2014 Interim Transportation Corridor Study Guidelines

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Onward! Providing more travel choices helps to improve overall mobility in Calgary's transportation system.

THE CITY OF CALGARY

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Document Purpose

These Guidelines have been created by Network Planning to foster an understanding of the process followed in the undertaking of transportation corridor studies by The City of Calgary. Its purpose is to supplement the Transportation Corridor Study Policy and facilitate the implementation of appropriate engagement throughout the course of a project.

These Guidelines reiterate The City's commitment, as demonstrated by the Transportation Corridor Study Policy, to involve stakeholders early in the project process, incorporate their input at key points throughout, and report back to stakeholders on how their input was integrated, or explain why not.

This living document is the first Interim Guideline of potentially two or three interim guidelines that will form a Final Transpotation Corridor Study Guidelines. The next interim guideline will build upon the concepts and processes introduced in this version, incorporating feedback and lessons learned from applying the Transportation Corridor Study Policy and Interim Guidelines on upcoming corridor studies.

An electronic version of the Guidelines can be accessed online at www.calgary.ca/corridorstudies.

Message from the General Manager

The Interim Transportation Corridor Study Guidelines document The City of Calgary Transportation Department's current and recommended approach to undertaking Transportation Corridor Studies with stakeholders, citizens and the public at large. They are intended to help inform Council, Administration, retained consultants and all stakeholders of the requirements, goals and objectives of Transportation Corridor Studies as well as the engagement processes that will be used to complete these studies.

The Guidelines align with and supplement Council direction to create a Corridor Study Policy. The guidelines outline the recommended process phases that will be undertaken when The City completes a Transportation Corridor Study to achieve excellence through a continuous integration of technical and engagement streams.

TRANSPORTATION GENERAL MANAGER, MAC LOGAN

In keeping with The City of Calgary's comprehensive policy and framework for engaging with stakeholders (*engage!* Policy) the Transportation Corridor Study Policy and the supporting Interim Transportation Corridor Study Guidelines have been developed to provide more specific direction around the engagement opportunities for stakeholders within the planning processes associated with Transportation Corridor Studies. These guidelines aim to move The City towards adopting a more collaborative and iterative process when completing Transportation Corridor Studies and away from a more traditionally consultative and linear process.

In short, The Transportation Corridor Study Guidelines help to ensure that The City of Calgary can continue to meet the needs and expectations of Calgarians when completing Transportation Corridor Study projects.

Malcolm Logan

GM.

Acknowledgements

The completion of these Interim Transportation Corridor Study Guidelines could not be possible without the contributions of the following individuals, who were also instrumental in the development of the Corridor Study Policy.

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Thank you for your time, effort and interest in helping guide The City of Calgary as we continue to improve the way we deliver transportation projects.

How to Use the Guide

The Transportation Corridor Study Guidelines have been created for City Administration and city stakeholders to foster an understanding of the process of undertaking a transportation corridor study and the roles of both Administrators and citizens in the study. Its purpose is to supplement and facilitate the Transportation Corridor Study Policy.

In the past, transportation corridor studies were often conducted with an eye towards achieving the technical or engineering objectives of the study – determination of roadway requirements and right-of-way. However, it has become very apparent that this strategy does not place an appropriate amount of emphasis on the impacts of roadway planning studies on adjacent communities and citizens.

The new process will be more context sensitive and will be most applicable in complex projects, locations where there is high exposure or a high degree of impacts on adjacent communities and citizens. **Table 1** illustrates the differences between the ‗old' and the ‗new' transportation corridor study processes.

TABLE 1: COMPARISON OF STUDY PROCESSES

Element	Old Process	New Process
Process Approach	Traditional	Context sensitive
Project Scoping	Pre-RFP and selection of consultant with little external input	In conjunction with RFP preparation with input from consultant and/or stakeholders
Issue Identification	Solely done by project team	Jointly done by project team and stakeholders
Issue Resolution	Back end loaded	Front end loaded
Engagement Plan	Preset	Iterative
Engagement Tactics	Determined by project team	Determined by stakeholders and project team
Project Methodology	Varied by project manager	Process framework providing consistency for stakeholders

The guidelines outline the selection strategy of candidate corridors and provide information relating to the guiding policies and directions that form the foundation of all transportation corridor studies. A detailed overview of the transportation corridor study process is included and guidance provided as to where opportunities for engagement exist throughout the course of the study. Suggestions for means of communication with stakeholders and formats of engagement are also provided, for information only. Specific tactics should be identified in the project-specific engagement and communications plan and align with the engage! policy and framework.

The guide can be accessed online at www.calgary.ca/corridorstudies.

This document is divided into five sections:

1) **Introduction**
   The introduction covers the intended audience of the guidelines, includes a summary of the Transportation corridor Study Policy and Council direction, and provides a glossary of terms found throughout the document.

2) **Background**
   This section provides details related to transportation corridor studies – their purpose and alignment with City guiding principles and documents – and summarizes the feedback received from Calgary citizens that helped form the Corridor Study Policy and these Guidelines.

3) **Transportation Corridor Study Process**
   This section describes the process undertaken by The City and its project team to complete a Transportation corridor Study and identifies opportunities for enhanced engagement throughout the process. The City's recommendations for the level and methodology of engagement during each phase of the project are outlined in this section.

4) **Case Studies**
   Case studies that were conducted on previous Calgary transportation corridor study projects to identify successes and engagement gaps are located in this section.

5) **Appendices**
   Included in the appendices are the findings of the literature review that was completed to determine North American best practices as they relate to transportation corridor studies and engagement.

Glossary of Terms

AASHTO – American Association of State Highway and Transportation Officials

Administration – refers to the non-elected City of Calgary staff who work to deliver City services.

Advisory Group – a group of stakeholders or proxies for stakeholder groups convened to meet on a regular basis over time to provide input to a project and advice to a decision maker.

Arterial Street – a street type used by The City to provide a high-quality environment for all modes of transportation. The most common type of street in the transportation system, they provide for a reasonably direct connection between multiple communities and major destinations.

Charette – an intense problem-solving session that brings together all the essential stakeholders for a prolonged working meeting where a facilitator leads a group to alternative solutions, in an attempt to generate comprehensive lists of ideas, scenarios, alternatives, plans or designs for making a decision.

Class 4 Cost Estimate – a cost estimate prepared based on conceptual or feasibility studies, considering project options and known constraints, and developed to aid in defining the detailed project scope. Expected variance is -40% to +75%.

Collaborative – an engagement strategy where the stakeholders are considered partners in the decision making process and may be involved in analyzing issues, building alternatives, and identifying a preferred solution.

Context-Sensitive Solution – a collaborative approach that involves all stakeholders and considers the total context within which a transportation improvement project will exist.

CSS – Context-Sensitive Solution

CTP – Calgary Transportation Plan

DoT – Department of Transportation

FHWA – Federal Highway Administration

Information Session - an informal setting with multiple displays showing materials, plans and exhibits where participants rotate through stations and discuss specific topics with project staff. The focus is to share information rather than obtain feedback.

Investing in Mobility – The City's strategic plan for capital transportation infrastructure projects, Investing in Mobility defines the priority and timing of projects, and helps inform Council's capital budget decisions.

LRT – Light Rail Transit

LUPP – Land Use Planning and Policy

MDP – Municipal Development Plan

Neighbourhood Boulevard – a special street type used by The City to support retail and medium-density residential corridors while providing the highest priority to pedestrians and cyclists and the highest level of connectivity of all street types.

Network Planning – a division with Transportation Planning, Transportation at The City of Calgary tasked with the long-term planning of the city's transportation network; this group leads transportation corridor studies.

Open House – an informal setting with multiple displays showing materials, plans and exhibits where participants rotate through stations and discuss specific topics with project staff.

Parkway – a special street type used by The City with a focus on integration with adjacent natural areas. Parkways focus on pedestrian and cyclist movements (both recreational and commuting) but accommodate all modes of travel.

RFP – Request for Proposal

Road and Street Palette – provides a summary of the road and street types used by The City and defines the priority level for each transportation mode (walking, cycling, transit, goods movement and vehicles) for each road and street type.

ROW – Right-of-Way

Skeletal Road – a road type used by The City to promote the movement of vehicular traffic over longer distances, skeletal roads typically operate at high speeds and have little direct access and interaction with adjacent land uses.

Stakeholder – defined as anyone (person or group of people) who can impact or be impacted by the results of a decision made by The City, and may include: citizens, the public, customers, businesses, community organizations and partners, City of Calgary Administration, other government agencies and any other body interacting with The City.

TBL – Triple Bottom Line

The City – refers to the corporate entity, The City of Calgary.

TOD – Transit-Oriented Development

TP – Transportation Planning

Transportation Corridor – represents routes within the transportation network identified in the CTP. A transportation corridor can be a road, street or rapid transit corridor it does not differentiate by the type of road (i.e., skeletal or arterial), land use or user (i.e., motorist, pedestrian, cyclist, or transit user). Typically, the transportation corridors that are studied more often are the skeletal roads and arterial streets (which include Urban Boulevards, Neighbourhood Boulevards, and Parkways).

Transportation Corridor Study – is a long-term transportation system analysis which examines the current and future transportation planning needs for a specific area of the city. A Transportation Corridor Study is not detailed design. A Transportation Corridor Study is intended to provide recommended alignments and upgrades to meet the long term needs of the Corridor as identified in the CTP as well as to highlight issues to be reviewed through more detailed studies.

Urban Boulevard – a special street type used by The City to accommodate reasonable high volumes of vehicular traffic while giving the highest priority to walking, cycling and transit, Urban Boulevards provide high levels of connectivity to surrounding communities or destinations.

Workshop – interactive working groups where participants work on defined assignments focused on a specific topic or issue.

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1 INTRODUCTION

Target Audience

This Transportation Corridor Study Guidelines document will be of interest to you if:

- You are a **Stakeholder** who is interested in or affected by a Transportation Corridor Study project. This document will help you understand the process undertaken by the project team, what The City's commitment is with respect to stakeholder engagement, how and when you can provide feedback and how it will be used to influence project outcomes.
- You are a **City Project Manager** leading or involved in a Transportation Corridor Study project. This document will outline your responsibilities with respect to stakeholder engagement and will provide tools that can be used to determine the most effective means of obtaining useful public input.
- You are a **Consultant** retained by The City to conduct a Transportation Corridor Study project. This document will outline the expectations that stakeholders may have with respect to how they will be engaged through the study process and will help you better understand and prepare for the project scope.

Policy Summary

This policy clarifies what is and is not intended to be undertaken as part of a Transportation Corridor Study.

The City of Calgary will:

- Undertake Transportation Corridor Studies to facilitate long term growth of the City based on the goals and objectives of the CTP.
- Use a multifaceted communications approach to communicate with stakeholders.
- Conduct the appropriate level of engagement based on the classification of the corridor, impact to the surrounding community and the engage! policy.
- Provide clear definitions of desired outcomes and tradeoffs for the movement of all transportation modes.
- Work with stakeholders to identify existing and potential issues along a Transportation Corridor.
- Use the issues identified and work with stakeholders to develop concepts for improvements to a Transportation Corridor.
- Seek to develop concepts that:
    - Preserve the integrity of adjacent communities
    - Identify community improvements
    - Minimize negative impacts on adjacent land uses and open spaces
    - Include a ‗do nothing' concept
    - Include staging and prioritizing both interim and ultimate solutions
- Communicate the approximate timelines and possible triggers for each potential concept for improvement.

The City will not review the classification of the transportation corridor as part of the transportation corridor study process.

Stakeholders will:

- Have an opportunity to participate in an active two way process to develop and evaluate concepts.
- Have an opportunity to understand the issues and/or need for a transportation corridor study.
- Have the ability to follow up on the corridor study process through various engagement and communication tactics.

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2 BACKGROUND

City of Calgary Guiding Principles

The City of Calgary has a number of policies and documents which guide Administration's work. Below are summarized some of the relevant guiding principles which help shape how transportation corridor studies are conducted, identify which goals and objectives must be kept in mind throughout the course of the study and provide the greater context within which transportation corridor studies are undertaken.

Triple Bottom Line

The City of Calgary adopted a Triple Bottom Line Policy in 2005 which outlined the commitment of The City to incorporate sustainable development principles into its decisions and actions. Triple Bottom Line thinking means that Council and staff will consider and address social, economic, environmental and smart growth impacts in all City business. The purpose of the TBL Policy is the following:

Vision: To advance Council's vision to create and sustain a vibrant, healthy, safe and caring community by providing clarity on the definition and meaning of Triple Bottom Line.

Action: To embed the Triple Bottom Line into The City's Corporate policies, performance measures, actions and implementation procedures, and enhance The City's decision making.

Community: To place Calgary's efforts in the broader context of efforts of cities around the world to improve their sustainability performance, and make a contribution to global sustainability.

2020 Sustainability Direction

The 2020 Sustainability Direction is a strategic guide for transformation that identifies what must happen at The City over the next 10 years to contribute towards the imagineCALGARY 100-year vision. The goals of the 2020 Sustainability Direction are:

Community Well-being: Calgary is a vibrant, safe, healthy and socially inclusive city. Communities are resilient, complete and connected – built with strong social, community, recreation, arts and culture, parks and natural spaces, and public safety

infrastructure. Programs, services and amenities are accessible, affordable and high quality.

Prosperous Economy: Calgary is the undisputed choice for people and business, with a vibrant, resilient, environmentally sound and sustainable local economy that fosters opportunity for all to achieve individual economic well-being.

Sustainable Environment: The protection of air, land and water is recognized as critical for achieving healthy ecosystems within Calgary and this understanding is applied to the way we grow and operate as a city.

Smart Growth and Mobility Choice: New population and job growth will be accommodated through strategic intensification of developed areas and by completing existing Greenfield communities. This will be done in ways that support existing infrastructure investments and promote an integrated transportation system that provides safe, reliable and convenient travel choices.

Financial Capacity: The City serves the needs of citizens by achieving a sustainable financial position.

Sustainable Corporation: The City of Calgary serves citizens through engagement, transparency, resiliency and innovation.

Calgary Transportation Plan / Municipal Development Plan

The Calgary Transportation Plan (CTP) and Municipal Development Plan (MDP) are an integrated set of policy documents which describe the vision for a long-term pattern of growth and development in Calgary over the next 60 years. The foundation of these documents is the Key Directions for Land Use and Mobility:

1. Achieve a balance of growth between established and greenfield communities.
2. Provide more choice within complete communities.
3. Direct land use change within a framework of nodes and corridors.
4. Link land use decisions to transit.
5. Increase mobility choices.
6. Develop a Primary Transit Network.
7. Create complete streets.
8. Optimize infrastructure.

The Key Directions represent the strategic moves that need to be accomplished in order to guide Calgary towards the imagineCALGARY vision.

Complete Streets

The Complete Streets Guide provides guidance to City Administration and the development industry on how to incorporate Complete Street concepts (including enhancing the public realm) into the planning, design, construction of new streets, and reconstruction of existing streets.

A Complete Street is a street for which the needs of all users have been considered in it planning and design. All users are not necessarily accommodated to the highest standards possible, particularly when right-of-way is limited. When trade-offs are required between the users sharing the space, the goals of the Complete Street philosophy should be the primary consideration.

A Complete Streets approach seeks to design a transportation network that will:

- Serve the land uses that are adjacent to the street, integrating mobility as a means, not an end
- Encourage people to travel by walking, bicycling and transit
- Provide transportation options for people of all ages, physical abilities and income levels
- Enhance the safety and security of streets, from both a traffic and personal perspective
- Improve people‘s health
- Create liveable neighbourhoods
- Reduce the total amount of paved area
- Reduce streetwater runoff into watersheds
- Maximize infiltration and reuse of stormwater
- Reduce greenhouse gas emissions and other air pollutants
- Reduce energy consumption
- Promote the economic well-being of both businesses and residents
- Increase civic space and encourage social interaction
- Promote alternative streetscapes

All transportation studies and design projects shall incorporate the Complete Street philosophy, both for new and existing roads, with the understanding that the ideal Complete Street standards may be modified in retrofit situations where right-of-way constraints exist.

RouteAhead

RouteAhead is a City initiative that aims to identify the transit service investments required over the next 30 years to meet the transit-related targets set out in the CTP. Some of the core principles that guided the development of RouteAhead included:

- Match transit to land use.
- Evolve from a radial network to a connective grid.
- Take care of and optimize use of what we own.

The 30 year plan outlined in RouteAhead includes short-, mid-, and long-term projects that provide the opportunity to plan resourcing and funding needs.

engage!

The engage! policy provides the guidelines for the development and implementation of engagement processes for stakeholders, both external and internal, in order to achieve the following:

- Alignment with City Council‘s priorities for citizen-centric service delivery
- Support for City Council‘s decision making by providing information about stakeholders‘ opinions and perspectives
- Consistent and clear engagement practices
- Enhancements of The City of Calgary‘s reputation as an organization that listens to citizens and stakeholders

The engage! policy is supported by the engagement framework which includes a 6 step process which details fundamental components of good engagement, and when used consistently across The City will ensure we are putting forward our best and demonstrating The City‘s commitment to the engagement process. **Figure 1** illustrates the engage! process.

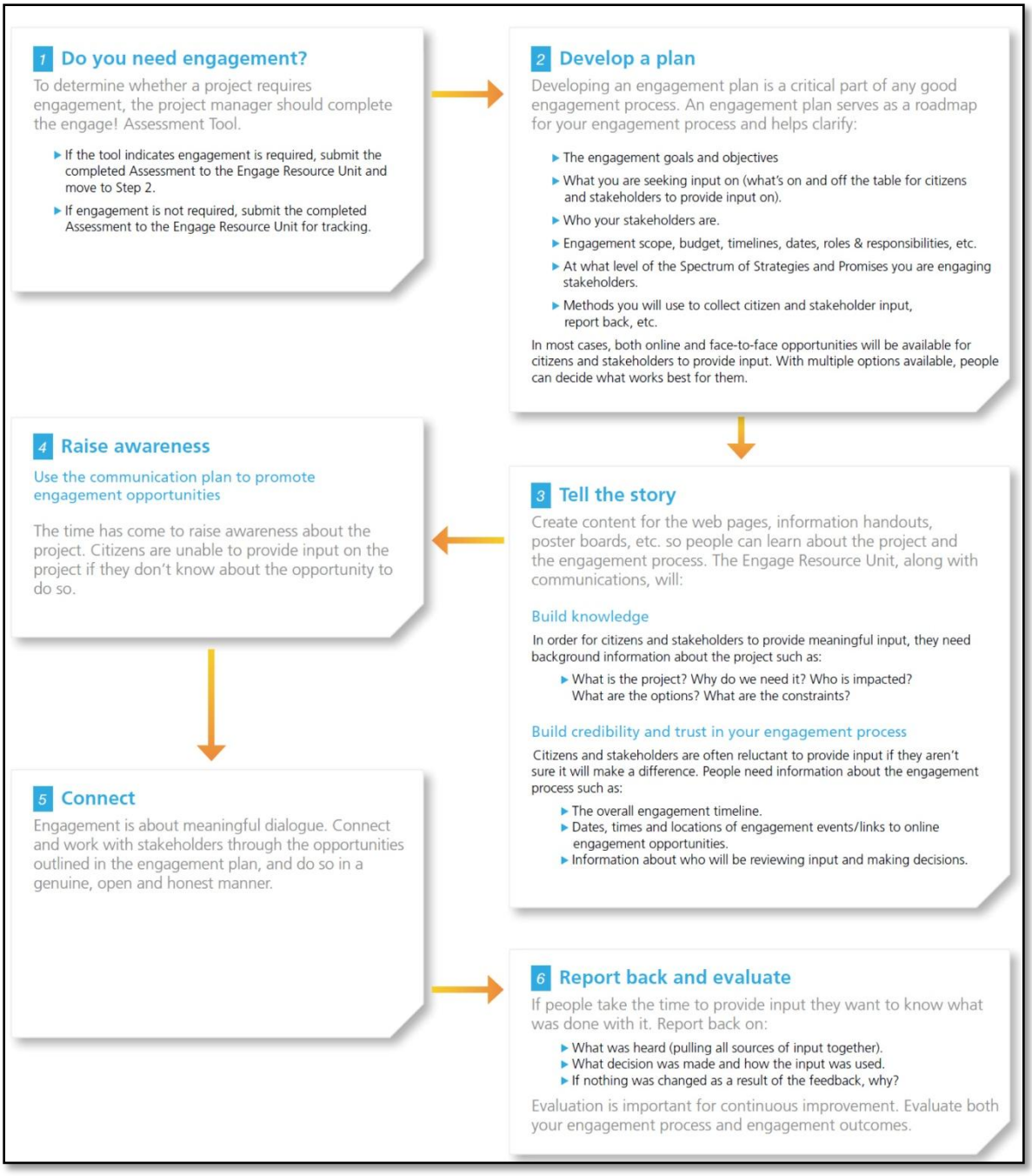


FIGURE 1: ENGAGE! PROCESS

About Corridor Studies

Planning Studies & Objectives

The City conducts a number of different types of planning studies intended to identify the long-, medium-, and short-term needs of the city's transportation infrastructure. At the highest level is the Calgary Transportation Plan which outlines thirteen transportation policies that contribute to achieve the CTP Key Directions with which all studies must align. These policies are as follows:

- **Transportation Choice** - Maintain automobile, commercial goods and emergency vehicle mobility in Calgary while placing increased emphasis on sustainable modes of transportation (walking, cycling and transit).
- **Walking and Cycling** - To make walking and cycling attractive and convenient through the provision of additional or enhanced infrastructure, and through land use planning that brings homes, jobs, services and amenities closer together.
- **Transit** – To provide a safe, accessible, customer focused public transit service that is capable of becoming the preferred mobility choice of Calgarians.
- **Goods Movement** – To recognize the important economic role of goods movement by providing a safe, efficient and connective goods movement network that supports the Calgary International Airport , the Canadian National (CN) and Canadian Pacific (CP) intermodal facilities, transportation and distribution districts and goods movement routes, while also minimizing impacts on surrounding communities.
- **High Occupancy Vehicles (HOV)** – Optimize the person-moving capacity of the transportation system by increasing average vehicle occupancy and reducing reliance on single-occupant vehicles for commuting in Calgary, and improve operating speeds and reliability of transit service by creating priority along Primary Transit corridors.
- **Quality of Service** – Provide high-quality service for all modes of transportation using effective and cost-efficient transportation management tools and techniques.
- **Complete Streets** – Increase the attractiveness, convenience and safety of all modes of transportation by creating a new selection of multi-modal streets that emphasize different modes of transportation, incorporate elements of green infrastructure and function in the context of surrounding land uses.

- **Local Transportation Connectivity** – Create better connectivity in future communities and Activity Centres for walking, cycling, and street networks, while also increasing access and reducing response times for emergency services.
- **Parking** – manage parking in Centre City, Activity Centres, Corridors and TODs to support an affordable and diverse housing mix, promote development, consider business vitality, increase densities, encourage using all modes of transportation, improve air quality and reduce the environmental footprint of the city.
- **Transportation Safety** – Continue to enhance safety for all users of the transportation system, accommodate increased walking, cycling and transit use by addressing the safety concerns of network users, and support emergency management processes.
- **Universal Access** – Ensure access and freedom of mobility for all Calgarians, providing citizens with the opportunity to travel and participate in public life.
- **Environment and Transportation** – Protect air, land, water, and biodiversity in the planning, design, operation and maintenance of all transportation infrastructure.
- **Infrastructure Management** – Use best infrastructure management practices to keep Calgary's transportation infrastructure safe and reliable, and minimize future expenditures by optimizing the life-cycle of existing and future facilities.

A transportation corridor study is typically conducted because the corridor is determined to be experiencing deficiencies in meeting some or all of these stated objectives, as defined by its classification. These objectives can also be used to help prioritize which corridors are most in need of being studied.

Transportation Corridor Studies Alignment with CTP/MDP

Transportation corridor studies are conducted to achieve the following CTP goals:

- Transportation Goal #2: Promote safety for all transportation system users.
- Transportation Goal #4: Enable public transit, walking and cycling as the preferred mobility choices for more people.
- Transportation Goal #5: Promote economic development by ensuring the efficient movement of workers and goods.
- Transportation Goal #7: Ensure transportation infrastructure is well managed.

Transportation corridor studies allow The City to understand the existing condition of the transportation corridor as well as the impacts of continued growth on the infrastructure. These studies identify existing or expected gaps in connectivity,

access and operational capacity within a 10-30 year period and allow The City to better manage funding and resources to fill these gaps (see **Figure 2**). Planning for future roadway requirements allows The City to meet Transportation Goal #7.

Transportation corridor studies identify opportunities for enhanced transit, walking and cycling facilities, helping to achieve Transportation Goal #2; identify infrastructure upgrades (widening, interchanges, intersection improvements, etc.) required to ensure the continued flow of vehicles and goods, helping achieve Transportation Goal #5; and are conducted using the current best practices in transportation corridor planning and roadway and Complete Streets design, helping achieve Transportation Goal #2.

The CTP also identifies the goal of including impacted stakeholder groups early in the planning process and undertaking collaborative processes when planning new transportation infrastructure, upgrading existing infrastructure, or evaluating the impacts of new developments. Transportation corridor studies aim to achieve this goal through the incorporation of a robust public engagement program intended to involve stakeholders well before detailed design and construction of transportation projects.

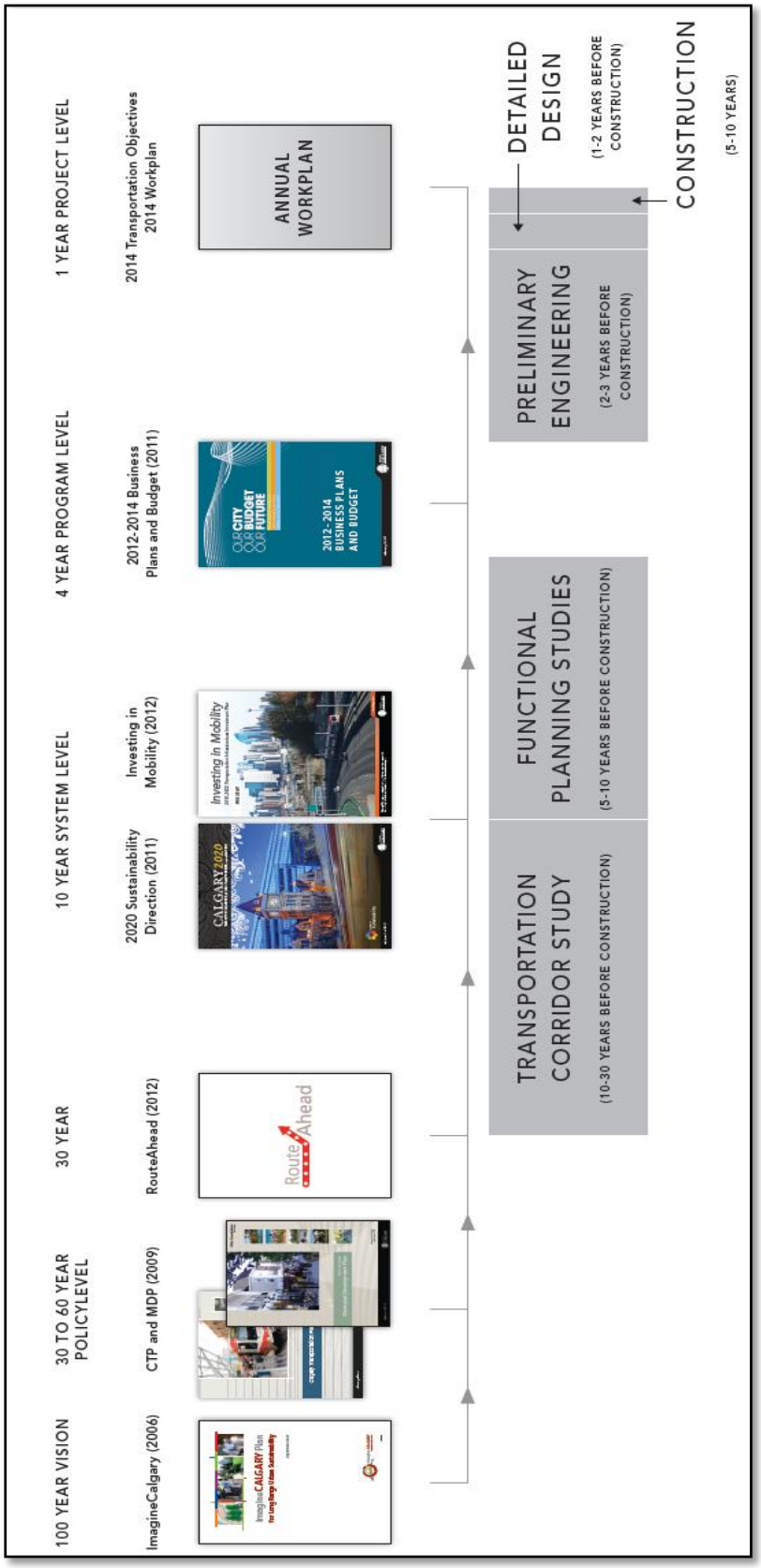
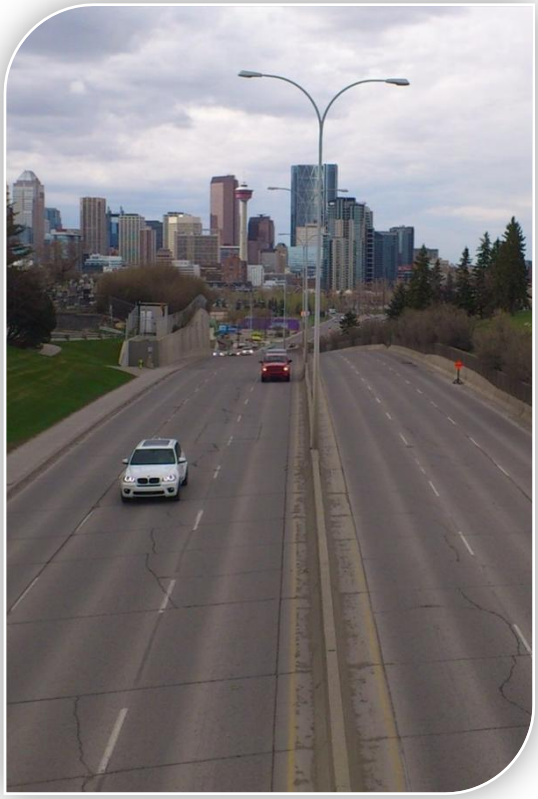


FIGURE 2: TRANSPORTATION CORRIDOR STUDIES TIME FRAME

Undertaking a Transportation Corridor Study

What is a transportation corridor?



In 2009, The City of Calgary produced a complementary set of policy documents entitled The Calgary Transportation Plan (CTP) and the Municipal Development Plan (MDP). Both of these documents reference *Corridors* which are considered to be integrated routes that connect high-use destinations such as activity centres, where significant employment and residence occurs or is planned. *Corridors* are intended to be more than just roads in that they are not focused solely on vehicle movement but provide an enhanced public realm and a safe and attractive environment for pedestrians and cyclists.

In the broader sense, *transportation corridors* represent routes within the transportation network identified in the CTP. A Transportation Corridor can be a road, street or rapid transit corridor. It does not differentiate by the type of road (i.e., skeletal or arterial), land use or user (i.e., motorist, pedestrian, cyclist or transit user). Typically the Transportation Corridors that are studied more often are the Skeletal Roads and Arterial Streets (which includes Urban Boulevards, Neighbourhood Boulevards and Parkways).

For the purposes of this document, a corridor refers to a *transportation corridor* and a corridor study encompasses all higher-level planning studies of network routes.

What is a Transportation Corridor Study?

A transportation corridor study is a long-term transportation system analysis which examines the current and future transportation planning needs for a specific area of the city. Transportation corridor studies are typically completed 10 to 30 years in advance of construction to identify issues such as how much room is needed and where the road will go for new roadways or to determine upgrades to an existing roadway.

Transportation corridor studies are conducted on specific transportation routes within the City network and are intended to highlight issues to be reviewed in greater detail at the functional planning stage. **Figure 3** illustrates the transportation planning spectrum and where transportation corridor studies fit in.

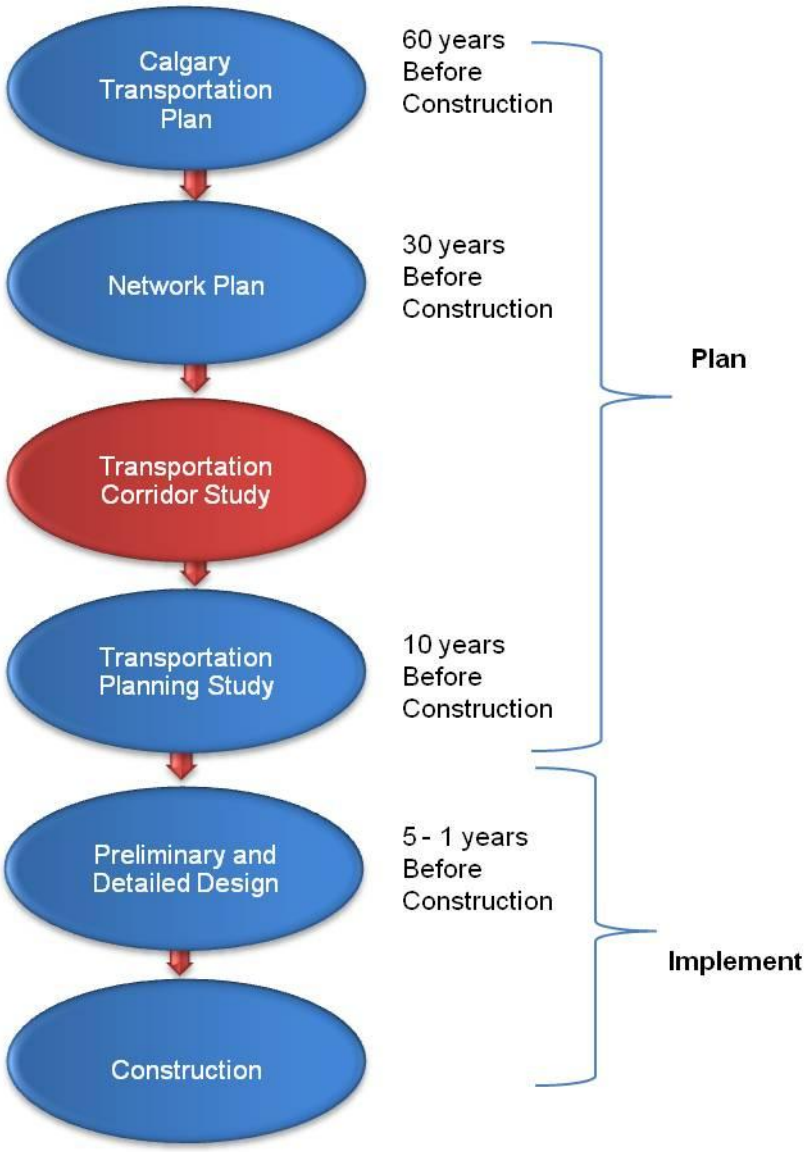


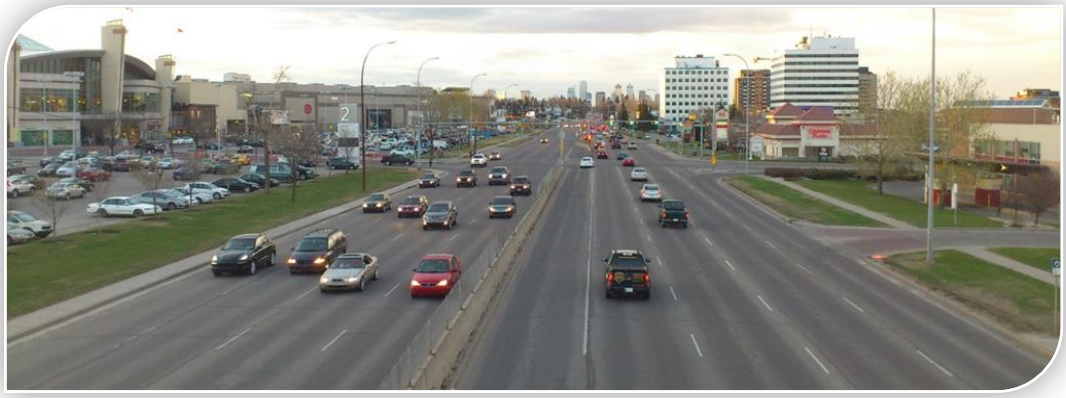
FIGURE 3: TRANSPORTATION PLANNING SPECTRUM

Transportation corridor studies are required to ensure that a long-term plan is in place to help guide development and to protect lands required for road right-of-way.

Because the land use within the city changes over a long period of time, it is important to look ahead and identify what requirements will need to be met in the future. Without transportation corridor studies, the implementation of necessary roadway changes (i.e., widening, interchanges, interim upgrades, etc.) can be substantially more disruptive to the surrounding communities and businesses as well as excessively high costs to acquire land for construction where required.

Where are transportation corridor studies undertaken?

Transportation corridor locations have been identified through the work done for the Calgary Transportation Plan. These locations were developed based on their integration with the adjacent communities, their importance as transportation routes and the expectation of required improvements to better manage growth and to achieve the goals of the CTP, and are shown on the CTP Primary Transit Network and Road and Street Network Maps (**Appendix C**).



Transportation corridors can be adjacent to a variety of land uses, including residential, industrial, commercial, institutional and parks/open space (including environmentally sensitive areas). The type of adjacent land use in which a transportation corridor is located will impact a number of components of the project scope and engagement, such as:

- Impact to adjacent communities and properties (competing interests of numerous stakeholders, weight of relative impacts)
- Ability to implement desirable Complete Streets features (retrofit conditions where right-of-way is constrained versus new development)

For example, traffic flow will be a priority for skeletal roadways and access and goods movement will be a priority for industrial arterials, whereas pedestrian and cyclist accommodation might be of greater importance for Parkways. These priorities are set out in the CTP in the Road and Street Palette (see **Figure 4**).

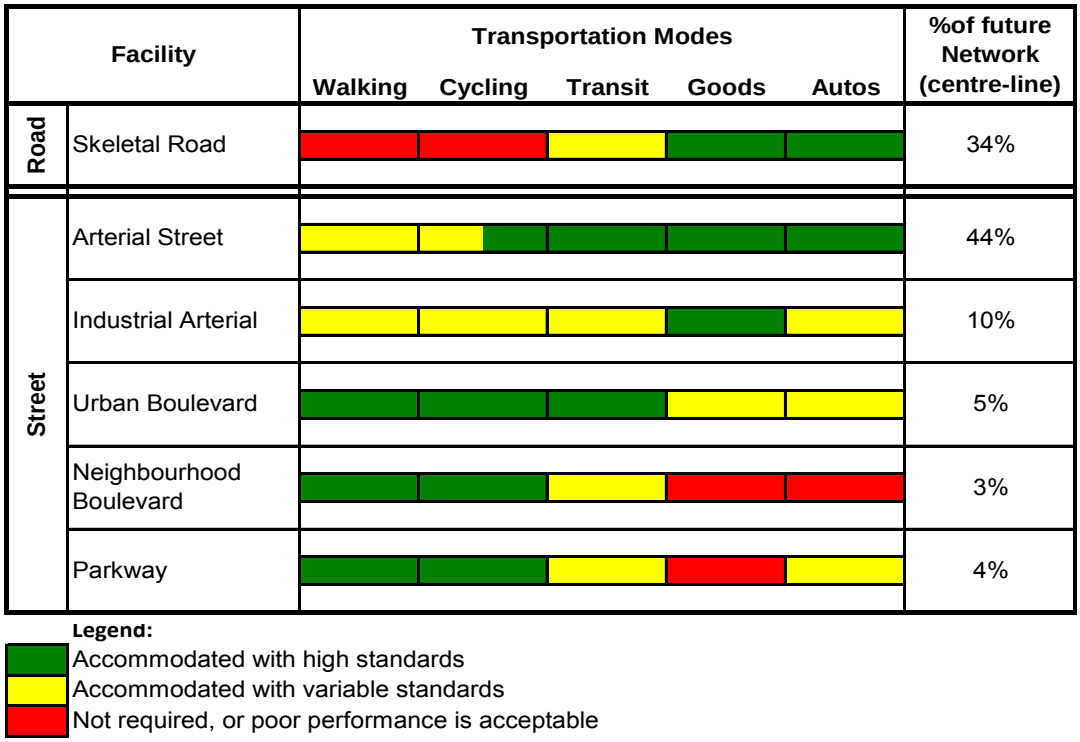


FIGURE 4: COMPLETE STREETS ROAD PALETTE (CTP)

Why is a Transportation Corridor Study undertaken?

The primary goal of a transportation corridor study is to determine the general elements of the roadway, such as: number of lanes; accommodation for transit, cyclists and pedestrians; traffic control requirements; and the required road right-of-way and associated land impacts. As such, the typical scope of a transportation corridor study is higher-level and looks primarily at vehicle operational needs, connectivity for both vehicular and sustainable modes, intersection/interchange configurations, access and right-of-way requirements. Typically, the scope of a transportation corridor study will not include in-depth utility or stormwater/environmental assessments. Class 4 cost estimates that range from +75% to -40% are included. The specific scope of a transportation corridor study, however, is determined by considering the area of impact, the required level of detail of design, right-of-way availability, the potential for environmental impacts, existing and future travel demands and many other issues.

Going forward, The City intends to expand the scope of a typical transportation corridor study to better examine the corridor‘s integration with adjacent land uses and its impact on communities and open spaces. In the past, transportation corridors tended to be examined in isolation, with a focus solely on the transportation aspects – access, operations, road width/elements. Now, The City is looking to study the

corridor within the greater context of the community; part of this will include the assessment of a ‗do nothing' concept which will consider the impacts to the community and to the transportation network of having the transportation corridor remain in its current state as the city grows.

The scope of the transportation corridor study will also identify an appropriate level of stakeholder engagement, related to considerations such as the number and proximity of adjacent communities and the complexity of the project.

How do we identify why a specific transportation corridor is being studied?

A specific transportation corridor is selected for study based on a prioritization exercise conducted by The City. A list of potential corridors is developed based on their identification in the CTP or through the development planning process. Although the intention is to study all eligible transportation corridors over time, there must be a prioritization done to determine where to allocate resources in the current workplan. The prioritization exercise uses criteria such as:

- Mobility choice
- Congestion relief
- Key network component
- Network linkage
- Livable communities
- Economic vitality
- Safety
- CTP/MDP alignment
- Investing in Mobility funding
- RouteAhead alignment
- Land use planning
- Right-of-way protection
- Impacts on other business units

The candidate corridors are assessed and prioritized by the Transportation Planning Department to determine which corridors should be studied during the current workplan term. Once a transportation corridor has been prioritized for a transportation corridor study, The City will undertake a transportation corridor study in accordance with the Transportation Corridor Study Policy, and these Guidelines.

The Transportation Corridor Policy

Why is a transportation corridor study policy needed?

Although long-term in nature, transportation corridor studies can impact both current and future citizens in a number of different ways. A transportation corridor study policy helps ensure that these studies are conducted in an open and transparent manner, and that citizens are engaged appropriately throughout the process.

In the past, transportation corridor studies were often conducted with an eye towards achieving the technical or engineering objectives of the study – determination of roadway requirements and right-of-way. However, it has become very apparent that this strategy does not place an appropriate amount of emphasis on the impacts of roadway planning studies on adjacent communities and citizens. Recognizing this, The City (Council and Administration) identified a need to create a policy guiding the way transportation corridor studies are conducted to ensure that the process incorporates appropriate levels of collaborative engagement with the general public and impacted stakeholders.

The new process will be context sensitive and will be most applicable in complex projects, locations where there is high exposure or a high degree of impacts on adjacent communities and citizens.

Context Sensitive Solution Approach

In the past, Transportation Corridor Studies have followed a traditional process wherein the issues are identified, often with input from the public, then the project team designs a solution and presents the solution to the public. **Figure 5** illustrates the allocation of efforts throughout the course of a traditional planning approach.

This traditional process is backend loaded with the resolution of main issues left until the end of the process. While this approach may minimize the level of effort during the initial phases of the study, it can also lead to an increasingly complex arrangement of unresolved or previously unidentified stakeholder issues and concerns being discussed and debated near the end of the process.

While this process has been used in the past and may still be acceptable on small, isolated projects, this process is not an acceptable approach for transportation corridor studies.

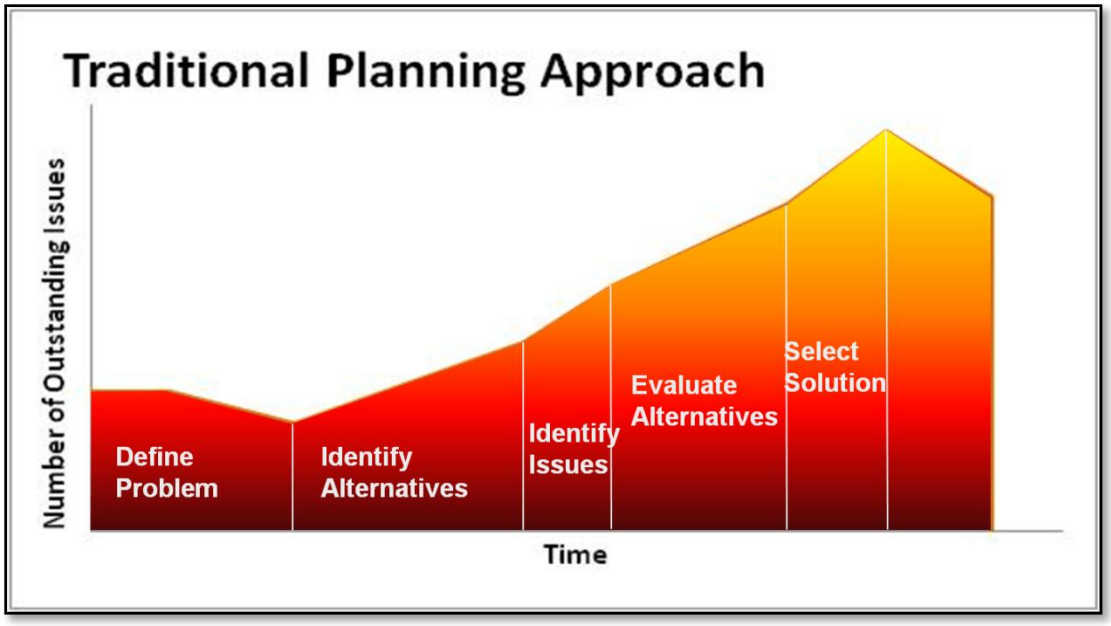


FIGURE 5: LEVEL OF EFFORT – TRADITIONAL PLANNING APPROACH
Modified from Source: (FHWA, 2013)

The City of Calgary is looking to move towards a more collaborative process which involves stakeholder input throughout the process in order to provide more context-sensitive solutions. This type of process would take a complex problem, conduct an iterative process whereby initial community input is obtained, the problems/issues are assessed within an appropriate context and technical information is added to the mix, and result in the development of a collaborative solution at the completion of the study. Figure 6 illustrates the collaborative and iterative process.

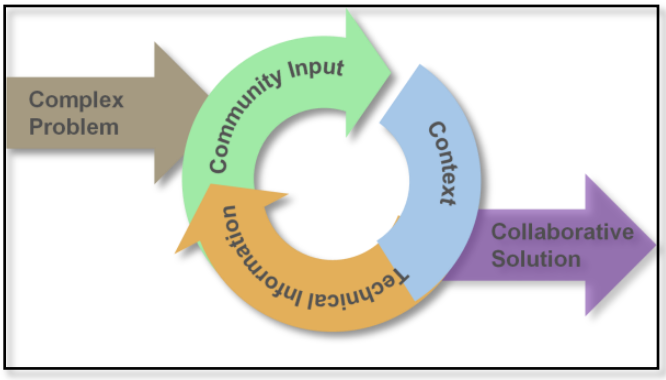


FIGURE 6: COLLABORATIVE PROCESS
Modified from Source: (FHWA, 2013)

In assessing the level of effort attributed to addressing issues within the collaborative process, and contrasting this with the traditional, the proposed process is more front-end loaded with the resolution of issues predominantly within the first three phases of the process (**Figure 7**). Through the collaborative process it is envisioned that a terms of reference, collaboratively developed with stakeholders, would allow for a more complete understanding of the issues up front as well as the acceptable solutions that may be developed to resolve these issues, thereby significantly minimizing the level of effort required at the completion of the project.

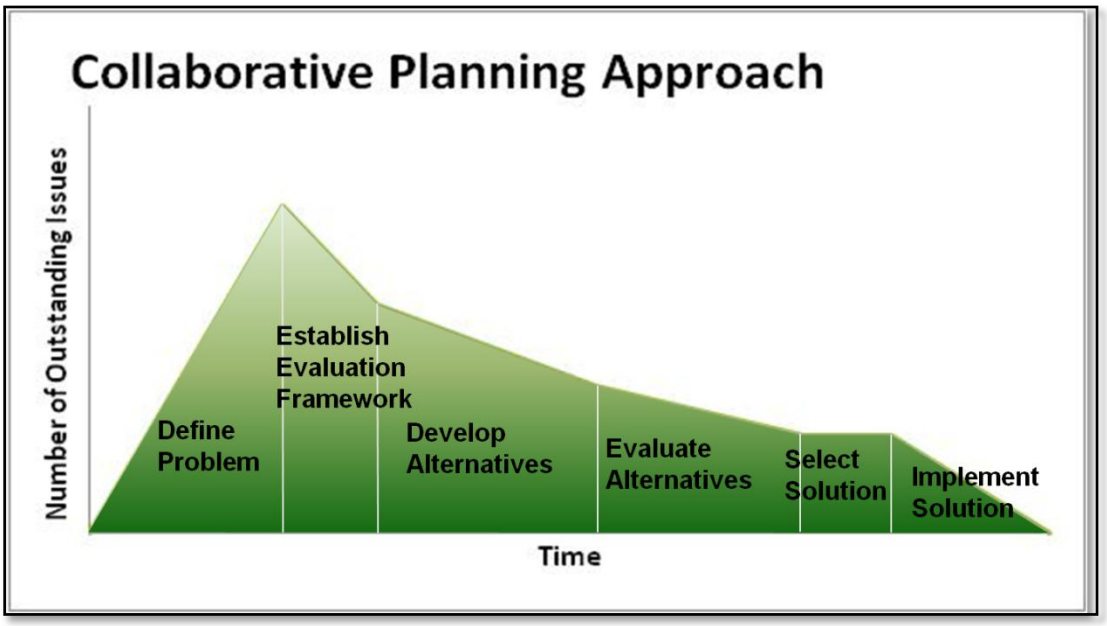


FIGURE 7: LEVEL OF EFFORT – COLLABORATIVE PLANNING APPROACH
Modified from Source: (FHWA, 2013)

Developing the Policy

Background

The City of Calgary (Council and Administration) recognize that Transportation Corridor Studies have a significant impact on the long term growth and development of the City of Calgary and are a required component of the City's Transportation Plans. As such, Transportation Planning was asked by Council to create a new 'Corridor Study Terms of Reference Policy' that is based on a collaborative community engagement and communication approach with internal and external stakeholders. The policy addresses options for staging and prioritizing both interim and ultimate solutions within a given corridor, and provides clear definitions of

desired outcomes for movements through and across the corridor for all transportation modes.

Purpose

The purpose of the policy is to provide guidance to Administration, Council, and the Public about how the City will undertake transportation corridor studies through an interactive two way communication process following The City's engage! Policy.

Methodology

Engagement was at the core of developing this Policy. The engagement plan established was set in three parts: Part A – Understanding the As Is'; Part B – Shared Learning; and Part C – Process Building. In Part A, stakeholders and community associations with prior experience in transportation planning projects were asked to provide feedback at facilitated world cafe-style engagement evens. In Part B, citizens were engaged through additional sessions to learn why corridor studies are important and how their feedback helps shape the final outcome; as well as for the project team to hear how Transportation can improve the corridor planning and engagement process in the future. In Part C, the project team worked collaboratively with citizens to finalize the policy. The engagement plan is illustrated in **Figure 8**.

Another part of this project was to draw on best practices of other jurisdictions with respect to how the public is involved in decisions related to transportation corridor studies. A summary of the literature review conducted is included in **Appendix A**.

The case studies looked at the following five transportation corridor studies:

- 16 Avenue N Urban Corridor,
- 17 Avenue Transportation and Land Use Studies,
- 16 Avenue NE Transportation Planning Study,
- Crowchild Trail Corridor Study and
- the West LRT Detailed Design and Implementation Plan.

The case studies are included in **Section 4** of this report.

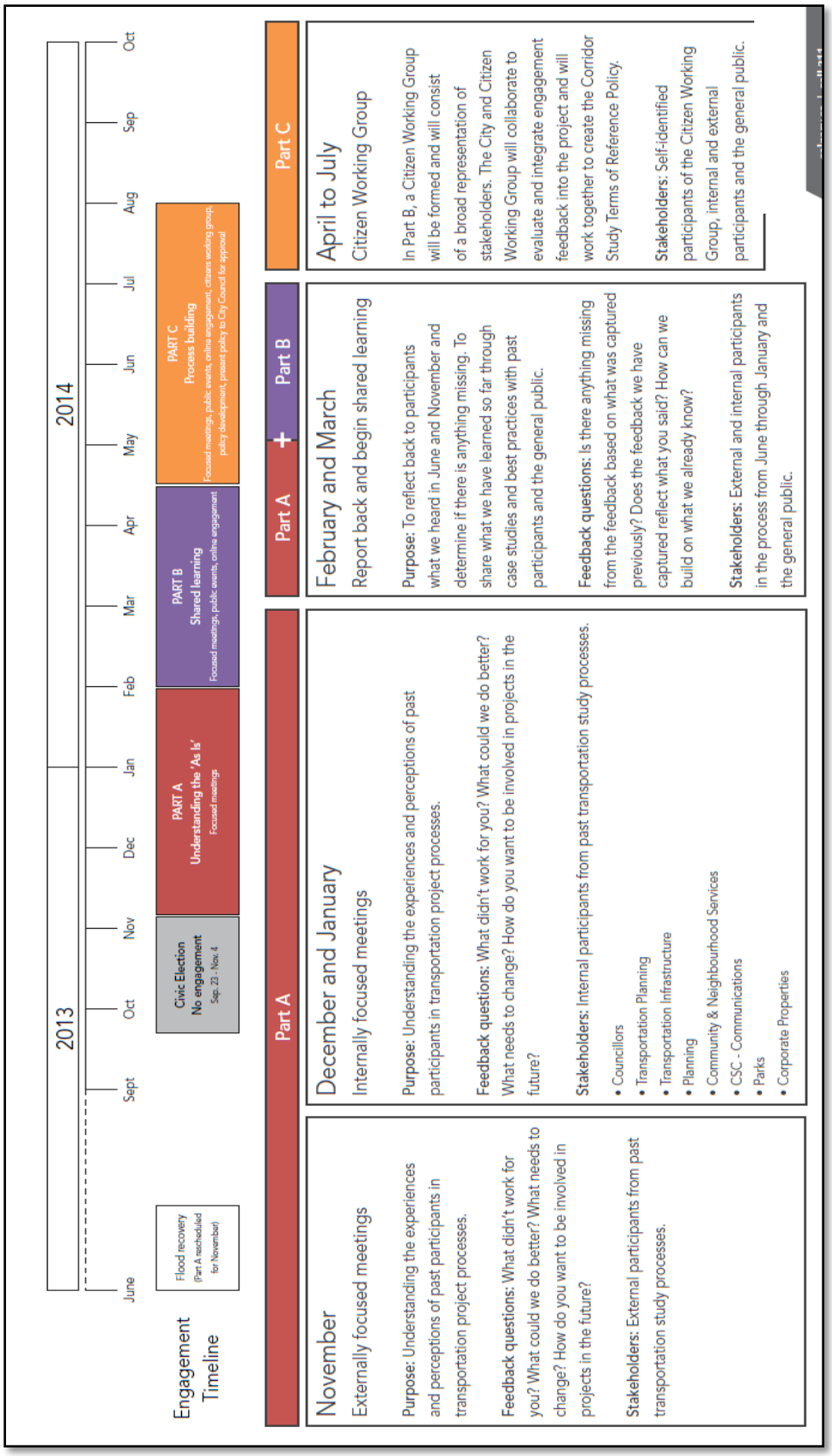


FIGURE 8: POLICY DEVELOPMENT ENGAGEMENT PLAN

Summary

Some of the lessons learned from the Calgary based case studies were as follows:

- Taking a step back is sometimes necessary in order to re-evaluate project priorities and success measures.
- Evaluate the number of stakeholders, anticipated complexity, and exposure to challenging and controversial issues.
- Determine an appropriate level and scope of public consultation for the degree of complexity and challenges in the project.
- Sufficient budget should be allocated for public consultation.
- Ensure that communities are being heard and that their concerns and suggestions are being examined.
- Developing a set of tradeoffs with the communities and external stakeholders has proven to be valuable in developing alternatives.
- Engaging the communities early in the project schedule to hear their concerns.
- Ensuring there is flexibility in the project to meet citizen, community, and Councillor requests and make changes as necessary.
- The public's understanding of when and how they are engaged plays an important role in the engagement process and in the level of trust between The City and the public.

These lessons learned from the case studies were similar to what the project team heard from the public during the engagement phase (listed below) and helped form the basis for developing the policy as well as these guidelines.

- Timely engagement
- Better communication to stakeholders on engagement timelines and information being shared
- A simplification of the information being presented
- Clearly identifying project scope and engagement opportunities
- Engagement tactics inclusive of all stakeholder groups

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3

TRANSPORTATION CORRIDOR STUDY PROCESS

Study Process Summary

Transportation corridor studies conducted by The City typically follow a four phase approach:

Phase 1 – Project Initiation includes the identification and definition of study area needs and confirmation that the project goals align with CTP/MDP objectives.

Phase 2 – Concept Development consists of development of the evaluation criteria that will be used to assess options, the development of transportation corridor options and the application of the evaluation criteria to the options. This is often an iterative process.

Phase 3 – Study Recommendations begins with the selection of the preferred alternative and includes the work required to further develop the concept to ensure the study objectives have been met.

Phase 4 – Project Closeout includes the presentation of the study findings and recommendations to Council.

These phases are detailed in the following sections and are illustrated in **Figure 7**.

All transportation corridor studies will have elements of public consultation integrated with the technical aspects of each phase. The City's engage! framework and toolkit provide an extensive inventory of potential engagement tactics available to project managers for use in transportation corridor studies.

The following sections suggest some forms of communication and engagement formats that may be suitable for each phase of the project. These suggestions are included simply for information as each project will have varying needs with respect to public engagement and the engagement and communications strategy that is developed will be project-specific and may vary from the tactics mentioned below.

Communication and engagement are addressed separately as they serve different functions in the context of transportation corridor studies:

- **Communication** serves to *provide information* to stakeholders.
- **Engagement** is purposeful two-way dialogue between The City and stakeholders to gather information to *influence decision making*.

The overall goal of communications and engagement for a transportation corridor study is to create awareness of the project and involve stakeholders in the decision-making process. Wherever communications or engagement is conducted, it is The City's commitment that the results will be reported back to stakeholders to communicate how their input was incorporated or explain why it wasn't.

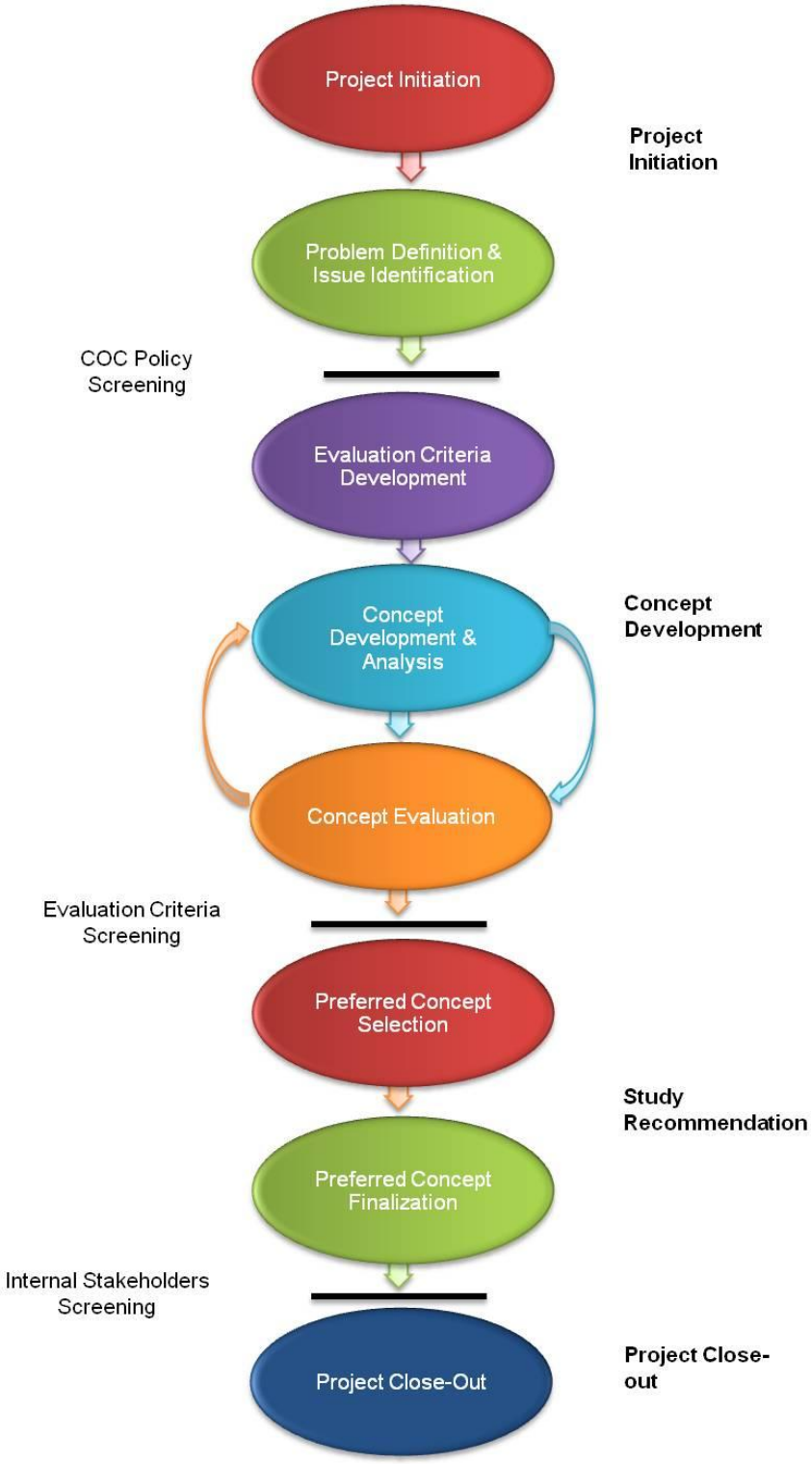
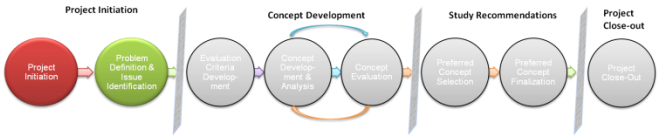


FIGURE 9: TRANSPORTATION CORRIDOR STUDY PLANNING PROCESS



Study Process Phases

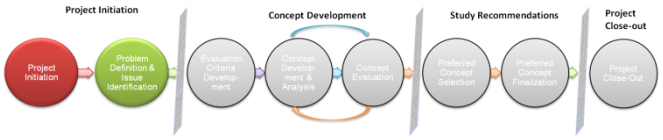
Phase 1 – Project Initiation

Project Initiation and Problem Definition - Transportation corridor studies are initiated by The City for a number of reasons. The CTP identifies network roadways as having certain characteristics. In inner city areas and established communities, these characteristics may not have been incorporated when the roadway was initially constructed (i.e., bike facilities, etc.). These roadways would require upgrading to align with the CTP and a transportation corridor study is the first step in determining the feasibility of the upgrades and associated right-of-way and funding requirements. Transportation corridor studies in greenfield areas are initiated through the development planning process to identify the long term transportation requirements for the area.

The Network Planning division within Transportation Planning prepares a workplan each year that includes projects which are selected to be completed. This workplan includes transportation corridor studies which have been prioritized and evaluated based on available resources and relative importance to the citywide transportation network.

> ***Transportation Corridor Study Policy (9a):*** *Undertake Transportation Corridor Studies on Transportation Corridors as required in support of the long term growth and development of The City to ensure that appropriate plans are in place for Transportation Corridors based on the goals and objectives and policies of the CTP;*

To initiate a transportation corridor study, The City typically retains a consultant to conduct the project (*see The RFP Process on the following page*).



The RFP Process

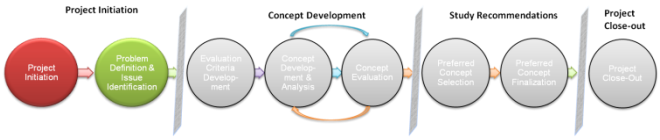
To initiate a project, Network Planning typically writes a Request for Proposal (RFP) which sets out the preliminary scope and objectives for the project, and the issues that the transportation corridor study is intended to examine. Prior to writing the RFP, information is gathered from a number of sources such as traffic counts, citizen concerns, roadway data and previous area studies (both land use and transportation studies). The intent of this work is to define the scope of the project and ensure that the objectives of the project align with the needs of the study area.

There are various approaches that may be taken to engage the public and gather feedback at this stage. Based on the variability present within the project scope and study area, The City will use different approaches on projects and will provide recommendations in the next Guidelines update. These approaches may include:

- Once a work plan has been set for a select year, The City will approach the public with all planned projects and ask for input on level of engagement required for each project.
- Engage the public on each separate project prior to writing the RFP to help define the study needs and scope.
- Writing the RFP without setting all project needs and scope and engage the public once a consultant is on board to collect this data.

Once the RFP has been written and issued, The City evaluates proponents' proposals and selects a consulting team that demonstrates the best understanding of the study area and project goals.

Transportation Corridor Study Policy (9c): *Conduct the appropriate level of engagement based on the classification of the Transportation Corridor, impact to the surrounding community and by following The City's engage! Policy and Administrative Framework;*



The City Project Manager and the consultant form part of the project team which may be further complemented by a communication and engagement strategist. The project team will work together to establish an appropriate preliminary communications and engagement strategy for the project. Factors considered in the development of this plan include:

- Project complexity
- Level of influence
- Decision points
- Resources, goals/objectives/desired outcomes
- Number of stakeholder groups and varying concerns
- Project timeline
- The number of challenging issues (i.e., property impacts, noise exposure, community demographics, river crossings, etc)

The project team will notify internal and external stakeholders and the public that a study is being undertaken by The City. This notification will be provided through a multi-faceted communications approach which would relay:

- the classification of the roadway based on the CTP
- information on the current and future accommodation of all modes of travel along and across the transportation corridor
- timeline for activities related to the study including approximate timelines when the study will be presented for approval

Forms of communication at this stage could include:

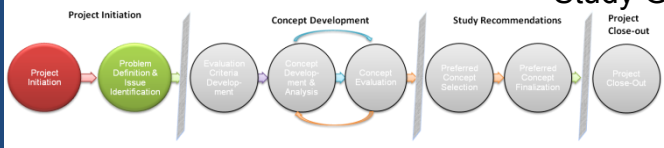
- City website
- City blog / social media
- Community newsletters

Engagement formats at this stage could include:

- Online surveys
- Open houses
- Community association meetings

Feedback from the public and stakeholders in the early stages will help shape how communication and engagement will be handled throughout the project (i.e., format, frequency, level of participation, etc.), recognizing the importance of maintaining flexibility to adapt to changing project and stakeholder needs.

Transportation Corridor Study Policy (9b): *Use a multifaceted communications approach to communicate to stakeholders that The City is undertaking a study on a Transportation Corridor;*



Issue Identification – This component of the project work is broad and occurs concurrently with other phases. The identification of issues can be part of the RFP scoping phase and it can also occur once the consulting team has been selected and the technical work is being initiated.

The project team will gather information to identify study area issues. Information sources could include:

- vision for the corridor
- CTP/MDP goals and objectives for the corridor
- stakeholder input
- previous studies
- safety assessment
- traffic volumes and forecasts
- collision data
- property information
- roadway characteristics and features
- active mode and transit facilities

Forms of communication at this stage could include:

- Project website
- Community newsletters

Engagement formats at this stage could include:

- Workshops
- Charettes
- Online surveys

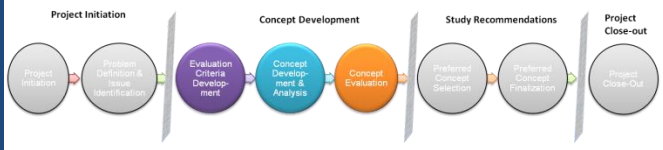
Communications at this stage will focus on sharing the project goals and constraints, and the background information obtained and issues identified by the project team.

Engagement activities at this stage will ask about area needs and issues not identified by the project team. The project team will also be looking to obtain input from the public and stakeholders on the relative importance they feel each issue merits.

Transportation Corridor Study Policy (9e): *Engage with Stakeholders to identify existing and potential future issues along a Transportation Corridor.*

Policy Screening – Once the issues associated with the transportation corridor are identified and the problem and scope defined, the project objectives are re-evaluated to ensure continued alignment with City of Calgary policies and guiding principles. For example, some of the issues identified by the project team and stakeholders may indicate that there is a desire for increased access to a roadway. However, when

assessed against the Calgary Transportation Plan, the classification of the roadway may be such that increasing access would impact its functionality. At this point, the issues and objectives that are still in alignment with City of Calgary policies will move forward and form part of the project scope. Issues which are determined to contradict those policies will be documented for potential future study. Where issues have been determined not to align with the project objectives, an explanation will be provided to stakeholders as to why.



Phase 2 – Concept Development

Evaluation Criteria Development – All concepts developed for a transportation corridor must be evaluated to determine the most appropriate solution. Before concepts are even created, the criteria by which they will be evaluated should be developed. This ensures that the evaluation clearly reflects project goals and objectives, stakeholder input and area needs rather than being influenced by specific concepts. Typically, the project team will identify a preliminary set of evaluation criteria and may assign weightings to each criterion. Evaluation criteria may include:

- traffic operations
- community impacts
- cost (construction and land)
- environmental impacts
- access and connectivity
- green infrastructure
- accommodation for varying modes (pedestrians, cyclists, and transit)
- safety

The evaluation criteria should reflect issues identified in Phase 1 by both the project team and stakeholders that have provided input.

Transportation Corridor Study Policy (9d): *Provide clear definitions of desired outcomes and tradeoffs for movement onto, through and across the corridor for all Transportation modes.*

Depending on project needs, these evaluation criteria may be communicated to the public through information sharing means such as the project website or an open house, or may be further developed through a collaborative effort with stakeholders via a workshop or Advisory Group.

Communications at this stage will focus on sharing the preliminary evaluation criteria and weightings developed by the project team and reporting back to the public on the transportation corridor issues and project objectives solidified in Phase 1.

Engagement activities at this stage will ask for

Forms of communication at this stage could include:

- Project website
- Email

Engagement formats at this stage could include:

- Workshops
- Advisory Group meetings
- Open houses
- Online surveys

input on the presented criteria as well as on items which may have been missed by the project team and the relative importance of each criterion.

The objective at the end of this step is to have a set of evaluation criteria and associated weightings by which to evaluate transportation corridor concepts that reflect the values and concerns of the project stakeholders. Acquiring an idea of stakeholders' weightings for the criteria allows the project team to begin to understand the impacts of trade-offs and compromises that may be required to arrive at a recommended plan.

Advisory Groups

An Advisory Group may be appropriate for projects which are more complex in nature. Factors to consider when determining whether an Advisory Group is suitable include:

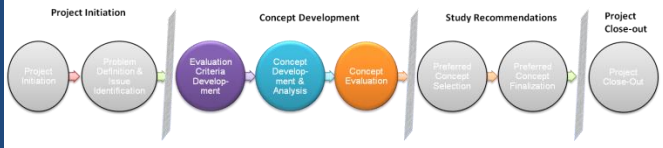
- numerous communities are impacted and have competing concerns
- there are a number of decision points throughout the study process that would benefit from focused attention and advice from stakeholders

An Advisory Group, if appropriate, may be formed at the end of Phase 1 or beginning of Phase 2. Members of the Advisory Group can be selected via an application process if interest is high or via collection of interested candidates at open houses. Terms of Reference should be developed with the Advisory Group members to outline expectations of involvement and commitment, tentative schedule of meetings and City obligations with respect to reporting back to members.

Concept Development and Analysis (Iterative) – The project team will work to develop concepts that address, in whole or in part, the issues identified for the transportation corridor with the aim of achieving the long-term transportation network requirements as set out in the project scope and objectives.

Transportation Corridor Study Policy (9f): *Use identified issues to work with Stakeholders to develop Concepts for improvements to the Transportation Corridor.*

Preliminary concepts may include overall transportation corridor characteristics (i.e., on-street bike lanes), as well as optimization opportunities at specific locations (i.e.,



left turn lanes). The intent is to develop a suite of possibilities that can be arranged and amalgamated to produce a recommended concept.

As part of the concept identification process, every transportation corridor study will include a ‗do nothing' concept in the evaluation to determine the impacts to the community and to the transportation network of having the transportation corridor remain in its current state as the city grows.

Transportation corridor concepts are analyzed to identify their impacts on current conditions as well as their potential for meeting the project objectives. Analyses typically include traffic operations, land requirements, high-level roadway dimensions and laning arrangements, high-level environmental impacts, and impacts to access.

In the past, transportation corridor studies have primarily focused on the long-term objectives of the project – enhancing road capacity, integrating active modes facilities, etc. The City is moving to include shorter-term priorities in its studies and identify opportunities for staging of ultimate plans to achieve these near-term objectives. Each concept developed through a transportation corridor study process should investigate such opportunities.

Transportation Corridor Study Policy (9h): *Communicate the factors (e.g. when land becomes available, traffic volumes reach a threshold, funding becomes available, etc.) that may lead to implementation of the recommended concept(s) and the estimated timelines for implementation*

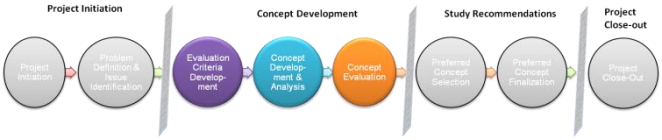
Communications at this stage will focus on sharing the preliminary concepts and high-level summaries of the analysis results, if appropriate. The analysis summaries should include information relating to possible triggers for implementation of each concept (i.e., when required land becomes available, traffic volumes reach a threshold, funding is obtained, etc.). The approximate timelines for each concept is likely related to the triggers but may also be conditional on the short-term or long-term nature of the concept. For example, a long term concept for a corridor may include interchanges but an interim concept could include optimization scenarios such as intersection upgrades.

Forms of communication at this stage could include:

- Project website
- Email

Engagement formats at this stage could include:

- Workshops
- Advisory Group meetings
- Open houses
- Online surveys



The intention is to provide the public with an update regarding the initial concepts and information that will feed into the evaluation component of the project.

Engagement activities at this stage will include opportunities to identify additional concepts or modifications for consideration. Input will also be garnered regarding preferences between concepts and reasons why.

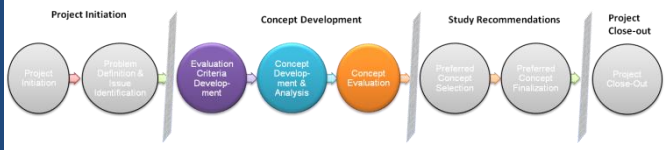
At the end of this step, the project team should have a set of concepts and associated analysis that have been reviewed by the stakeholders and a general sense of where preferences lie. The rationale behind the preferences will provide insight into potential modifications to concepts that will better reflect stakeholder desires. This will also feed into the initial evaluation performed in the next step.

Transportation Corridor Study Policy (9g): *Seek to develop concepts for a Transportation Corridor that will:*

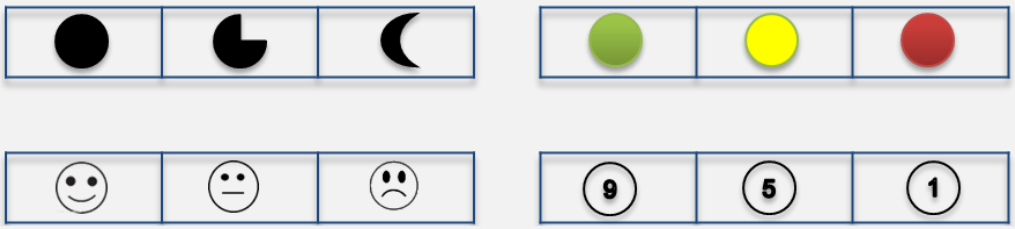
- *Preserve the integrity of adjacent communities*
- *Identify community improvements*
- *Minimize negative impacts on adjacent land uses and open spaces*
- *Include a 'do nothing' concept*
- *Include staging and prioritizing both interim and ultimate solutions within the corridor*

Concept Evaluation (Iterative) – The evaluation criteria developed earlier in this phase will now be applied to the concepts. The purpose is to evaluate each concept according to an objective set of agreed upon criteria which reflect both The City's objectives and stakeholders' values.

There are a number of formats which can be used for the evaluation – tabular, graphic, etc. The actual evaluation can be performed by the project team or can involve others. For example, the evaluation may be conducted with the internal stakeholder group providing individual scores and the final evaluation resulting from the average of all submitted scores. A workshop-style meeting may be held to discuss the scores and obtain acceptance for the criterion and concept. Alternatively, the evaluation may be performed with input from external stakeholders via a working group established for this purpose, an Advisory Group that has participated in other phases of the project, or via an online survey.



Examples of Evaluation Scoring



The most effective format for performing the concept evaluation will depend on a number of factors, including:

- complexity of concepts (may require specific explanations)
- type of analysis and facility of presentation (technical analyses not easily summarized or graphically presented can be difficult to communicate accurately via online means)
- competing views
- stakeholder interest

Engagement activities at this stage may include concept ranking or evaluation input.

Communications at this stage will focus on sharing the preliminary evaluation results and outlining the next steps for the project.

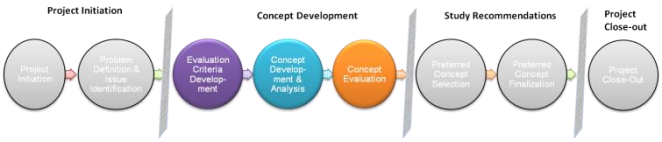
The objective at the end of this step is to either have narrowed the preliminary concepts down to a few which warrant further investigation or to have selected a preferred option to move forward with.

Forms of communication at this stage could include:

- Project website
- Email
- Letters
- Event promotion

Engagement formats at this stage could include:

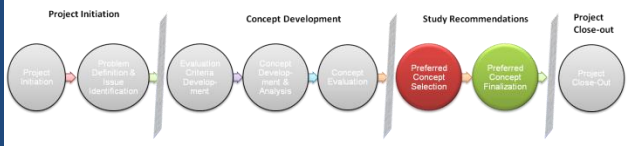
- Workshops
- Advisory Group meetings
- Open houses



Iterative Process

Typical Transportation Corridor Studies include an iterative process for the Concept Development and Analysis and Concept Evaluation components. Preliminary concepts, when evaluated, may result in 1-3 concepts warranting further analysis to determine the most appropriate. If one concept is clearly superior to the rest, it may be selected as the recommended concept and the project will move towards finalization. However, if two or more concepts rank similarly through the evaluation process, it may be determined that there are advantages to furthering the detail on all ‗second-stage' concepts to provide for a better comparison. If this is the case, the analyses will be conducted at a more detailed level and the evaluation process will be repeated until such time as a selection can be made for a recommended concept.

Evaluation Criteria Screening – The evaluation criteria that were established at the beginning of this phase will have been used throughout the iterative process in order to evaluate concepts and develop a preferred concept for further study. Through this assessment, some of the evaluation criteria may have been modified to reflect available analysis results or obvious differences between concepts. For example, if all options have the same environmental impacts, this criterion may have been removed from the evaluation or provided with a neutral weighting. Changes may have also occurred to the evaluation criteria if, for example, traffic analysis results (i.e., level of service, delay, etc.) are being used as proxy for criteria for which no data is available (i.e., air pollution due to congestion). The weightings may have been adjusted to reflect the analysis results being used. At the end of this phase, before final selection of a concept occurs, the evaluation criteria should be screened against the original set in order to ensure that the objectives initially set in collaboration with stakeholders are maintained.



Phase 3 – Study Recommendations

Preferred Concept Selection – Once the evaluation process is complete, a preferred concept is selected for finalization. Typically, this result is communicated to stakeholders through the engagement occurring in the Concept Evaluation stage. It may be communicated via an update to the project website and potentially emails to stakeholders that have provided contact information and asked for updates.

Preferred Concept Finalization – Additional work is required once the preferred concept has been selected. Technical work can include:

- design work to refine property impacts and confirm right-of-way requirements
- support components such as drainage and utility management plans, if necessary
- finalized cost estimates
- Staging opportunities
- report preparation

Communications at this stage will focus on sharing the finalized plans and outlining the steps required to obtain Council approval, if necessary, as well as reiterating timelines and triggers for implementation.

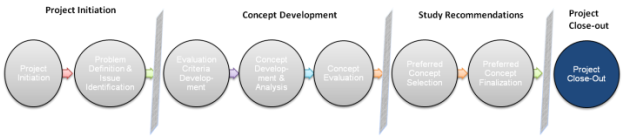
Forms of communication at this stage could include:

- Project website

Engagement formats at this stage could include:

- Advisory Group meetings
- Information sessions

Internal Stakeholders Screening – Although other City business units will have been involved throughout the project, this phase provides a final opportunity to circulate the final concept plans to ensure that City staff from all relevant business units are informed of the plans and have an opportunity to review them. This ensures that staff from other business units are aware of the final plans and can incorporate them, as necessary, in their work.



Phase 4 – Project Close-Out

Project Close-out – At this stage, the City project team will prepare a summary project report outlining the findings of the study and recommendations moving forward, for presentation to Council. Based on the results of the transportation corridor study, recommendations for next steps may include a request to begin opportunity-based land acquisition, direction to investigate potential funding sources and potential timelines for moving into more detailed studies (i.e., functional or preliminary design, etc.).

The project team will also undertake a robust internal project close-out exercise to reflect on lessons learned through the process. This information will be used in future studies for the corridor, ensuring a continuous understanding of the issues presented and will also be used internally to guide how future transportation corridor studies are conducted.

Transportation Planning is also committed to continuing their involvement in the corridor‘s development as it moves towards construction by maintaining a presence on the future project teams. This will help ensure that the corridor study goals and objectives are carried forward into implementation and revalidated to ensure continued alignment with City policies as time goes on.

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4

CALGARY CASE STUDIES

16 Avenue N Urban Corridor Traffic Management

Project Objective:

The 16 Avenue Urban Corridor Transportation Study was initiated in 2002 to review and update the 1977 Transportation Functional Study that had been completed previously and approved by Council to widen 16 Avenue from four to six lanes. While reviewing the 1977 Functional Study, it became apparent that a traffic management study of the corridor would be necessary to deal with the community issues. The study would accomplish the following:

- Work with eight different communities throughout the corridor to address their individual community traffic issues
- Determine and construct the community traffic management measures necessary between 17 Avenue and 15 Avenue along with the upgrading of the 16 Avenue N.

Process Highlights

The study process engaged the public extensively, including local business and residents most directly affected by the widening of 16 Avenue and the proposed land use and urban design policies.

- The study for the corridor consisted of two components: a Traffic Management Plan and a Land Use Policy Plan
- Traffic management meetings and individual surveys were conducted
- Global engagement was conducted to deal with the corridor as a whole

- A separate set of engagements were conducted with each community to deal with their specific concerns and issues
- Options for traffic management measures were developed on a community by community basis
- The Traffic Management Plan was based on a block by block analysis and the recommendations became part of the construction project

Stakeholders

The eight communities involved in the study were:

- Capitol Hill
- Renfrew
- Tuxedo Park
- Crescent Heights
- Winston Heights / Moutview
- Mount Pleasant
- SAIT
- Rosedale

Project Status

The Traffic management Plan was approved in 2006 and the Land Use Policy was approved by City Council in 2007. The cost of implement the specific measures identified during the study became a part of the 16 Avenue North construction program budget.

Successes & Lessons Learned

- Obtained buy-in from the communities and City Council
- Provided measures to alleviate issues anticipated due to the change in traffic patterns
- Regained public trust by providing mitigation measures to address community traffic issues in conjunction with the 16 Avenue Widening Project
- Public engagement and a firm understanding of community issues and concerns is crucial to the success of transportation planning and construction projects
- Taking a step back is sometimes necessary in order to re-evaluate project priorities and success measures
- Every Community is unique and experiences traffic issues differently; community solutions to project and study issues should reflect the unique community fabric, traffic patterns, and acceptability of project impacts.

17 Avenue Transportation and Land Use Studies

Before

After

Project Objective:

To identify a transportation / transit corridor that:

- Connects the downtown with the east freeway and promotes walking, cycling, and transit
- Complements the land use concept plan for land use adjacent to the corridor between Deerfoot Trail and 52 Street SE

Process

The transportation planning study of 17 Avenue SE was timed so that it can be integrated with the Land Use Concept Plan to ensure coordination among the varying components of development of the corridor. Key components of the process were as follows:

- The project was conducted under the guidance of a Technical Review Committee with representation from Transportation Planning (TP), Transit, Roads, Communications, Land Use Planning & Policy (LUPP), Transportation Infrastructure, Transportation Solutions, and the Consultant Team
- TP and LUPP worked together to coordinate activities for the two projects
- Brainstorming sessions were held with TP, LUPP, consultants and City staff from various business units

- Prepared a master schedule (LUPP and TP) and coordinated activities for seamless flow
- Formed two community advisory groups for consultations
- Modified the project schedule and added additional activities to the project to meet stakeholders and citizens needs to accommodate community concerns
- Collaboratively worked with Transit
- Conflict resolution workshops for internal stakeholders were held throughout the project for consensus building on the alternatives

Stakeholders

- Business Revitalization Zones
- Community Advisory Groups
- Area Aldermen
- Staff from various City Business Units
- Alberta Transportation

Successes and Lessons Learned

- Ensuring communities felt like they were being heard and their concerns and suggestions are being examined
- Listen to the communities‘ and stakeholders‘ concerns and respond in a timely fashion
- Ensure the stakeholders‘ interest does not dwindle through the study process
- Keep the options open for detailed discussion with the communities and stakeholders
- Obtained buy-in from the communities and aldermen
- Holding joint brainstorming sessions provides opportunities to the collaborating departments to learn each other‘s constraints and design standards
- Collaboration with Roads, Land Use Planning & Policy to establish preferred cross sections and gain consensus
- Sufficient budget should be allocated for public consultation on transportation projects
- Frequent meetings between TP and LUPP resulted in better understanding and brought them closer to each other
- Initial learning curve in the collaboration process between TP and LUPP and understanding each other‘s issues and constraints.

16 Avenue NE Transportation Planning Study

Project Objective:

The objectives of the study are:

- Determine the design and configuration of a future interchange at 16 Avenue and 19 Street NE while considering the proximity to the existing interchanges at Deerfoot Trail and Barlow Trail
- Identify opportunities to enhance walking, biking and transit connections

Process

- Meetings were held with area businesses and community representatives to introduce the project, seek input on the engagement process, and gather information on transportation issues in the area
- Stakeholders identified their top priorities and objectives for the corridor with the aid of the consulting team and City Administration
- Alternatives were developed based on stakeholders feedback and input
- Alternatives were presented to community representatives and interested stakeholders, who were then encouraged to provide their comments and feedback in a workshop style environment.

Stakeholders

- Special interest group representatives
- Adjacent communities and businesses

- Community Advisory Group

Successes and Lessons Learned

- Engaging the communities early in the project schedule to hear their concerns.
- Developing a set of trade-offs with the communities and external stakeholders proved valuable in developing alternatives.
- More to be updated upon completion of project

Crowchild Trail Corridor Study

Project Objective:

The overall objective of the study is to establish a long term vision for the Crowchild Trail corridor from 24 Avenue NW to 17 Avenue SW that provides recommendations for future roadway upgrades accommodating all modes of travel while maintaining connections to adjacent communities and amenities. The sub objectives were as follows:

- Recommendations must align with CTP/MDP
- Study must take into account the recommendations of adjacent Area Redevelopment Plans
- Study must account for the long term needs for all modes of travel with the view of providing enhanced transit services in the corridor
- The study should consider the need to provide appropriate access to the adjacent residential communities and businesses

Process

- The study was awarded to one primary consultant who worked closely and cohesively with a sub consultant.
- The project scope was divided into two segments internally within the project team but was presented to the public as one.
- An online survey was conducted in the early stages of the project to gather input on the existing use and concerns by users of the corridor. There were a total of 4,208 survey responses.
- Based on the survey responses, the consulting team completed a technical analysis along the corridor and chose possible alternatives based on that analysis.
- Select stakeholders were engaged before the development of alternatives.
- Alternatives were presented to the public in two well attended open houses.

- The project was placed on hold per council directive after concerns were raised by the public over the presentation of the alternatives.

Stakeholders

- City of Calgary Recreation (land steward of the Foothills Athletic Park)
- Business owners directly adjacent to Crowchild Trail
- University of Calgary
- Calgary Board of Education
- Neighbouring churches (located at 2526 24 Ave NW and 2424 24 Ave NW)
- Banff Area Redevelopment Group

Successes and Lessons Learned

- The survey was well administered and provided good feedback
- Having one primary consultant with a sub consultant rather than two separate consultants provided better cohesion
- The Technical work completed by the consulting team was very good and included analysis of options that were discounted early in the process due to technical reasons and not presented to the public.
- Geographically large project with complicated characteristics are difficult to portray and illustrate to the public in an open house format
- The public‘s perception of when and how they are engaged plays an important key in the engagement process and in the level of trust between the City and the public
- Improper engagement with the public has the potential to derail projects and negatively impact time and budget constraints (as was the case with the Crowchild Trail Corridor Study).
- Presentation of alternatives should be visual and easy to understand as well as needing to have a clear definition that they are options for possible alternatives and not the preferred final option.
- Open houses are not always the best way of presenting information to the public, as illustrated by this complex project.

West LRT Detailed Design and Implementation Plan

Project Objective:

The project includes:

- 8.2 kilometer of track between downtown and 69 Street SW
- Six new light rail transit (LRT) stations and a revamped bus network in 21 communities
- Construction of a new interchange at 17 Avenue and Sarcee Trail SW

Process

- Alignment plans from the 1970s were reviewed and adjusted then presented to Council.
- A construction completion date of December 2012 was chosen at the beginning of the project as a firm unmovable deadline.
- In February 2008, property acquisition letters were mailed to applicable residents and businesses followed by a public open house showing line drawings of the LRT route and station locations.
- Properties had to be acquired and short notice was given to those impacted.
- The LRT alignment was altered twice due to public feedback and community lobbying. The modifications were approved by Council and resulted in an additional cost of approximately $80 million to the project.
- Engagement on the LRT alignment occurred between February and June 2008.
- Engagement on public engagement plan occurred between June 2008 and January 2009
- Five community committees were extensively engaged from August 2008 – April 2009 to design the six stations and urban design elements.

  - All five communities attended a kickoff and the wrap up meeting
  - 3 individual meetings were held with each community for the design of their specific station
- The communities were also involved in developing the engagement plan and citizen committee group
- Further engagement was conducted from September 2008 – June 2009 in regards to the urban design concepts and station design
- Construction began in the spring of 2010 with engagement on ‗inform' and ~~"li~~sten and learn" levels only
- Separate engagement on the bus routing led by Calgary Transit (2010-2012 and landscaping led by West LRT project team (2012) continued throughout the project

Stakeholders

- Five ‗station' communities: Sunalta, Shaganappi, Westbrook, 45 Street, Sirocco/69 Street
- Internal City business units (Transit, Transportation Infrastructure, Transportation Planning, Roads, Land Use Planning & Policy, Corporate Properties, Communications)

Successes and Lessons Learned

- The engagement process for the project design (pre-construction) was extended by 6 months from what was originally anticipated due to originally engaging at the ~~"I~~nform" level regarding the LRT alignment.
- The loss of trust from communities and citizens due to the ~~"I~~nform" level of engagement at the beginning of the project resulted in a loss of trust and skepticism from communities throughout the project's lifecycle, which resulted in more meetings and resources committed to engagement than what was originally scheduled, during the project's lifecycle and into 2013. This also increased the cost of certain items of the project.
- Eventual buy-in from the communities on the alignment and station design
- The flexibility to meet citizens, communities, and alderman demands and make changes as necessary.
- While the project never came to a ‗stand still', modifications needed to be made to meet public demand; thus increasing project costs.
- Immediate land acquisition has huge impacts on project budget and schedule as well as building distrust between the public and the City.

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5

APPENDICES

Appendix A – Literature Review

Identifying a Need

A –Thinking Beyond the Pavement" national workshop was sponsored in 1998 by the Federal Highway Administration (FHWA), the American Association of State Highway and Transportation Officials, the Maryland Department of Transportation, and the Maryland State Highway Administration. The workshop highlighted specific qualities of excellence in design and the process characteristics that contribute to that excellence as follows (Maryland State Highway Administration 1998):

Qualities of Excellence:

- An agreement by a full range of stakeholders of the purpose and needs of the project is made in the earliest phase of the project and amended as warranted during the project development
- The project is in harmony with the community and preserves environmental, scenic, aesthetic, historic and natural resource values of the area
- The project achieves a level of excellence in designers and stakeholders minds
- The project involves efficient and effective use of resources of all involved parties
- The project is designed and built with minimal disruption to the community
- The project is seen as having added lasting value to the community

Contributing Characteristics:

- Communication with all stakeholders is open and honest, early and continuous
- A multidisciplinary team is established early—with disciplines matching the needs of the specific project—and includes the public
- A full range of stakeholders joins transportation officials in determining the project's scope, clearly defining the purposes of the project, and reaching consensus before proceeding
- The development process is tailored to the circumstances, examines multiple alternatives, but results in a consensus approach
- Top agency officials and local leaders are committed to the process
- The public involvement process, which includes informal meetings, is tailored to the project
- The landscape, the community, and valued resources are understood before the engineering design begins

- A full range of tools for communication about project alternatives is used—for example, visualization techniques

Due to the findings from the workshop and the growing demand for more public involvement in decisions about transportation projects that affect local communities, the context sensitive design or solutions approach evolved.

Context sensitive solutions (CSS) has been defined as a collaborative, interdisciplinary approach in which citizens are part of the design team to provide a transportation facility that fits its setting. It defines the need and purpose of the transportation project and then addresses the scenic, aesthetic, historic, community, and environmental resources, while improving or maintaining safety, mobility, and infrastructure conditions (AASHTO; FHWA 2007).

The Indiana Department of Transportation (INDOT) identified that a two-way proactive communication process with the public has great benefits and assist the agency in (Indiana Department of Transportation 2012):

- Creating a context sensitive solution that meets the community needs, explores project objectives and trade-offs, and full communication of the engineering judgement for the full range of alternatives.
- Reducing project re-design and delays by increasing public trust and acceptance.
- Effectively using limited resources by obtaining support and funding for cost – effective projects to stakeholders.

While public involvement has great benefits for projects, there are some problems that face ‗good' public involvement (Lewis, Goodwin and Sabaroche 2011):

- Citizens may find transportation concepts and terms complex and difficult to understand
- Inadequate explanations provided to the public by the transportation officials
- Lack of trust between transportation planners and engineers and the public
- Citizens may be more interested in immediate or short term solutions opposed to the long term transportation solutions presented to them
- Citizens desiring to keep their community unchanged when new transportation infrastructure is needed or proposed

Public Involvement Best Practices

The FHWA Public Involvement Policy states that:

> ~~-~~performance standards for these proactive public involvement processes include early and continuous involvement; reasonable public availability of technical and other information; collaborative input on alternative, evaluation criteria and mitigation needs; open public meetings where matters related to Federal-aid highway and transit programs are being considered; and open access to the decision-making process prior to closure" (FHWA 2013).

The Committee on Public Involvement in Transportation identified some general principles for a successful public involvement process (Trannsportation Research Board 2000):

- Practitioner should clearly understand the difference in public involvement from public information and public relations. Public information program is a one way communication process generally between an agency and the public to provide information on an ongoing issue or development. Public relations' main goal is to promote a particular issue or policy.
- Public involvement programs should not be perceived as selling' a policy or a solution. Instead, the program should be based on a two way dynamic communication that promotes public feedback and uses that feedback in the decision process and outcome.
- Public involvement programs should be inclusive seeking out to all groups and individuals who will be impacted by the project. The practitioner needs to be proactive with a good knowledge of the community as some groups or individuals may be difficult to reach.
- Communication between practitioners, agency officials, and members of the public should be respectful. Opinions from the public needs to be given serious consideration and receive prompt and respectful responses.
- Public involvement should be initiated early the project development and continue throughout as initiating public involvement later in the project development process causes public distrust and often causes re-examination of some decisions.
- The decision process needs be structured so that outcomes reflect public input and should be clearly defined to all participants at the beginning of the project, as well as all critical decision points where they can have influence.
- Adequate resources of staff time and budget for information material and other involvement strategies are essential.

The Texas Department of Transportation (TxDOT) states that the two most important components needed to the public interested and engaged in a project from start to end are trust and credibility (Lewis, Goodwin and Sabaroche 2011). Factors to be considered to foster trust and credibility are:

- Describe the process and expectations of each meeting so stakeholders will understand the sequence of activities and their role in the process
- Include stakeholders from the outset and be direct about the information
- Treat all stakeholders with great care and respect
- Follow up with stakeholders and keep promises
- Promise what can be delivered
- Give equal attention to all groups and consider all issues of stakeholders
- Avoid closed meetings that may arouse suspicion or imply there is something to hide
- Foster effective communication
- Encourage innovation
- Be proactive
- Respect the opinions and actions of persons involved by displaying sincerity, credibility and veracity
- Be certain information obtained is accurate and logical
- Enlist organizations that are reputable with the community
- Be direct, clear and concise. Mixed messages can create confusion and contradiction
- Employ plain language to meet the needs of the public
- Focus on building trust as well as producing good scientific data
- Emphasize partnering to achieve a mutual understanding of issues
- Work as a team promoting group efforts
- Provide appropriate public notifications
- Use appropriate tools (graphics, maps, photos) depending on the audience at hand

US DOT Policies

A Texas Southern University study team reviewed and identified the states in which their department of transportation had a direct written policy about the public involvement process. Some of the states supported their policy with detailed descriptive phrases while others included goals or implementation steps. Their observations are summarized in **Table B1** (Lewis, Goodwin and Sabaroche 2011).

Table B1: DoT Policies and Structures

State DOT	Selected Key Words / Phrases	Structure
Alabama	…it will be the endeavor of the Heart of Alabama Rural Transportation Organization to actively seek comprehensive public input into our public transportation planning process…	Includes a purpose section
Connecticut	….actively engage in early and continuous public involvement efforts throughout all phases of project planning, development implementation and operation…	Supported by three delineating points
Florida	…meaningfully involve the public in important decisions by providing for early, open, continuous, effective public participation in, access to key planning and project decision-making processes….	Supporting points are delineated
Hawaii	…recognizes the value of public involvement as a programmatic measure that strengthens and solidifies its transportation programs…	Three paragraph policy supported by strategies
Indiana	…promotes public involvement opportunities and information exchange activities.	Includes benefits and implementation
Kansas	…reaches out to the citizens it serves and actively engages the public in the decision making processes…	Includes a goal statement with four descriptive points
Minnesota	…productively work with the people of Minnesota in public involvement that is appropriate, accessible, transparent, accountable, meaningful and inclusive of the state‘s diverse population	
Oregon	…meaningfully involve the public in important decisions by providing for early, open, continuous, effective public participation in, access to key planning and project decision-making processes….	Is accompanied by purpose, objectives, and implementation steps
Wyoming	The policy provides criteria for using different levels of public involvement initiatives.	

Texas Department of Transportation

The TxDOT created a public involvement policy that supplements two other manuals: Review of the Transportation Planning and Programming Division, Public Involvement Plan, and Texas Department of Transportation Public Involvement Plan: Talking with Texans. The manuals provide additional guidance and information regarding methods and requirements while the policy is as follows:

> ~~"~~The TxDOT commits to purposefully involve the public in planning and project implementation by providing for early, continuous, transparent and effective access to information and decision-making processes. TxDOT will regularly update public involvement methods to include best practices in public involvement and incorporate a range of strategies to encourage broad participation reflective of the needs of the state's population." (Lewis, Goodwin and Sabaroche 2011)

The objectives of the policy are:

- Ensure adherence and compliance with federal and state guidelines and policies and sound public involvement practices.
- Solicit and encourage proactive public involvement that can be fully integrated into the planning process and incorporated in the various planning activities.
- Provide opportunities for accurate, timely information upon which Texas residents can rely.
- Establish and maintain TxDOT's reputation as a trusted source of information.
- Respond to public inquires and suggestions and proactively seek early and continuing public input and involvement.
- Be accountable and responsive to all stakeholders when comments are provided.
- Energetically adhere to or exceed all applicable TxDOT, State of Texas, or federal public participation requirements for planning and project implementation.
- Utilize multiple methods to explain TxDOT's processes, priorities and procedures, so the public will have a solid foundation upon which to make requests, inquires and suggestions.

Oregon Department of Transportation

The Oregon Transportation Commission (OTC) and the Oregon Department of Transportation (ODOT) created the 2008 public involvement policy and its

implementation actions to update the Public Involvement Polices and Procedures previously adopted by the OTC in 1994. The policy and its implementation actions recognise the importance of meaningful involvement from the public and lists basic steps necessary to meet public involvement obligations. The policy is as follows:

> "The Oregon Transportation Commission and the Oregon Department of Transportation will meaningfully involve the public in important decisions by providing for early, open, continuous, and effective public participation in and access to key planning and project decision-making processes." (Oregon Transportation Commission 2009).

The objectives of the policy are:

- Improve public involvement during the development and update of statewide transportation plans
- Improve the consistency of ODOT public involvement processes
- Advise ODOT staff on public involvement processes and coordination within the agency
- Involve stakeholders and members of the public actively in the development and update of transportation plans

Kansas Department of Transportation

The mission of the Kansas Department of Transportation (KDOT) public involvement program is to "foster effective two-way communication, facilitate citizen participation, and help KDOT and its customer work together to fulfill KDOT's mission" (KDOT 2011), and their mantra is ***Responsible and Responsive***. The KDOT public involvement plan document "Sharing the Future" outlines the policy, the basics of public involvement, how to make decisions, and how the public are involved in the project development process. Their policy is as follows:

> "Therefore, it is the policy of the Kansas Department of Transportation to reach out to the citizens it serves and to actively engage the public in the agency's transportation decision-making processes" (KDOT 2011).

The document identifies a ten-step process for developing and implementing a public involvement plan that can be adopted for any public involvement effort as illustrated in **Figure B1**. The first six steps in the process should be performed as early in the project as is feasible.

Figure B1: KDOT Public Involvement Step-by-Step Process

Virginia Department of Transportation

The Virginia Department of Transportation (VDOT) recognizes the importance of citizen input and thus has created a guide to educate the public on transportation planning projects, their roles in the process, and how to become involved. The guide titled ~~–~~Public Involvement – Your Gide to Participating in Transportation Planning and Programming Process" has the following objectives:

- Educate citizens about the planning and programming processes
- Explain where and when the public can participate
- Explain how the public input will be used

Minnesota Department of Transportation

The Minnesota Department of Transportation (Mn/DOT) created *Hear Every Voice'* to outline the guidance and techniques for its public involvement process. The document discusses how public involvement has evolved within Mn/DOT, how to develop a public involvement plan to implement the guidelines, Mn/DOT's planning and programming processes, and specific public involvement techniques.

Public involvement techniques and their applicability to steps in the planning process are illustrated in **Figure B2**.

KEY

● Always Appropriate ◗ Sometimes Appropriate ○ Not Very Appropriate

Plan Process

Tool/Technique	Total Planning Process	Developing Values, Goals & Objectives	Choosing Alternatives	Plan Implementation	Feedback-Modification	Case Study
Civic Advisory Committee (Advise)		●	●	○	○	
Citizens on Decision & Policy Bodies (Recommend)		○	○	●	○	
Collaborative Task Force (Problem Solve)	●	●	●	●	●	
Mailing Lists	●	●	●	●	●	21
Public Information Materials	●	●	●	●	●	
Key Person Interviews	●	●	●	●	●	
Briefings	●	●	●	●	●	
Video Techniques		◗	●	◗	○	
Telephone Techniques		◗		◗	◗	
Media Strategies	●	●	●	●	●	21
Speakers Bureau & P.I. Volunteers		●		◗	○	
Public Meetings/Hearings (Formal)		○	●	○	○	21
Open Forum/Open Houses		◗	●	○	◗	
Conferences, Workshops & Retreats	●	●	●	●	●	
Brainstorming		●		○	○	
Charrettes	●	●	●	●	●	
Visioning		●	●	○	○	13
Small Group Techniques	●	●	●	●	●	14, 15
On-line Services		●		◗	◗	
Hotlines		◗	●	◗	●	
Drop-in Centers		◗	●	○	○	
Focus Groups	●	●	●	●	●	17
Public Opinion Surveys		●	●	○	●	
Facilitation		○	●	○	○	21
Negotiation & Mediation		○	○	●	○	
Transportation Fairs		◗	●	○	○	
Games & Contests		○	●	○	○	
Improving Meeting Attendance	●	●	●	●	●	
Role Playing		○		○	○	
Site Visits		◗	●	●	○	
Non-Traditional Meeting Places & Events	●	●	●	●	●	
Interactive Television		◗	●	○	○	
Interactive Video Displays & Kiosks		◗	●	○	◗	18
Computer Presentations & Simulations		◗	●	●	○	
Teleconferencing		○	◗	○	◗	

Figure B2: MnDOT Public Involvement Techniques in the Planning Process

Source: (MnDOT 1999)

The document also identifies Mn/DOT public involvement objectives, general methods of involvement, and specific techniques as summarized in **Table B2**.

Table B2: Public Involvement: Mn/DOT Specific Experience

Objective	General Method	Specific Technique
Inform	Committees	Civic Advisory Committees (Advise) Citizens on Decision Policy Bodies (Recommend) Collaborative Task Forces (Problem Solve)
	Communication	Mailing Lists Public Information Materials Key Person Interviews Briefings Video Techniques Telephone Techniques Media Strategies Speakers Bureau & P.I. Volunteers
Involve	Meetings	Public Meetings/Hearings (Formal) Open Forums/Open Houses Conferences/Workshops/Retreats
	Techniques	Brainstorming Charrettes Visioning Small Group Techniques
Feedback	Establishing Places	On-Line Services Hotlines Drop-In Centers
	Designing Programs	Focus Groups Public Opinion Surveys Facilitation Negotiation & Mediation
Participation	Special Techniques	Transportation Fairs Games & Contests Improving Meeting Attendance Role Playing Site Visits Non-Traditional Meeting Places & Events Interactive Television Interactive Video Displays & Kiosks Computer Presentations & Simulations Teleconferencing

Source: (MnDOT 1999)

Appendix B – References

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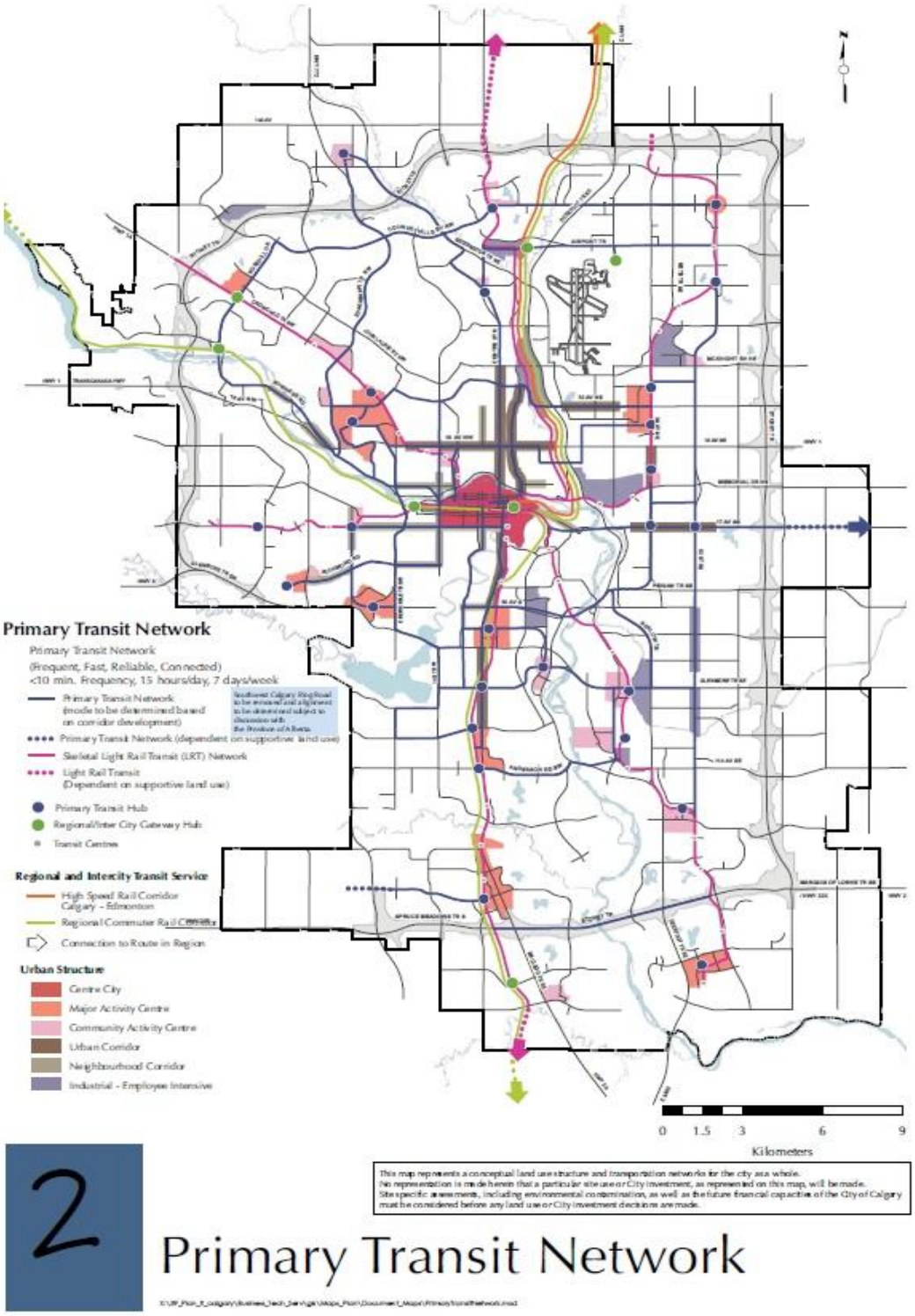
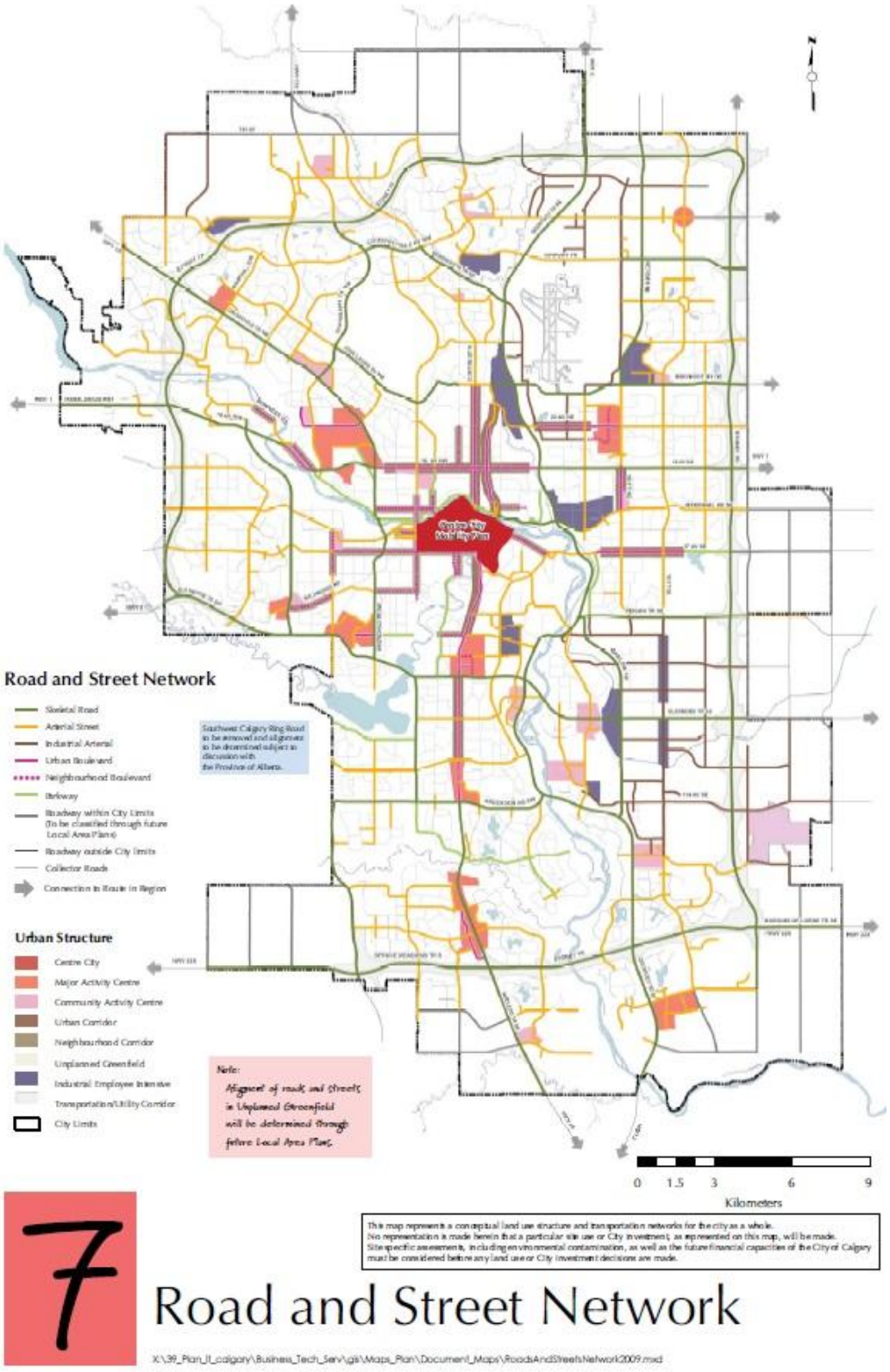
Appendix C – Calgary Transportation Plan Maps



2

Primary Transit Network


Road and Street Network
Skeletal Road
Arterial Street
Industrial Arterial
Urban Boulevard
Neighbourhood Boulevard
Parkway
Roadway within City Limits
(To be classified through future Local Area Plans)
Roadway outside City Limits
Collector Roads
Connection to Route in Region
Southwest Calgary Ring Road
to be removed and alignment
to be determined subject to
discussion with
the Province of Alberta.
Urban Structure
Centre City
Major Activity Centre
Community Activity Centre
Urban Corridor
Neighbourhood Corridor
Unplanned Greenfield
Industrial Employee Intensive
Transportation/Utility Corridor
City Limits
Note:
Alignment of roads and streets
in Unplanned Greenfield
will be determined through
future Local Area Plans.
0 1.5 3 6 9
Kilometers
This map represents a conceptual land use structure and transportation networks for the city as a whole.
No representation is made herein that a particular site use or City investment, as represented on this map, will be made.
Site specific assessments, including environmental contamination, as well as the future financial capacities of the City of Calgary
must be considered before any land use or City investment decisions are made.
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Road and Street Network
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