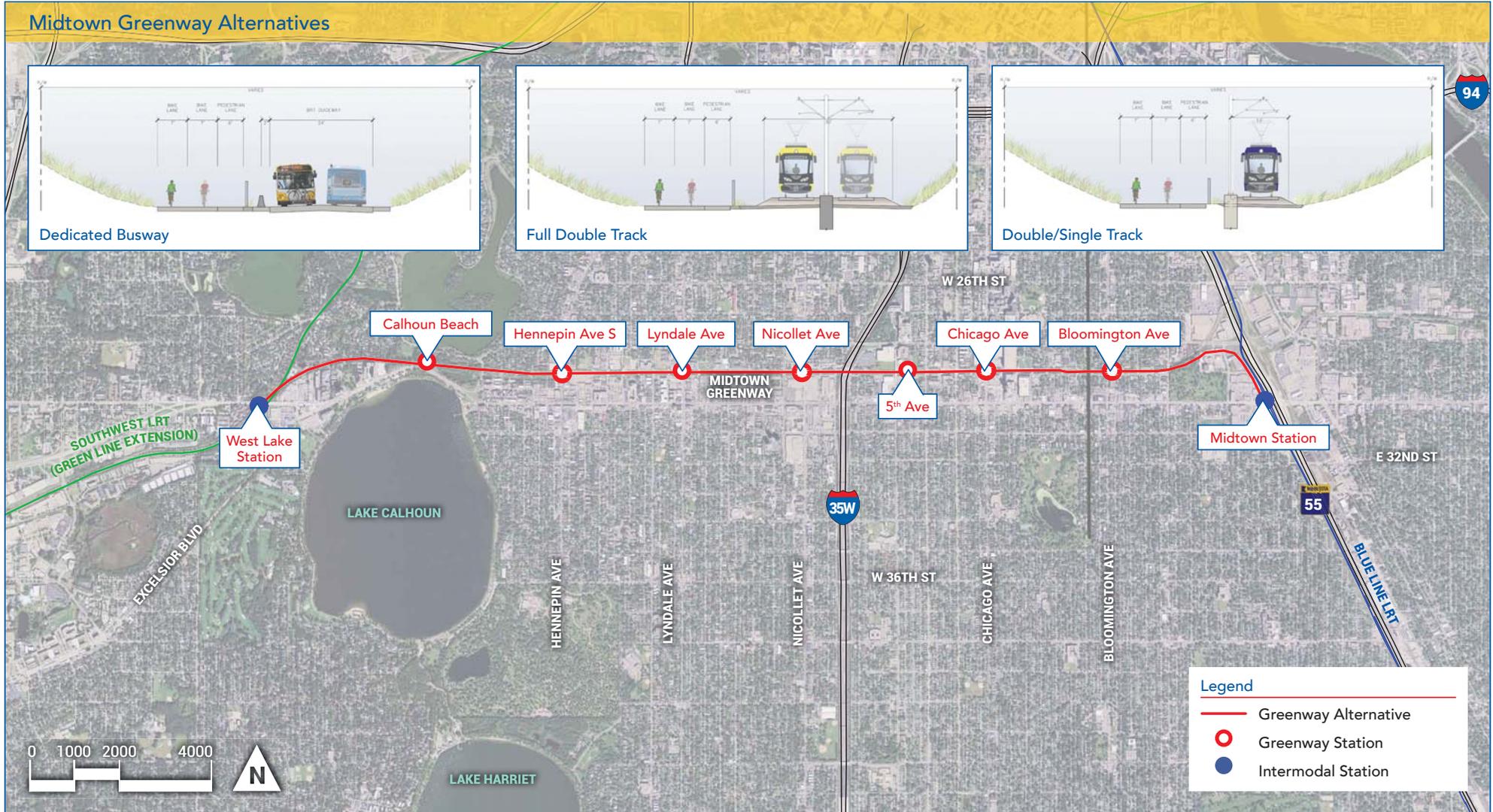
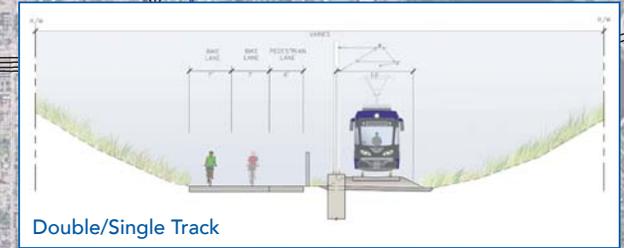
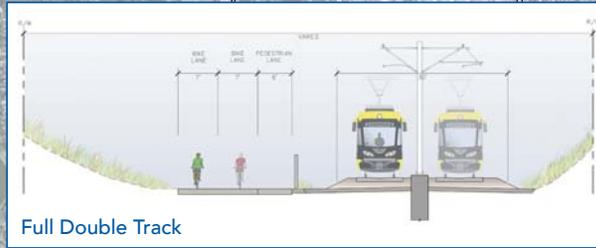
Legend

- LRT/Dedicated Busway Alternative
- LRT/Dedicated Busway Station
- Intermodal Station





Midtown Greenway Alternatives





Both – One-Way Loop Alternative

