

TRANSPORT

theme overview

planning & design decisions

goal

ensure multiple transportation choices are available
ensure effectiveness of multi-modal transportation system

detailed design tasks

fostering sustainable living

Development planning that separates land uses and supports diffused growth settlement patterns encourages use of the automobile. This results in air emissions, unhealthy lifestyles, and reduced economic and transit viability. Sustainable urban neighbourhoods support a transport network that enables multiple mobility choices including walking, cycling, transit, and automobiles.

theme overview

why is this theme important?

Continuous automobile use creates pollution, promotes obesity, deteriorates the safety and quality of streetscapes, and fragments the community. Land use characteristics can significantly influence the travel patterns of a community and can moderate the use of automobiles. Neighbourhoods with medium- to high-densities, mixed land uses, interconnected street networks, a strong local employment base, and viable connections to transit can minimize automobile use and encourage walking, bicycling, and using public transit. Communities that are designed to encourage these alternative forms of transportation can significantly reduce average household greenhouse gas emissions and can dramatically improve physical activity and public health levels. A large body of research has shown that by locating activities close together, automobile dependence is reduced and alternative forms of transportation are encouraged. One study, for example, found that doubling urban density in North American cities can result in a 25% to 30% reduction in vehicle kilometres travelled (VKT)¹.

Likewise, studies have also shown that if retail shops are within 90m (300 feet) from residential units, people are more likely to commute by transit, foot or bicycle.²

why is transport important to emerald hills urban village?

Strathcona County will strive to accommodate the movement of people and commodities in a safe, economical, efficient and environmentally responsible manner. As growth in the County continues, pressure on the transportation system will continue to increase. Strathcona County will continue to ensure all transportation uses such as trails, public transportation, rail, air and pedestrian walkways that are interconnected.

Improving the trail system in both the Sherwood Park Urban and Rural Service Areas will continue to provide more pedestrian friendly routes throughout the County and provide more opportunities for residents to interact.

how can emerald hills urban village impact on this theme?

Emerald Hills Urban Village has a unique opportunity to create an interconnected and fine grained multi-modal community, which is walkable, safe, and vibrant. Such a community gives residents the option of not requiring a vehicle to access basic goods and services or employment opportunities. This can promote better health, economic savings, and a safer, more tightly-knit community.

summary table of goals and strategies for transport

goal	charrette process strategy
Ensure multiple transportation choices are available	Provide safe and vibrant designated walking and cycling corridors. Minimize car access through the Village.
Ensure effectiveness of multi-modal transportation system	Reduce the distance of residences and employment locations to a range of non-automobile transportation choices. Incorporate a density and mix sufficient to ensure viability of public transit. Create an interconnected network of streets and corridors.

1. Holtzclaw, Dr. John. Using Residential Patterns and Transit to Decrease Auto Dependence and Costs. Natural Resources Defence Council. June 1994.

2. Cervano, Robert. Mixed Land Uses and Commuting. Transportation Research A 30(5): 361-77. 1996.

planning & design decisions

general intent of this strategy / Designing a neighbourhood and its streets and buildings to prioritize walking and bicycling creates affordable, efficient transportation options for everyone. Carefully designed mobility corridors of greenways, narrow roads and laneways, and smaller paths provide an interconnected network for pedestrians and cyclists that is accessible, safe, and convenient.



Safe and vibrant designated corridors for walking and cycling provide transportation choice.

goal / ensure multiple transportation choices are available.

strategy one / provide safe and vibrant designated walking and cycling corridors.

area i: institutional, residential, commercial

- An internal pedestrian-oriented street links from Emerald Dr. into the Village, connecting with the North-South landscaped walkway to the south of this parcel.
- Sidewalks are located on both sides of the internal street.
- Angled parking along the internal street ensures that vehicular traffic is slowed down.
- A green corridor at the south edge of this parcel links pedestrians and cyclists from Eton Blvd. to the central North-South corridor.

area ii: residential, commercial

- A green corridor at the north edge of this parcel links pedestrians and cyclists from Eton Blvd. to the central North-South corridor.
- A service and emergency access street at the south of this parcel has sidewalks on both sides.

area iii: residential, commercial

- A service and emergency access street at the north of this parcel has sidewalks on both sides.
- A natural landscape corridor to the south of the parcel allows for pedestrian and cyclist mobility and links from Eton Blvd. to the North-South landscaped walkway and central open space.

municipal reserve & public utility lot

- The Municipal Reserve provides landscaped corridors for pedestrians and cyclists, and connects the North-South landscaped corridor with the East-West natural corridor and the pedestrian-oriented streets on the Public Utility Lots.

area iv: residential

- A natural landscape corridor to the north of the parcel allows for pedestrian and cyclist mobility and links from Eton Blvd. to the North-South landscaped walkway and central open space.
- Building edges along Eton Blvd. and Aspen Dr. are pedestrian-friendly with windows oriented toward the streets.

- Mid-parcel pedestrian connections between buildings increase route options and are small scale with a residential feel.

area v: residential

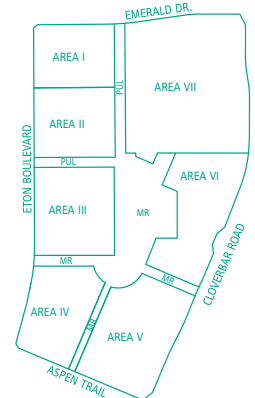
- A natural landscape corridor to the north of the parcel allows for pedestrian and cyclist mobility and links from Clover Bar Rd. to the North-South landscaped walkway and central open space.
- Building edges along Clover Bar Rd. and Aspen Dr. are pedestrian-friendly with windows oriented toward the streets.
- Mid-parcel pedestrian connections between buildings increase route options and are small scale with a residential feel.

area vi: residential, commercial

- A service and emergency access street at the north of this parcel has sidewalks on both sides.
- The naturalized landscape corridor to the south of the parcel allows for pedestrian and cyclist mobility and links from Clover Bar Rd. to the North-South landscaped walkway and central open space.
- Mid-parcel pedestrian connections between buildings increase route options.
- Building edges along Clover Bar Rd. are pedestrian-friendly with windows oriented toward the streets landscaped with canopy trees.

area vii: commercial, residential

- An internal pedestrian-oriented street links from Emerald Dr. into the Village, connecting with the North-South landscaped walkway to the south of this parcel.
- Sidewalks are located on both sides of the internal street.
- Angled parking along the internal street ensures that vehicular traffic is slowed down.
- A service and emergency access street at the south of this parcel has sidewalks on both sides.
- Pedestrian and cyclist access through the parking field is humanized through trees and landscape elements.



planning & design decisions

general intent of this strategy / Limiting car access through the Village helps to emphasize the walking and cycling focus of the neighbourhood. Providing vehicle access from block perimeter to the parcels, but not between parcels, ensures efficient access of residential and commercial units without lessening pedestrian comfort. On-street parking with lane access for garages and commercial parking allows building frontages to address the street, ensuring sidewalks are not fragmented by parking lots and driveways and further humanizing the corridors.



Internal laneways provide access to garages.



Vehicular access is provided off Clover Bar Rd. and Emerald Dr. into commercial units.



Grey roadway surfaces illustrate car access into, but not through, the Village.

goal / ensure multiple transportation choices are available.

strategy two / minimize car access through the village.

area i: institutional, residential, commercial

- Vehicle access is provided from Eton Blvd. and off Emerald Dr. into the parcel, but not through the parcel.
- The pedestrian-oriented street at the east edge of the parcel has angled parking, with the bulk of the parking provided underground.

area ii: residential, commercial

- Vehicle access is provided from Eton Blvd. and Emerald Dr. into, but not through, the parcel.
- The pedestrian-oriented street at the east edge, Eton Blvd. along the west edge, and the service/emergency route at the south edge have angled surface parking, with the bulk of the parking provided underground.

area iii: residential, commercial

- Vehicle access is provided from Eton Blvd. into the parcel, but not through the parcel.
- Eton Blvd. along the west edge and the service/emergency route at the north edge have angled surface parking, with the bulk of the parking provided underground.

municipal reserve & public utility lot

- A pedestrian-oriented street along the North-South Public Utility Lot between Areas I, II, VII allows vehicles to come into the site off Emerald Dr., but not through the site.
- The Public Utility Lots at the middle of the Village between Areas II and III and VI and VII allow for service / emergency vehicular access.
- No vehicular access is provided along or through the Municipal Reserve.

area iv: residential

- An internal laneway with access off Eton Blvd. provides vehicular entry into the parcel, but not through the parcel.
- Some surface parking is provided, with the bulk of parking provided through garages at grade.

area v: residential

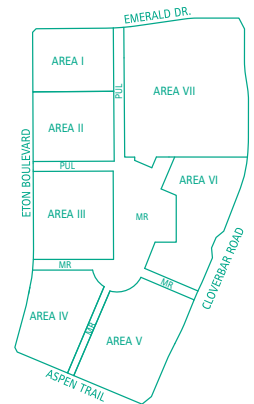
- An internal laneway network with access off Aspen Dr. provides vehicular entry into and around the parcel, but not through the parcel.
- Some surface parking is provided, with the bulk of parking provided through garages at grade.

area vi: residential, commercial

- Vehicular access is provided from Clover Bar Rd. into the parcel, but not through the parcel.
- Surface parking is provided in an internal courtyard.
- The service/emergency route at the north edge has angled surface parking, with the bulk of the parking provided underground.

area vii: commercial, residential

- Vehicular access is provided off Emerald Dr. at the north edge, and through two access points off Clover Bar Rd.
- Access is provided to the parking field and the entry into commercial units.



goal / ensure effectiveness of multi-modal transportation system.

strategy one / reduce the distance of residences and employment locations to a range of non-automobile transportation choices.

area i: institutional, residential, commercial

- The extended care facility and apartment/apartment hotel are located in close proximity to the hospital site and a range of commercial services, accessible through greenway corridors and across the pedestrian walkway.
- Transit stops are located along Emerald Dr. in close proximity to the parcel, with a park and ride facility located next to the hospital site.
- Multiple routes are provided to access other parts of the Village, including the greenway corridor, sidewalks along Eton Blvd. and Emerald Dr., and the North-South pedestrian-oriented street.

area ii: residential, commercial

- Multiple routes allow access to other parts of the Village, including the greenway corridor, sidewalks along Eton Blvd. and Emerald Dr., and the North-South corridor.
- Transit stops are located along all perimeter roadways. in close proximity to the parcel, with a park and ride facility located next to the hospital site.

area iii: residential, commercial

- Vehicle access is provided from Eton Blvd. Multiple routes allow access to other parts of the Village, including the East-West naturalized landscape corridor, sidewalks along Eton Blvd., and the North-South landscaped corridor.
- Transit stops are located along all perimeter roadways with a park and ride facility located next to the hospital site.

municipal reserve & public utility lot

- The North-South and East-West corridors along the Municipal Reserve and Public Utility Lots provide the main pedestrian and cyclist routes through the Village, connecting into the road network around the Village.

area iv: residential

- Multiple routes allow access to other parts of the Village, including the East-West naturalized landscape corridor, sidewalks along Eton Blvd., and the North-South landscaped corridor.
- Transit stops are located along all perimeter roadways with a park and ride facility located next to the hospital site.

area v: residential

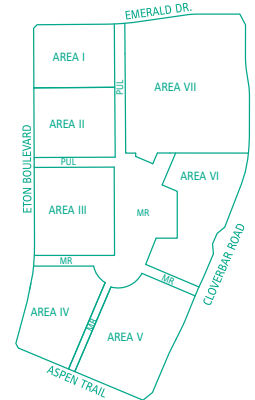
- Multiple routes are provided to access other parts of the Village, including the East-West natural landscape corridor, sidewalks along Clover Bar Rd., and the North-South landscaped corridor.
- Transit stops are located along all perimeter roadways with a park and ride facility located next to the hospital site.

area vi: residential, commercial

- Multiple routes allow access to other parts of the Village, including the East-West naturalized landscape corridor, sidewalks along Clover Bar Rd., and the North-South landscaped corridor.
- Transit stops are located along all perimeter roadways with a park and ride facility located next to the hospital site.

area vii: commercial, residential

- Multiple routes allow access to the hospital site and a range of residential and employment opportunities across the Village including the greenway corridor, sidewalks along Clover Bar Rd. and Emerald Dr., and the North-South pedestrian-oriented street.
- Transit stops are located along all perimeter roadways with a park and ride facility located next to the hospital site.
- The commercial buildings have two faces, ensuring there is no perception of division between Area VII and the rest of the Village.



planning & design decisions

general intent of this strategy / Increasing the employment density and the jobs-to-housing ratio of the Village also increases the viability of public transit, since transit can service both employees and residents in the area.



Mixed use provides greater opportunities for public transport.



A mix of activities in the Village increases the feasibility of effective transit service.



An integrated mix of residential, commercial and office employment.



Transit stops located along all perimeter streets.



The higher density buildings are located in close proximity to the transit that rings the Village.

goal / ensure effectiveness of multi-modal transportation system.

strategy two / incorporate a density and mix sufficient to ensure viability of public transit.

area i: institutional, residential, commercial

- Emerald Dr. is designed as a transit street, supported by high density extended care and residential buildings.
- A transit point for buses is located at the hospital site, with park and ride facilities.

area ii: residential, commercial

- Some of the highest densities in the Village are located on this parcel, in close proximity to the transit street.

area iii: residential, commercial

- Some of the highest densities in the Village are located on this parcel, in close proximity to the transit street.

municipal reserve & public utility lot

- The Municipal Reserve and Public Utility Lots support the easy movement of people in the Village from home / work to transit stops.

area iv: residential

- Multiple routes are provided to allow for residents of lower density buildings to walk to local bus stops along all perimeter roadways and to the Emerald Dr. transit street.

area v: residential

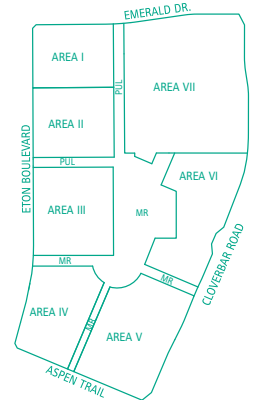
- Multiple routes are provided to allow for residents of lower density buildings to walk to local bus stops along all perimeter roadways and to the Emerald Dr. transit street.

area vi: residential, commercial

- The integration of employment opportunities on this parcel supports local bus routes along Clover Bar Rd. and situates them in close walking proximity to the Emerald Dr. transit street and the transit stops on all perimeter roadways.

area vii: commercial, residential

- The integrated mix of retail commercial, residential, live/work, and office employment is located adjacent to the Emerald Dr. transit street and the transit stops on all perimeter roadways and provides a density and diversity to support transit.



planning & design decisions

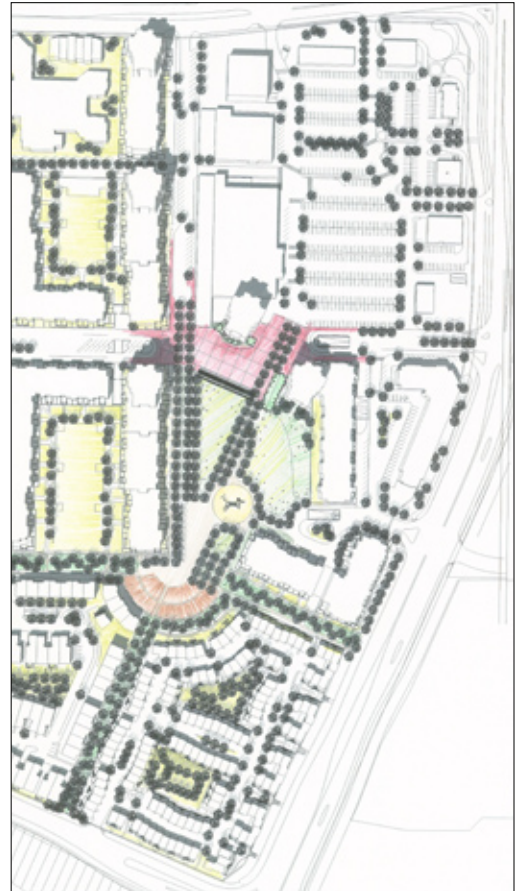
general intent of this strategy / Connectivity is important to encourage a variety of transportation modes. An interconnected network of streets and corridors reduces the distance between points, and supports use of transit and other non-automobile modes.



A range of mobility options are provided, allowing for different experiences.



Connectivity is achieved with a strong network of streets and corridors.



An interconnected network of walking and cycling corridors is interspersed through the Village.

goal / ensure effectiveness of multi-modal transportation system.

strategy three / create an interconnected network of streets and corridors.

area i: institutional, residential, commercial

- The North-South pedestrian-oriented street, the greenway corridor to the south, and smaller pathways that permeate through the parcel provide a mobility network that is connected to the rest of the Village and to the surrounding streets and pathways.
- A linkage to the hospital site across Emerald Dr. is provided from the North-South corridor.
- A linkage across Eton Blvd. is provided from the greenway corridor.

area ii: residential, commercial

- The North-South pedestrian-oriented street, the greenway corridor to the north connect with the mobility network within the rest of the Village and to the surrounding streets and corridors.
- Pathway connections through the parcel allow for permeation of pedestrians and cyclists, and increase route options.

area iii: residential, commercial

- The North-South landscaped corridor and the East-West naturalized corridor to the south are interconnected with streets and smaller pathways within and beyond the Village.
- Pathway connections through the parcel allow for permeation of pedestrians and cyclists, and increase route options.
- Angled parking along Eton Blvd. and on the service/emergency corridor are connected in to range of mobility options.

municipal reserve & public utility lot

- The North-South landscape corridor and East-West naturalized corridor along the Municipal Reserve are primary pedestrian and cyclist routes that interconnect with the roads around the Village, with internal lanes, and with service/emergency corridors along the Public Utility Lots.

area iv: residential

- The North-South landscaped corridor and the East-West naturalized corridor to the north are interconnected with streets and smaller pathways within and beyond the Village.
- Pathway connections link from the internal laneways to increase route options.
- Pedestrian and cyclist connections are provided through mid-parcel openings between the low-rise apartment buildings.

area v: residential

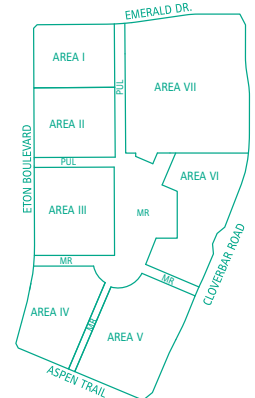
- The North-South landscaped corridor and the East-West naturalized corridor to the north are interconnected with streets and smaller pathways within and beyond the Village.
- Pathway connections link from internal laneways to increase route options.
- Pedestrian and cyclist connections are provided through mid-parcel openings that permeate through the townhouse buildings.

area vi: residential, commercial

- The North-South landscaped corridor and the East-West naturalized corridor to the south are interconnected with streets and smaller pathways within and beyond the Village.
- Vehicular laneways lead into the parcel off Clover Bar Rd., and pathway connections link from internal laneways into the greenway corridor to increase route options.
- Pedestrian and cyclist connections are provided through mid-parcel openings that permeate through the apartment buildings.

area vii: commercial, residential

- Multiple connections to the parking field are provided off Clover Bar Rd., and off Emerald Dr.
- Linkages from the Village's internal greenway corridor to the commercial buildings permeate through openings between the buildings along the North-South pedestrian-oriented street.
- A strong linkage from the central open space to Area VII is maintained, with many corridors converging at this pinnacle.





detailed design tasks

general intent / This section highlights design tasks flagged during the charrette process as needing to be addressed during the detailed design process. LEED for Neighbourhood Development prerequisites and credits are to be satisfied.

Provide safe pedestrian crossings across roadways.

detailed design tasks

- Carefully integrate landscaping plan with corridor design in order to ensure that routes are designed to meet CPTED principles.
- Identify locations for street furniture and bicycle lock-ups.
- Ensure that an appropriate connection is planned across Emerald Dr. for transit passengers.

related leed-neighbourhood development credits

- LEED ND SLL Credit 5: Bicycle Network
- LEED ND NPD Credit 11: Access to Surrounding Vicinity
- LEED ND SLL Credit 4: Reduced Automobile Dependence (Option 1 - 3 points)
- LEED ND NPD Credit 9: Transit Facilities
- LEED ND NDP Credit 10: Transportation Demand Management
- LEED ND NPD Credit 7: Walkable Streets (8 points)

See www.usgbc.org for more information.



Make provision for motorized seniors transport.



Identify locations for street furniture.

fostering sustainable living

general intent / The detailed design decisions that enable sustainable development at Emerald Hills Urban Village must also foster sustainable living. The Strategies and Initiatives/Activities identified below represent an initial framework and point of departure for generating a Fostering Sustainable Living Program at the Urban Village. They are intended to provide the integrated design team with the sustainable living lens that is to be applied to all detailed design decisions. It is recognized that these lists will evolve and be refined as the detailed design for the Urban Village emerges.

strategies

- Ensure detailed design of built environment supports alternative transport options.
- Provide support network for non-motorized transport, home-based businesses and telecommuting.
- Engage all Village citizens in creating a green transport plan.
- Create partnerships with local NGOs working on green transport alternatives.
- Encourage alternative fuels.
- Promote awareness-building and community mapping.
- Leverage green purchasing power to support local green transport options.
- Introduce community-based social marketing programs (CBSM) to foster alternative transport options.

initiatives / activities

- Lockers, showers and change rooms in business facilities.
- Bike system linked to transit.
- Informative signage, bus benches and shelters
- Village Café with internet access to allow for 'third-space'.
- Partner with Citizens for Better Transit of Edmonton.
- Partner with Car Share Co-op Edmonton
- Green power vehicle charging point in commercial precinct.
- Partner with Edmonton Bicycle Commuters Society to establish Village cycling program.
- Youth Bike Repairs Program.
- Bike trails in summer become groomed ski trails in winter.
- Walking school bus program.
- Programmed activities from stollercize to seniors walking club.
- 'Travel Green' section in the "Living Smart at the Village" intranet handbook.
- Village / community mapping of travel smart products, services and opportunities.
- 'Smart Travel' - a CBSM program to foster green travel lifestyles.
- Incentive program for public transit users and employers providing transit benefits.
- Commuter Challenge between condominium associations.
- Green transport incentives offered with every unit – free bike, free car club membership, parking discounts for vehicles using alternative fuel.



Green power electric vehicle recharging station.



Provide adequate bicycle lock-ups.



Village Cycling Club