



WESTERN UNIVERSITY

OPEN SPACE AND LANDSCAPE PLAN

Open House
January 5, 2017



PERKINS+WILL



Open Space and
Landscape Plan

TODAY'S AGENDA (TBD)

12:00 Open House

12:30 Presentation:

Campus Inventory and Analysis

Emerging Open Space Principles

BRT Options

1:00 Q + A Session

1:30 Open House

PROJECT TIMELINE

ACHIEVING
EXCELLENCE
— on the —
World Stage



January 2014



WESTERN UNIVERSITY
STRATEGIC PLAN
2014

LAUNCH OF SHIFT
2015

WESTERN ROAD
TRANSPORTATION STUDY
DECEMBER 2015

CITY BUSINESS CASE NOW
FULL BRT SYSTEM
2016

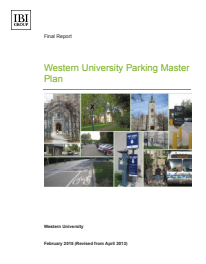


2015
CAMPUS MASTER PLAN

2015
WESTERN UNIVERSITY
PARKING STUDY

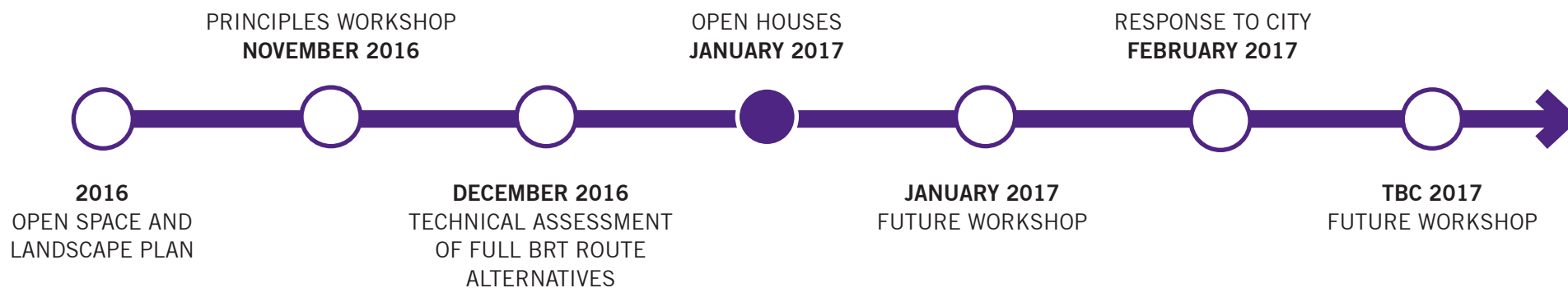
2016
BOARD SUPPORT FOR
LRT TO CAMPUS BUT
NOT THROUGH CAMPUS

2016
OPEN SPACE AND
LANDSCAPE PLAN



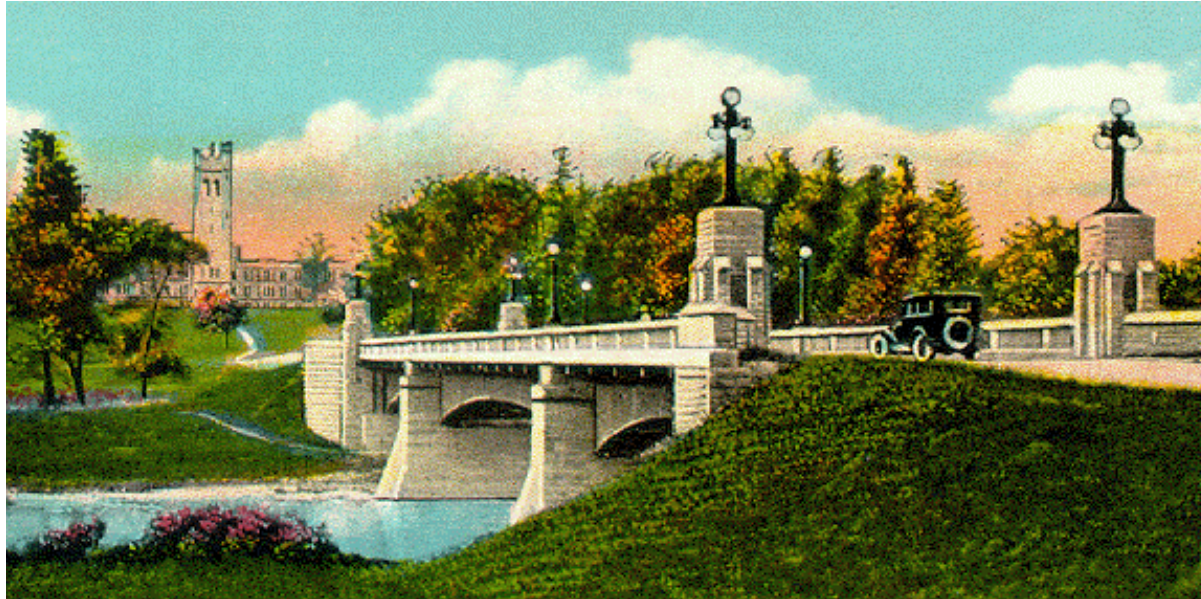
PROJECT TIMELINE

WE ARE HERE





CAMPUS INVENTORY AND ANALYSIS



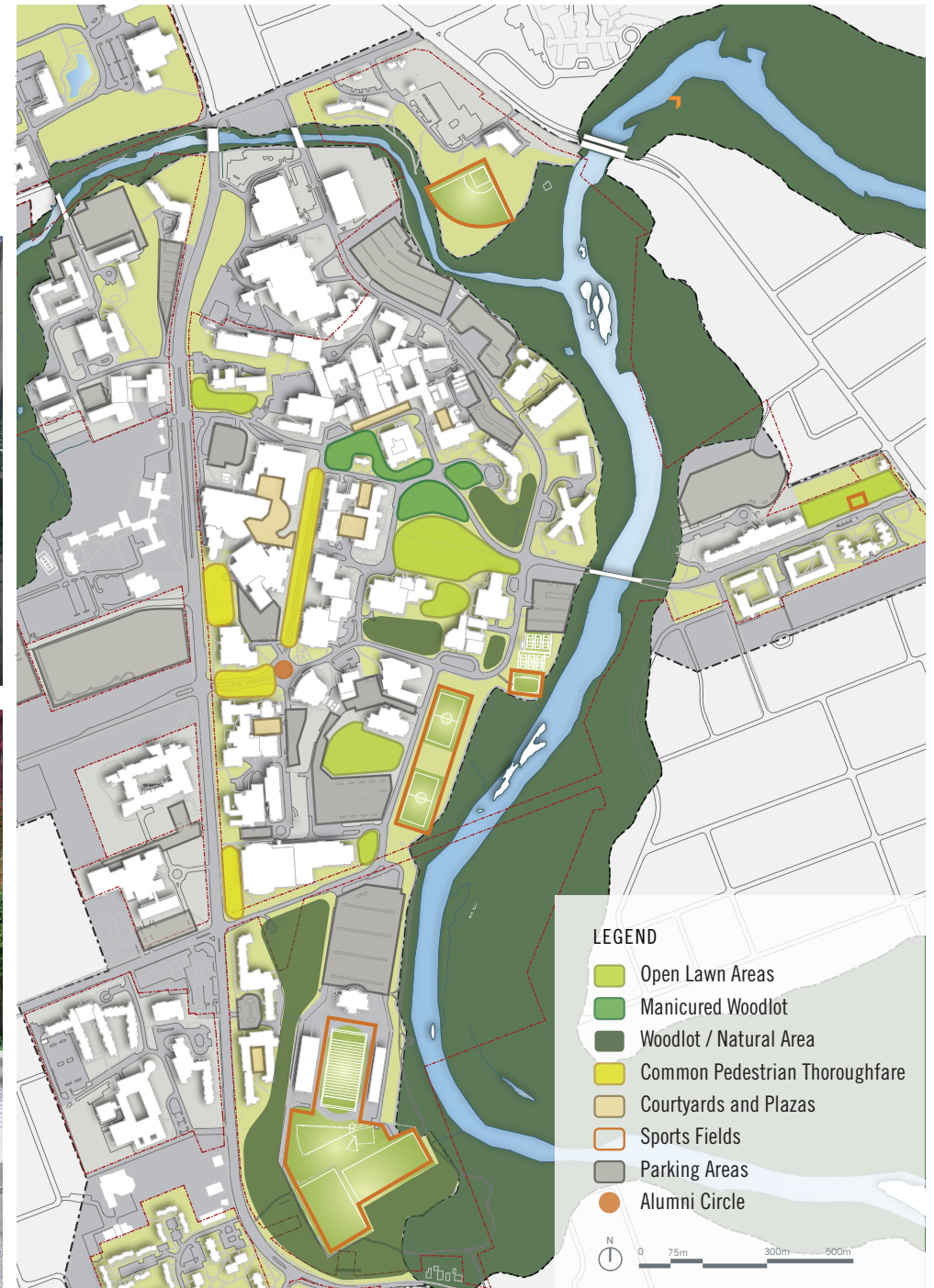
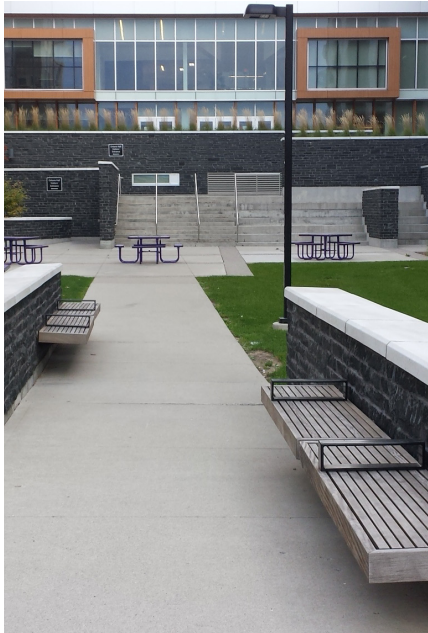
HISTORY



TOPOGRAPHY

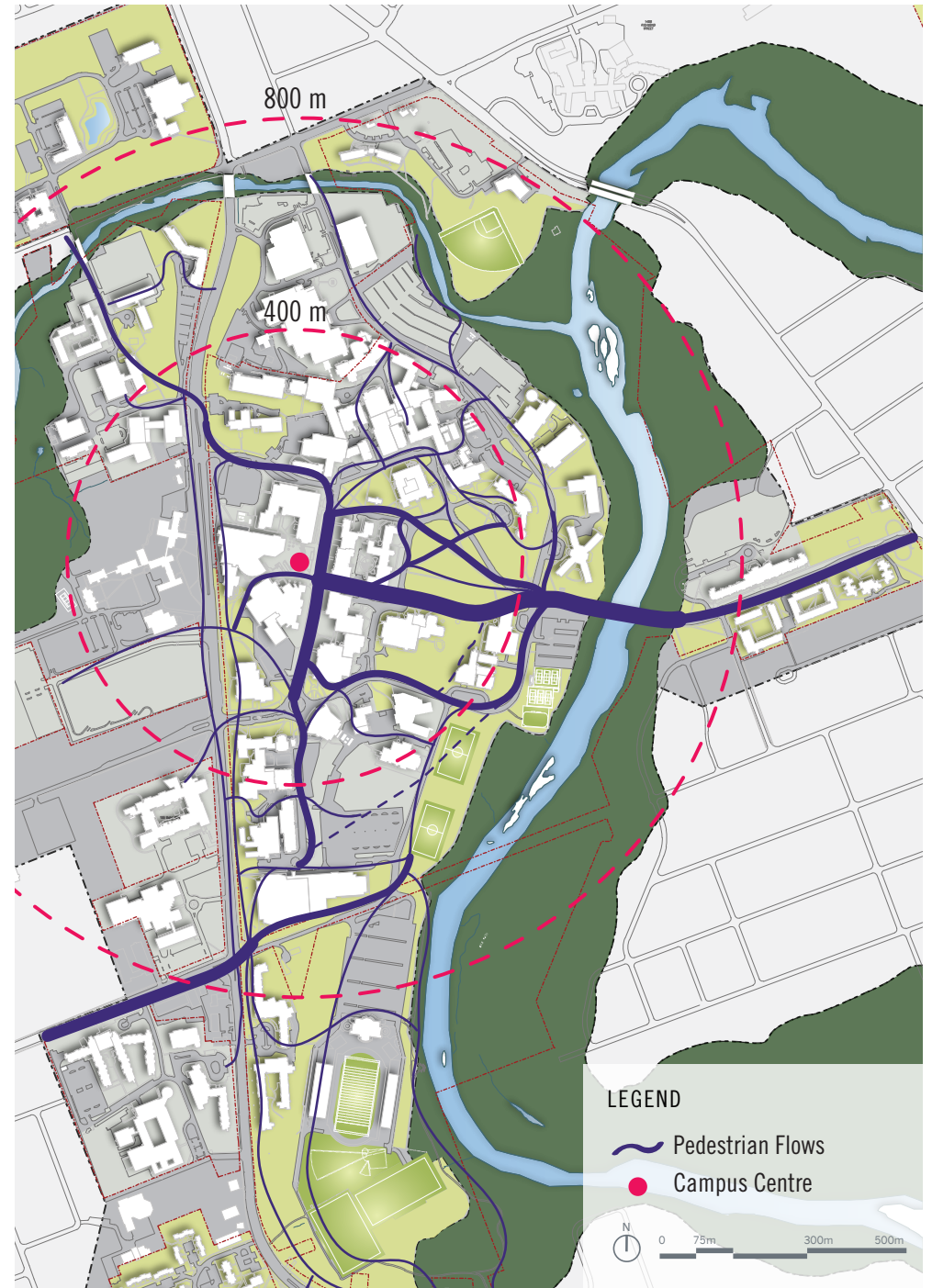
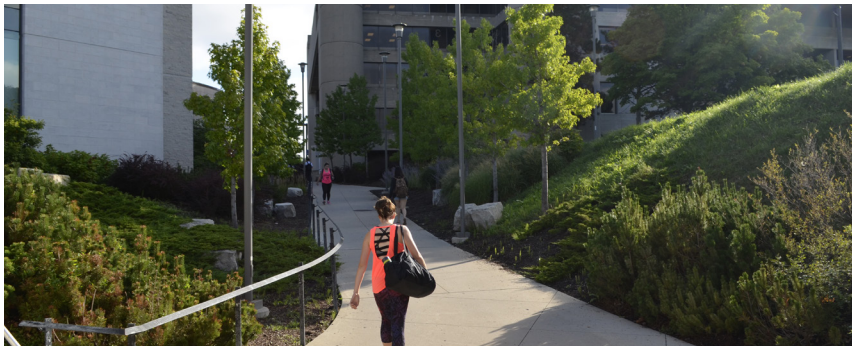
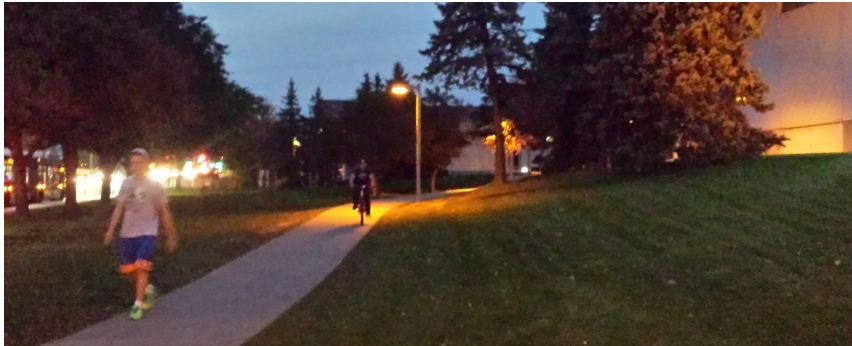
OPEN SPACE NETWORK

Pedestrian Spaces - Courtyards



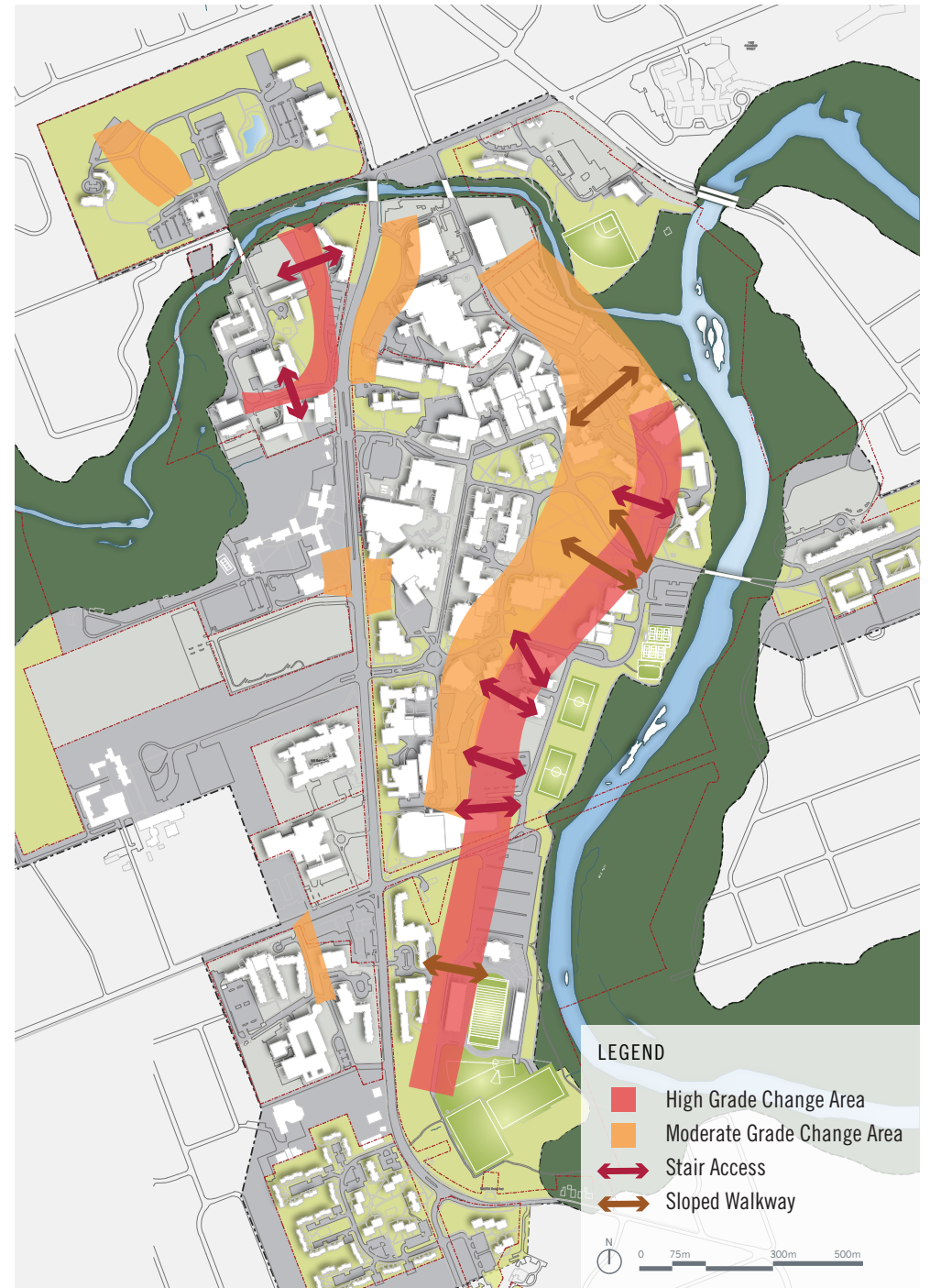
OPEN SPACE NETWORK

Pedestrian Corridors - Entrances



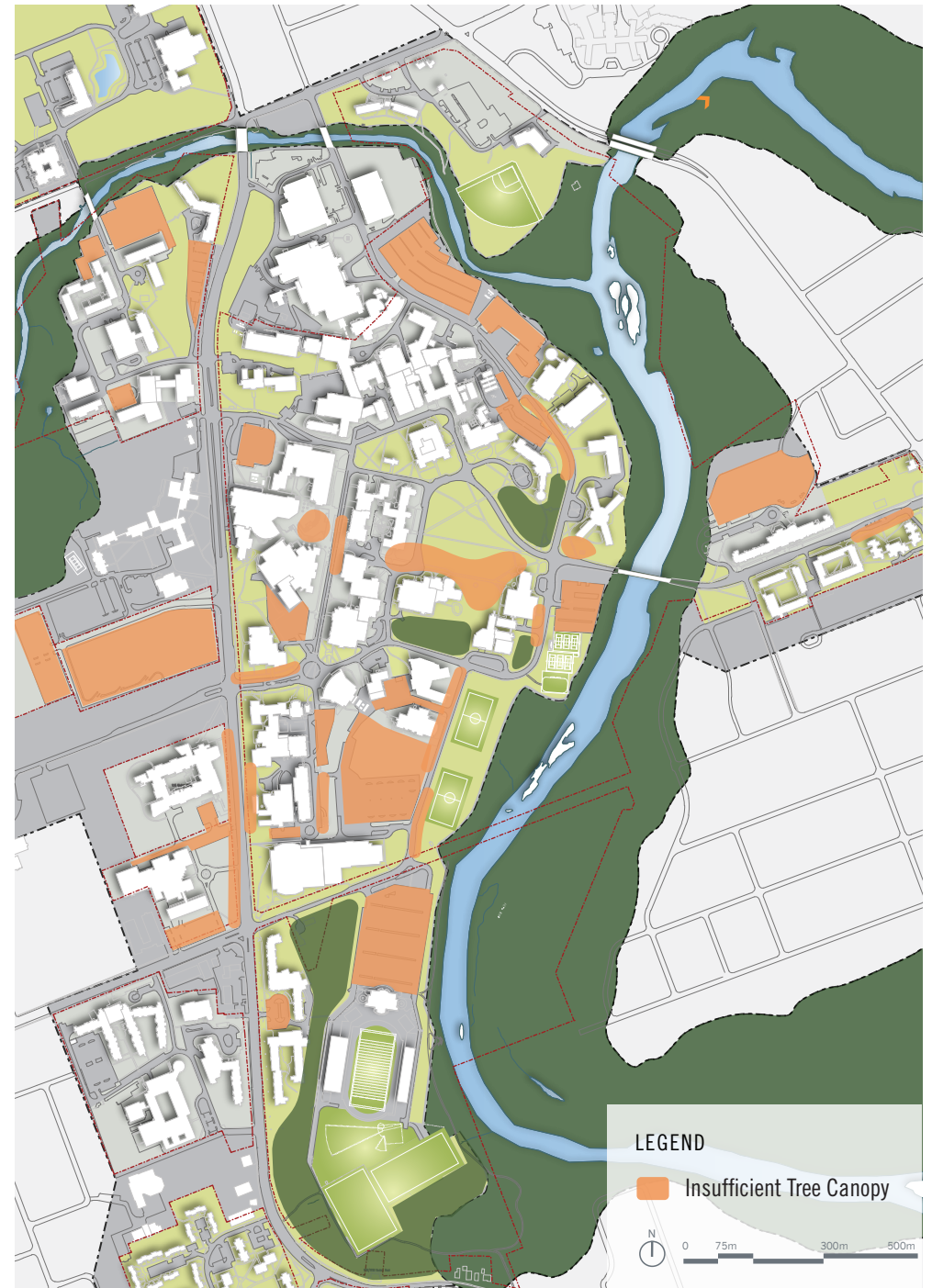
OPEN SPACE NETWORK

Pedestrian Corridors - Topography

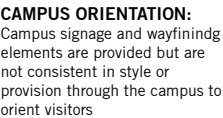
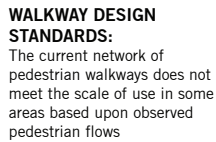
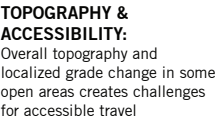
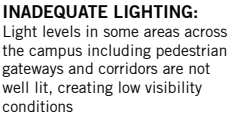


OPEN SPACE NETWORK

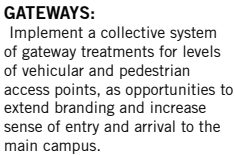
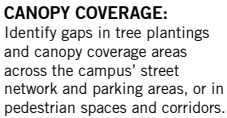
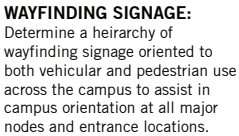
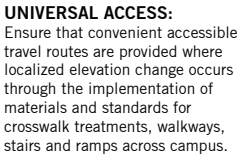
Tree Canopy



ISSUES



OPPORTUNITIES



OPEN SPACE NETWORK

Issues



ACCESSIBILITY



**LIGHTING +
VISIBILITY**



**WALKWAY
STANDARDS**



**UNDERUTILIZED
SPACES**



**CAMPUS
ORIENTATION**

OPEN SPACE NETWORK

Opportunities



**UNIVERSAL
ACCESS**



TREE CANOPY



**ENHANCED OPEN
SPACES**



**CAMPUS
GATEWAYS**



**WAYFINDING +
SIGNAGE**

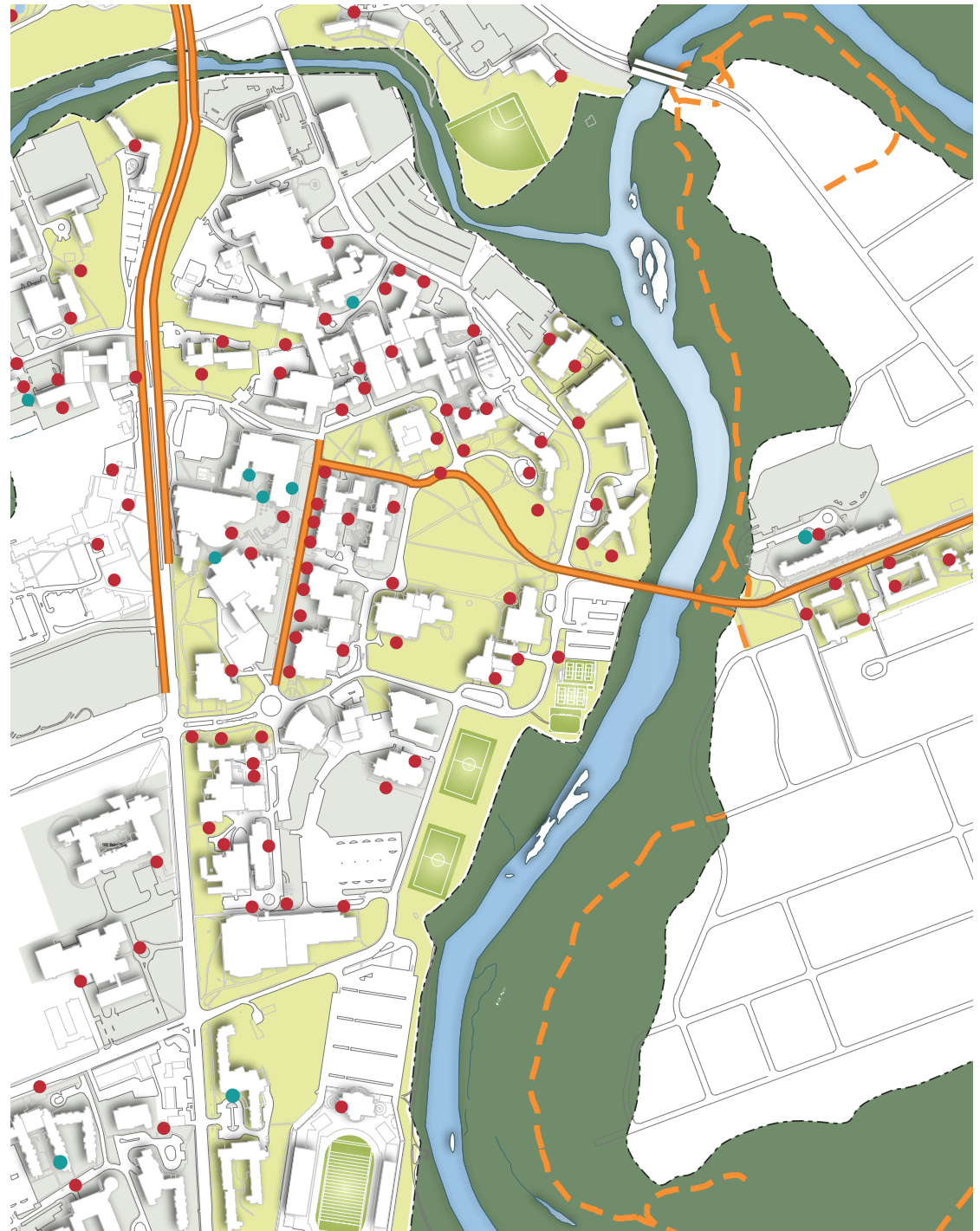
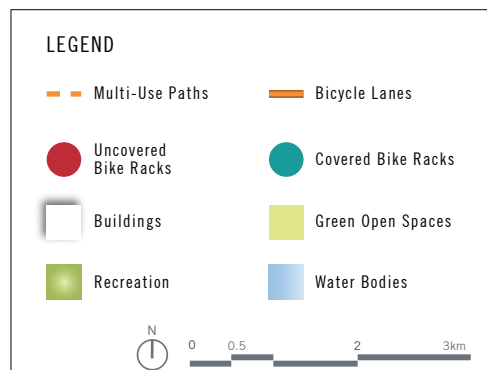
ACCESS + CIRCULATION

Dominant Vehicular Travel Flows



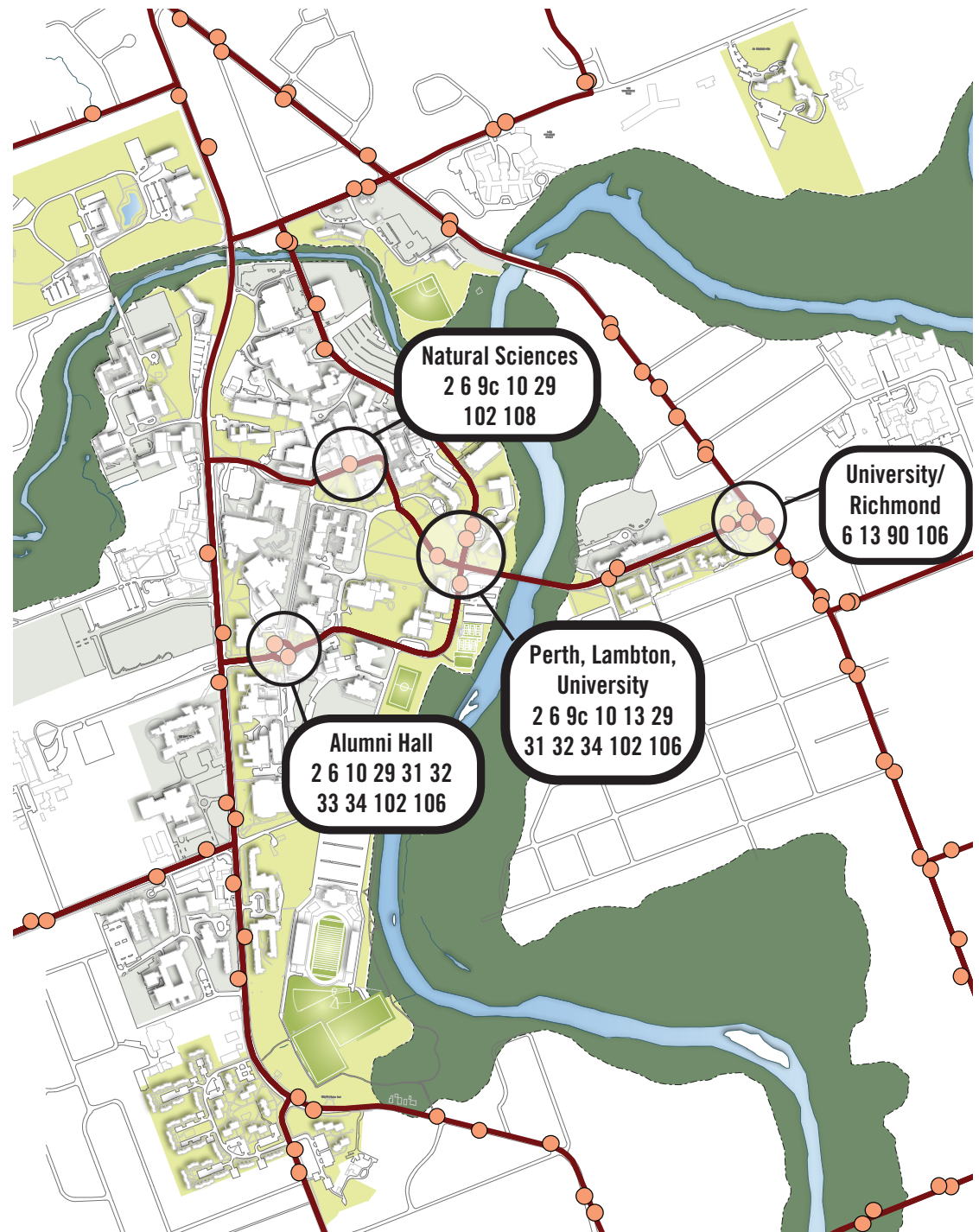
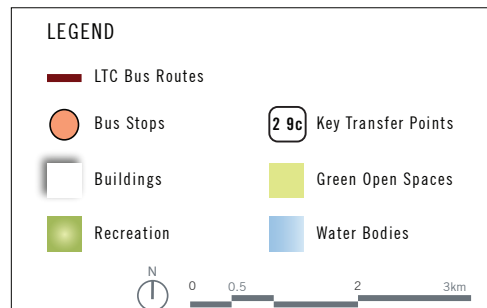
ACCESS + CIRCULATION

Bicycle Network and Parking



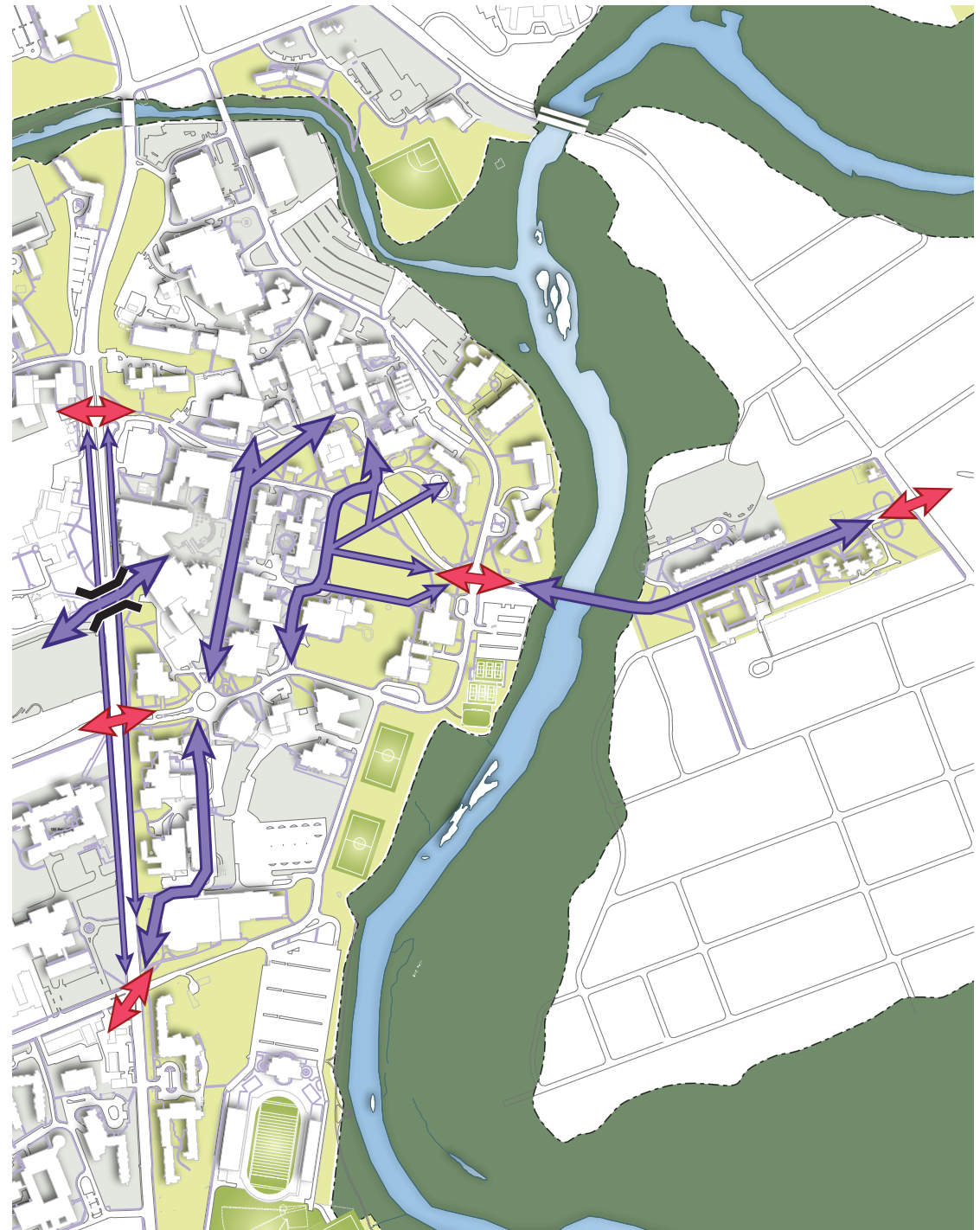
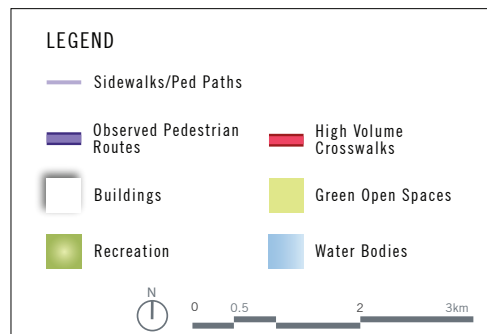
ACCESS + CIRCULATION

Transit Routes and Facilities



ACCESS + CIRCULATION

Pedestrian Facilities and Flows



ISSUES

INCOMPLETE CROSSOVERS:

Several crossings lack crossovers across all legs of intersections. Medians should provide protected pedestrian refuge but stop short of pedestrian crossovers.

CHAOTIC VEHICLE/PEDESTRIAN MOVEMENTS:

Elgin Road is an indistinct space and challenged gateway to the University. Vehicle movements should be rationalized and the character of the street strengthened. Intersection of Elgin Road and Middlesex Drive is a highly conflicted space with inefficient movements for all users.

EXCESSIVE PAVEMENT:

Oxford Drive has excessive amounts of unnecessary pavement. The existing curbing separating the bicycle facility from roadway presents a tripping hazard and unnecessary barrier.

MODAL CONFLICTS:

Alumni Circle has a number of conflicting demands including pedestrians, transit, vehicles, visitors, and loading vehicles. The area also has excessive amounts of pavement and does not optimize the opportunity of creating a distinctive space.

INADEQUATE SIDEWALK WIDTH:

There is a heavy flow of pedestrians traveling along this axis of campus. Sidewalk widths are often too narrow to accommodate pedestrian demand forcing pedestrians into the travel lane and subordinating them to vehicle traffic flows.

CUT-THROUGH TRAFFIC AND SPEEDING CONCERNS:

The Western University transportation study identified a high volume of traffic traveling through the campus with neither origin nor destination within the campus itself. Vehicle speeds, particularly in areas with poor visibility, were also identified as concerns.



OPPORTUNITIES

LOW-COST PEDESTRIAN IMPROVEMENTS:

Consider bell bollards and other treatments to provide temporary, low cost pedestrian improvements. Evaluate opportunity to provide additional crosswalks at existing intersections.

RATIONALIZE MOVEMENTS WITH LOW-COST RECONFIGURATION:

Rationalize vehicle movements through Elgin/Middlesex intersection through paint treatments and planters or other channelization devices.

CREATE SHARED STREET (WOONERF):

Grind out the cycle track curb on Oxford Drive. Consider unique paint scheme to create a dynamic environment in the street. Treat the street as a shared use street.

RELOCATE TRAFFIC TO THE PERIPHERY:

Relocate transit and the majority of vehicle traffic to the periphery of the main campus – predominantly utilizing Philip Aziz, Huron, Lambton and Perth. Remove or restrict vehicle flow through the center of campus, including Alumni Circle. Consider premium transit services providing east-west access from University Drive to Elgin.

SHARED USE SPACE:

Utilize temporary barriers such as planter boxes to expand pedestrian walking space. Alternatively, design parking drive aisle as shared use space and ensure very low speeds. Restrict loading vehicles to evening hours.

RELOCATE PARKING ACCESS - PURSUE TDM PROGRAM:

Relocate parking facilities and access to the periphery ring. Consider development of an aggressive transportation demand management program.



ACCESS + CIRCULATION

Issues



**INCOMPLETE
CROSSOVERS**



MODAL CONFLICTS



**CHAOTIC
MOVEMENTS**



**NARROW
SIDEWALKS**



**EXCESSIVE
PAVEMENT**



**CUT-THROUGH
TRAFFIC**

ACCESS + CIRCULATION

Opportunities



**LOW-COST PED.
IMPROVEMENTS**



**TRAFFIC TO
PERIPHERY**



**RATIONALIZE
MOVEMENTS**



**SHARED USE
SPACES**



SHARED STREETS



**RELOCATE
PARKING / TDM**

A purple-tinted photograph of a group of students walking away on a path through a wooded area. The students are seen from behind, walking along a dirt path that leads into a dense forest of tall trees. The scene is captured in a monochromatic purple hue. Overlaid on the center of the image is the title 'OPEN SPACE AND LANDSCAPE PRINCIPLES' in a bold, white, sans-serif font.

OPEN SPACE AND LANDSCAPE PRINCIPLES

PROPOSED OPEN SPACE AND LANDSCAPE PRINCIPLES

1. Human Place
2. Access to University
3. Equity
4. Mobility
5. Resilience
6. Pedagogy



HUMAN PLACE

- Prioritizes pedestrians and encourages accessibility throughout the campus
- Encourages safety and comfort
- Creates a sense of place and history
- High quality, flexible spaces



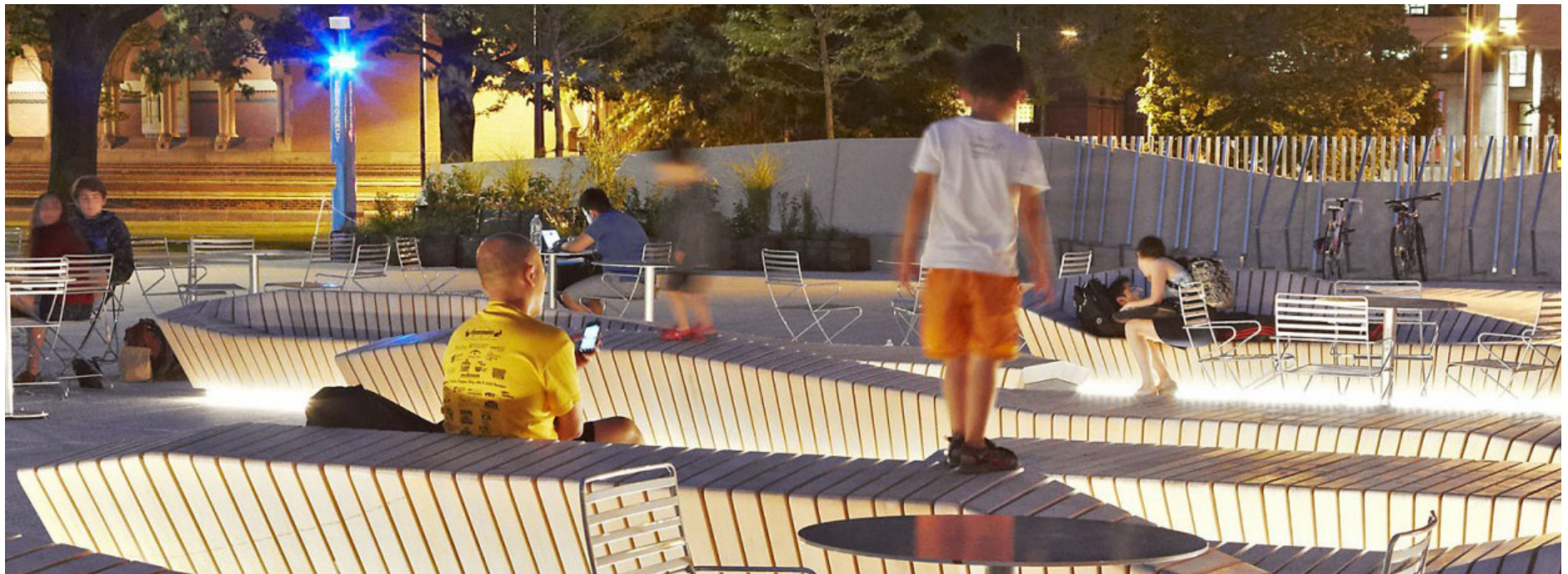
ACCESS TO UNIVERSITY

- Provide strong bus connectivity to the campus
- Integrate the campus with its surrounding context
- Foster collaboration with community and industry partners



EQUITY

- Equal access regardless of gender, age, background, or ability
- Recognize that people travel differently for different reasons
- City of London Facilities Accessibility Design Standards (FADS) & University of Western Accessibility Guidelines



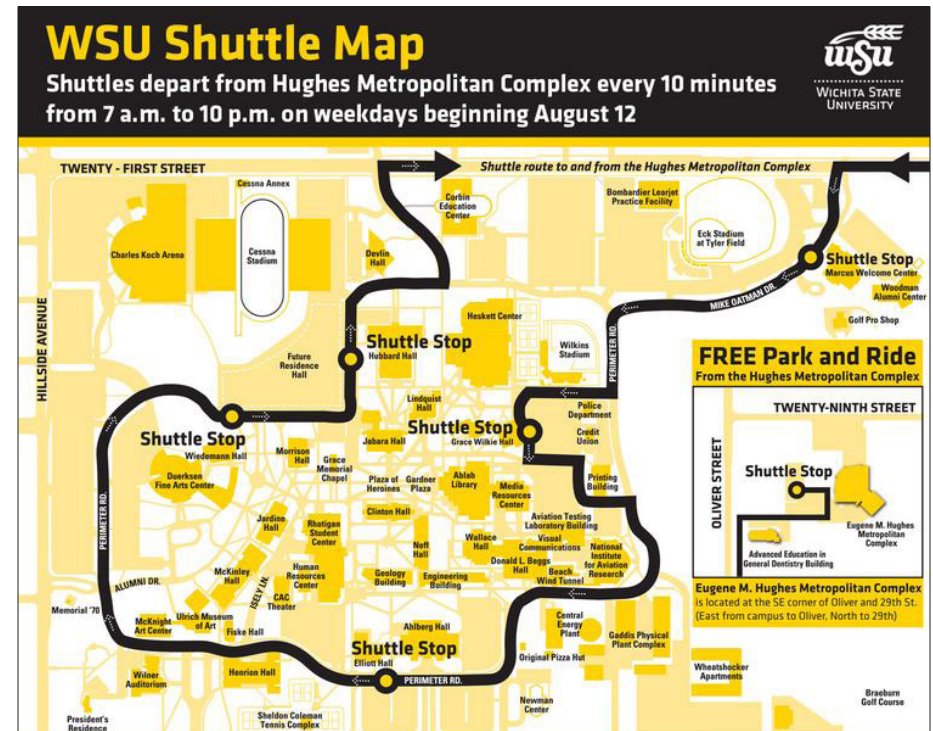
RESILIENCE

- Supports health and wellness of the university community
- Provides efficient and cost effective Operations and Maintenance
- Creates a sustainable environment (economically, socially, physically)
- Ability to recover from events related to climate change



MOBILITY

- Maximize connectivity and accessibility
- Create a safe pedestrian environment across campus
- Reduce cut through traffic
- Improve multimodal connections and expanded choices



PEDAGOGY

- Create campus spaces that support the academic mission
- Educate students through environmental design
- Consider outdoor spaces as part of the continuum of learning
- Provide positive environments that foster creativity and organic learning



A group of people are gathered around a large table in a meeting room, looking at a large map or blueprint. The map shows a street grid with various lines and arrows, possibly indicating a transit route. The people are dressed in business casual attire. The image has a purple tint. The text "BRT OPTIONS" is overlaid in white, bold, sans-serif font on the right side of the image.

BRT OPTIONS

TECHNICAL ASSESSMENT CRITERIA

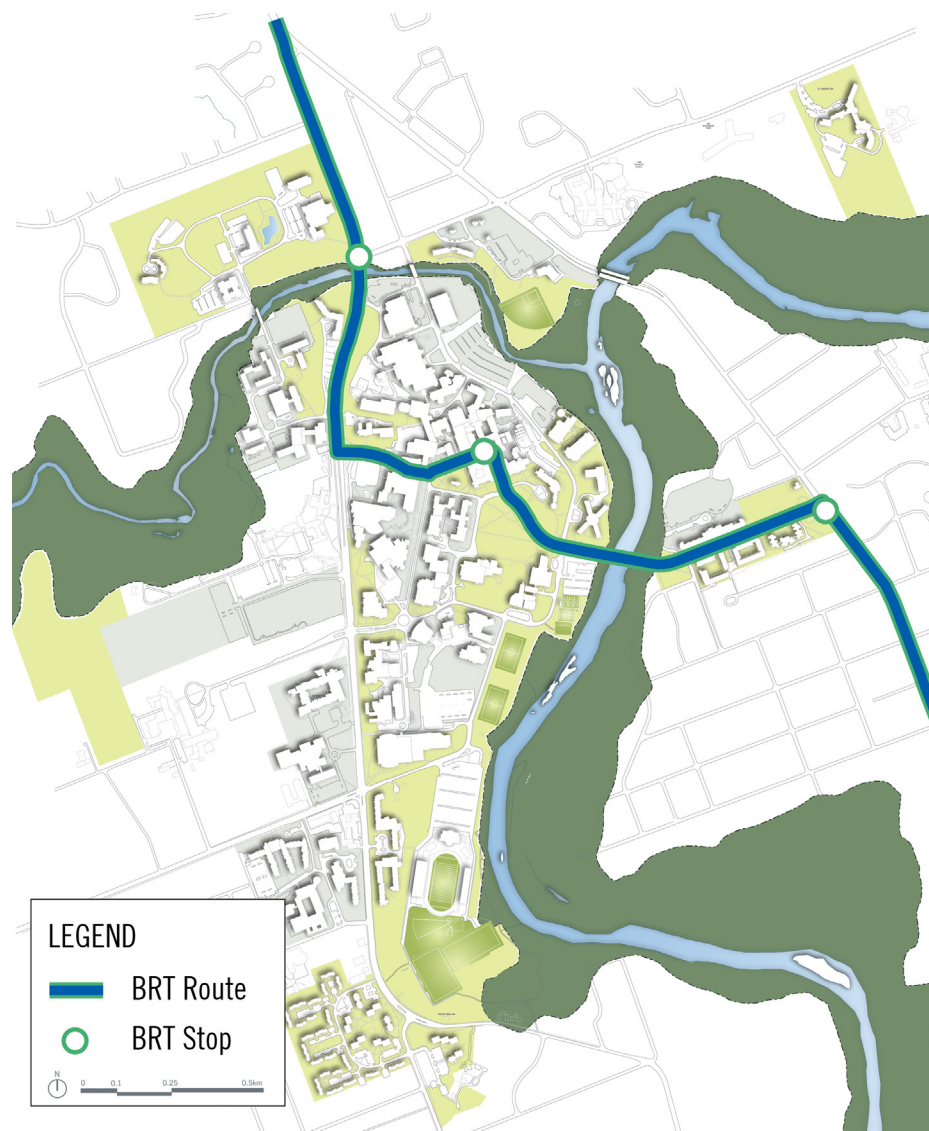
- **Stations:** The number and location of proposed rapid transit stations servicing the campus.
- **Route Length:** The length of the route from Richmond Street at Huron Street to Western Road at Windermere Road.
- **Travel Time:** The approximate transit travel time along the route (assuming a top operating speed of 35 km/hour on campus streets).
- **Ridership:** The sum of transit boardings at *existing* stops within 400 m of the proposed BRT stations.
- **Access:** The estimated walk time from the McIntosh Gallery (the geographic centre of campus utilized by the City of London) to the closest rapid transit station.



EVALUATION METRICS

Plan Principle/Objective	Qualitative Evaluation Measure(s)
Attract top talent: strengthen the ability of the University to compete in attracting leading faculty and top scholarship students from across Canada and the globe.	<ul style="list-style-type: none"> ▪ Efficiency of connection to the Downtown and other key regional destinations. ▪ Legibility of route and access to destinations.
Lead in Learning: Support leading research and teaching	<ul style="list-style-type: none"> ▪ Potential impacts on sensitive research and other activities
Promote sustainability: Reduce environmental impacts with regard to transportation-related emissions and stormwater from surface runoff.	<ul style="list-style-type: none"> ▪ Ability to support a mode shift among the university community to reduce vehicle kilometers traveled (VKT). ▪ Potential to enable reduction in impervious surface area dedicated to vehicle demand such as travel way widths and surface parking
Promote a pedestrian-oriented campus: Support and enable the reduction or elimination of private vehicle traffic in the core of the campus	<ul style="list-style-type: none"> ▪ Potential to negatively impact pedestrian safety ▪ Potential to provide a non-auto alternative to access campus destinations
Enable sustainable growth: Support planned campus growth by providing access, especially by non-auto means	<ul style="list-style-type: none"> ▪ Potential to reduce vehicle trip generation rates at planned campus expansion sites ▪ Potential to reduce parking demand
Campus connectivity: Strengthen the connection and accessibility between campus precincts.	<ul style="list-style-type: none"> ▪ Viability to use the proposed alignment to meet intra-campus connection demands
Quality of place: Facility design compliments visual character of the campus and campus landscape	<ul style="list-style-type: none"> ▪ Potential to negatively impact or degrade elements that contribute to campus identity and pride ▪ Potential to lead to improvement of Western Road

1. MIDDLESEX DRIVE ALTERNATIVE



POTENTIAL BENEFITS

- High level of service to major campus trip generators
- Convenient stop location to service students, faculty and staff
- Maintains existing transit hub location
- Partially serves planned campus expansion areas
- Relatively short segment of Western Road impacted.
- If autos are prohibited in core campus area, provides best connectivity and service to highest density of uses.
- If autos are prohibited in core campus area, proposed route and stop location have strong potential for place-making as unique, high quality and identifiable transit plaza and corridor.

POTENTIAL IMPACTS

- Proximity to sensitive research and arts facilities could impact these activities, although with substantially less impact than LRT
- Stop location could further exacerbate already significant modal conflicts (bicycle, pedestrian, transit and vehicle) at Oxford/Middlesex/Elgin intersection.
- Initial concepts from the city may require reconstruction or potential widening of University Drive bridge, reconstruction of Richmond Street gates and potential widening of other campus streets. Mitigations are available that could eliminate the need for major widening and avoid impact to the gate.
- Requires operational changes to provide two way transit service on Middlesex Drive and Elgin Road.
- Could result in conflicts between transit and bicycle facility on Middlesex Drive.
- Potential widening of Western Road.

2. LAMBTON ALTERNATIVE



POTENTIAL BENEFITS

- Good service to major campus trip generators
- Generally removed from sensitive research activities
- Convenient stop location to service students, faculty and staff
- Maintains existing transit hub location
- Good connectivity to planned campus expansion areas
- If autos are prohibited in core campus area, provides good connectivity and service to highest density of uses.
- Has strong potential to maintain excellent access if autos are prohibited in core campus area.
- Strong potential to support/enable removal of autos from core campus and thus greatly reduce pedestrian/vehicle conflict/risk
- Corridor and Alumni Circle have strong potential as unique and high quality transit plaza space; could remove substantial impervious surface around the Circle.

POTENTIAL IMPACTS

- Longer segment of Western Road is impacted
- Conflicts would remain between pedestrians, bicycles and transit – particularly at Alumni Circle
- May require reconstruction/potential widening of University Drive bridge and potential widening of other campus streets (if vehicles are not prohibited).
- Stop location is further from campus core.
- Slightly longer transit travel time.

3. RICHMOND/WINDERMERE ALTERNATIVE



POTENTIAL BENEFITS

- Little to no impact on university street or campus
- Fast travel time to the Downtown
- No change required in University Drive bridge
- Little impact on Western Road
- Generally removed from sensitive research activities
- Few additional conflicts between pedestrians and vehicles

POTENTIAL IMPACTS

- Stop locations are generally inconvenient for students, faculty and staff
- Does not well serve planned campus expansion areas
- Does not serve areas with highest density of uses.
- Does little to support removal of cars from core campus or replace lost connectivity if cars are prohibited from campus
- Stop locations are less obvious and intuitive.
- Lower projected transit ridership

4. PERTH DRIVE ALTERNATIVE



POTENTIAL BENEFITS

- Limited impact on streets within the main campus
- Fast travel time to the Downtown
- Little to no impact on Western Road
- Generally removed from sensitive research activities
- Few additional conflicts between pedestrians and vehicles

POTENTIAL IMPACTS

- Stop locations are generally inconvenient for students, faculty and non-hospital affiliated staff
- Numerous curb cuts on corridor could make station siting difficult
- Does not well serve planned campus expansion areas
- Potential for a high level of pedestrian conflict at the intersection of University, Perth, and Middlesex Drives.
- Does little to support removal of cars from core campus or replace lost connectivity if cars are prohibited from campus. Could harm concepts to restrict auto access only to periphery streets if BRT operations constrain the street.
- Stop locations are less obvious and intuitive.

5. PHILIP AZIZ ALTERNATIVE



POTENTIAL BENEFITS

- Excellent connectivity to student housing
- Good connectivity to athletic facilities
- Good potential access to planned university expansion areas
- Generally removed from sensitive research activities

POTENTIAL IMPACTS

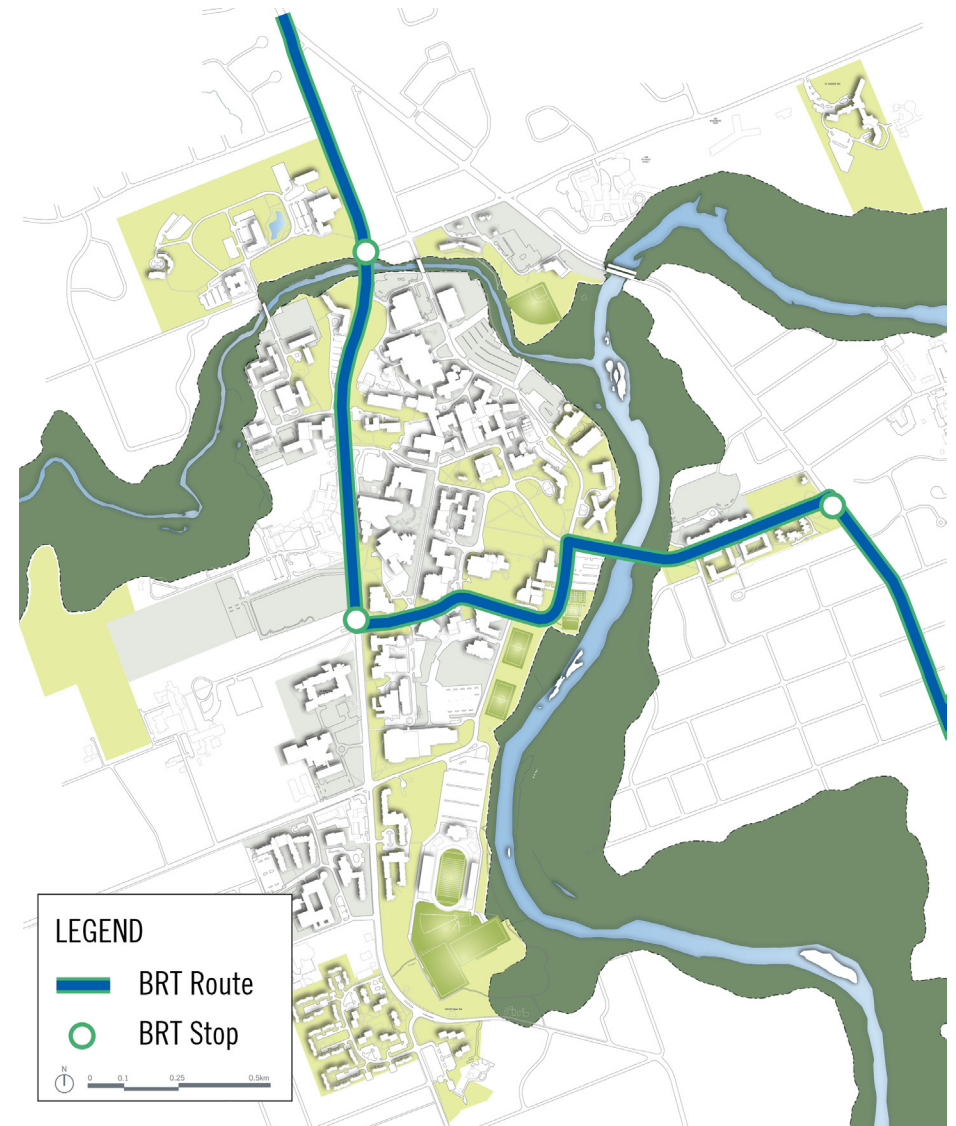
- Stop locations are less convenient to academic centre
- Could exacerbate pedestrian movement and safety at intersection of Philip Aziz and Western University traffic.
- Does little to support removal of cars from core campus or replace lost connectivity if cars are prohibited from campus. Could harm concepts to restrict auto access only to periphery streets if BRT operations constrain the street.
- Long travel time to the Downtown.

SUMMARY EVALUATION

University Objectives Metrics	Middlesex	Lambton	Richmond/ Windermere	Perth	Philip Aziz
Efficient connection to Downtown	Good	Good	Moderate	Poor	Poor
Legibility of route	Excellent	Excellent	Poor	Poor	Moderate
Impact on research and other labs	Poor	Moderate	Good	Moderate	Good
Potential for mode shift (reduced parking demand)	Good	Good	Poor	Poor	Moderate
Potential to reduce impervious surface	Moderate	Good	Poor	Poor	Poor
Impact on pedestrian safety	Poor	Moderate	Good	Good	Moderate
Access to campus destinations	Excellent	Good	Poor	Moderate	Moderate
Reduced trip generation for new development	Poor	Good	Poor	Poor	Moderate
Intra-campus connectivity potential	Good	Good	Poor	Poor	Poor
Potential visual impact	Poor	Poor	Good	Poor	Poor
Impact on Western Road	Moderate	Poor	Excellent	Excellent	Poor

PREFERRED ALTERNATIVE

- Best access to existing and future destinations
- Minimizes impacts to sensitive activities
- Does not preclude largely vehicle-free core campus
- Maintains access to core of campus
- Provides opportunity for signature street on campus
- Encourages pedestrian improvements on Western Road



UNIVERSITY CONDITIONS TO THE CITY OF LONDON

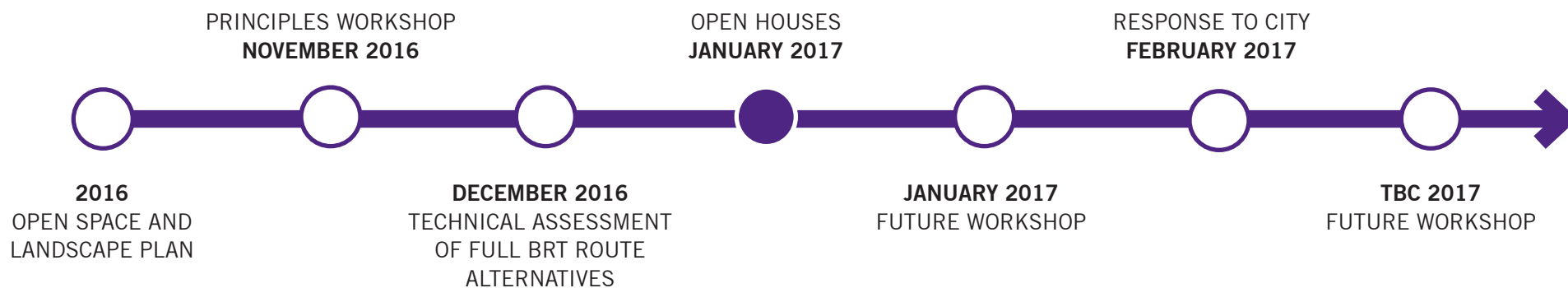
- **Transit vehicle traffic reduction.** LTC routes will no longer run through campus once BRT is operational.
- **Transit hubs and terminals.** All LTC routes will access a transit terminal or hub located at a location to be determined off Western Road in the vicinity of the RT route.
- **Elimination of cut-through traffic.** Western will minimize all non-university vehicle and cut-through traffic.
- **Limited access bridge.** The Thames River Bridge will be a limited access bridge with two vehicle lanes and active transportation lanes with vehicle gate controlled access limited to BRT, emergency and Western-designated vehicles.
- **Slow speeds and low volumes.** Speed of buses will be limited to 35km per hour on campus and assumption of 6-8 buses per hour per direction.
- **Relocation of parking.** Western will be moving all interior parking to outer areas and potentially building parking structure on campus accessing Huron-Aziz, Perth Drive and Western Road. Roads on campus will be restricted to designated university vehicles only.
- **Three campus BRT stops.** Rapid Transit will have 3 stops on campus including Richmond Gates, Talbot College Vicinity, and Lambton-Western Road (exact locations to be determined). BRT will also have stops on Western Road.
- ***BRT proposal is currently under consultation and final decision will be made by the Board of Governors.***

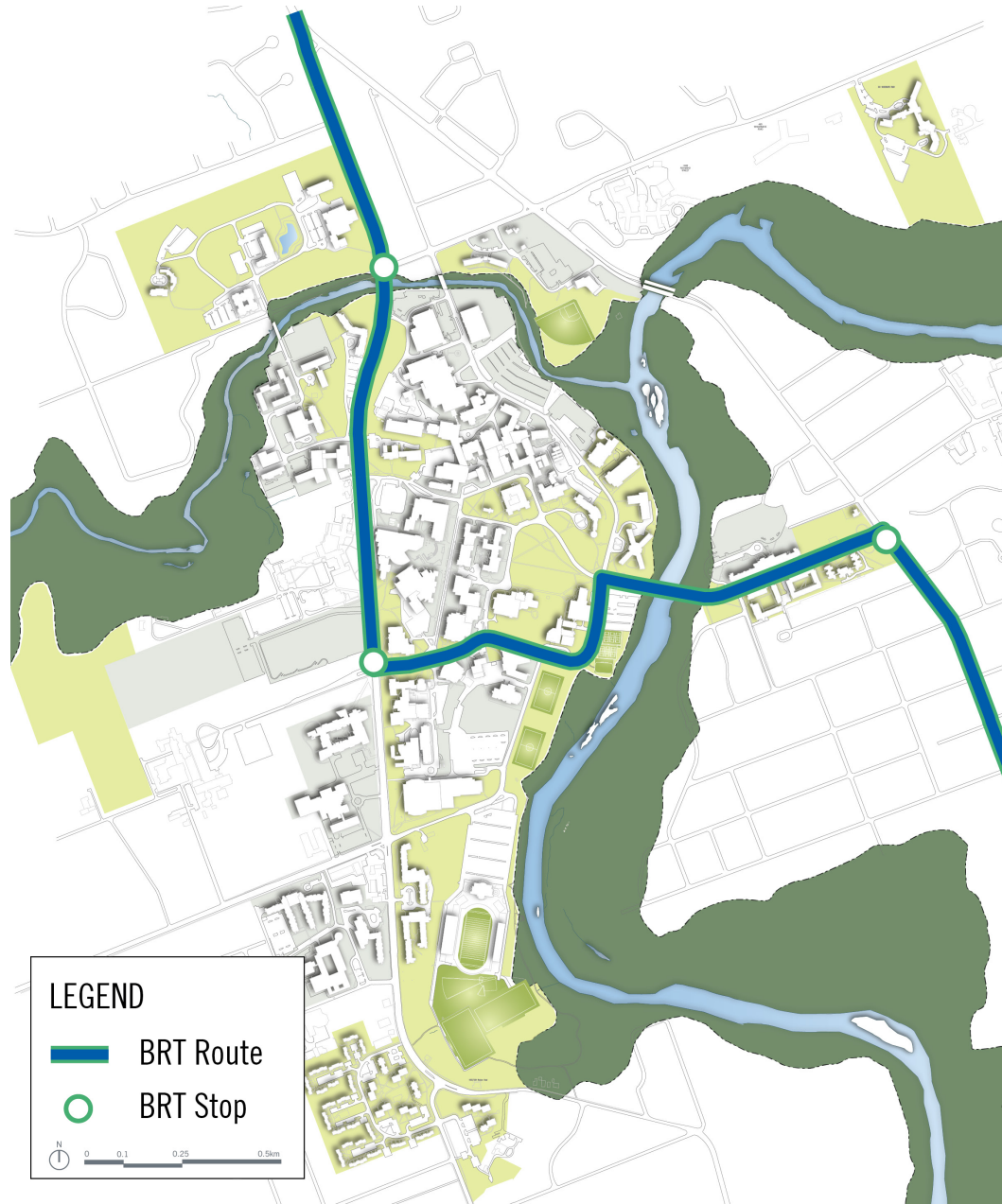
UNIVERSITY CONDITIONS TO THE CITY OF LONDON

- **No cost to university.** Costs for the construction of the BRT system on campus will be undertaken by the City of London.
- **Construction and maintenance agreement.** Agreement for the bridge reconstruction and infrastructure maintenance will need to be put in place.
- **BRT only.** City will sign agreement with Western as per our Board of Governors motion that the system will be BRT only and Western will not allow Light Rail Transit to access the campus.
- **Coordinated implementation.** The City and Western will work together on the timing of any major traffic access changes. Western also asks that the Sarnia-Western-Aziz EA be undertaken as soon as possible to design access elements as part of the lead up to the RT implementation

NEXT STEPS

WE ARE HERE





A purple-tinted photograph of a modern building with a glass facade and a group of people walking on a path in the foreground. The text "QUESTIONS + ANSWERS" is overlaid in white, bold, sans-serif font.

QUESTIONS + ANSWERS



- THANK YOU -