TSUUT'INA DEVELOPMENT AUTHORITY

INFRASTRUCTURE DESIGN STANDARDS AND SPECIFICATIONS

2025 VERSION

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Prepared for TSUUT'INA DEVELOPMENT AUTHORITY
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1 Overview

1.1 Purpose

The *Infrastructure Design Standards and Specifications* are available for use within the Taza Development on the Tsuut'ina Nation, effective as of the following date:

MARCH 2025

The *Infrastructure Design Standards and Specifications* have been prepared for the benefit of Developers, Applicants, Consultants, Contractors and other interested parties to provide procedures and standards on the Development of land and the construction of public and private infrastructure in the Taza Development on the Tsuut'ina Nation.

The *Infrastructure Design Standards and Specifications* define the minimum requirement for public and private infrastructure. It is the responsibility of Developers, Applicants, Consultants and Contractors to ensure all relevant standards, specifications, and codes referenced in this document are adhered to. It is also their responsibility to apply sound engineering principles and industry best practices to provide a final product that is practical, economical, efficient, safe and sustainable.

These *Infrastructure Design Standards and Specifications* have been developed to stay current with the *Taza Development Guidelines* and related strategic plans, industry best practices, and to remain in compliance with regulatory requirements.

It is advised that any individual using the *Infrastructure Design Standards and Specifications* contacts the Tsuut'ina Development Authority (herein referred to as TDA) to ensure they have the latest version. The document will also be accessible online at the following link:

https://tda.tsuutina.com/

1.2 Contents of This Document

The *Infrastructure Design Standards and Specifications* has been divided into three (3) Sections. The First Section titled Overview, provides an overview of this document including the purpose, disclaimer, studies relevant to the Taza Development, and the glossary of terms. Section Two (2) and Three (3) are composed of design standards and construction specifications pertaining to Public Infrastructure (PI) and Development Permit (DP) applications, respectively.

1.3 Disclaimer

The *Infrastructure Design Standards and Specifications* are to be read as a whole, in conjunction with the *Taza Development Guidelines* and the relevant Tsuut'ina Nation Laws, Policies, Regulations and Guidelines pertaining to the Taza Development, as well as the relevant standards, specifications, and codes referenced in this document, and no individual part or section shall be read individually. The Tsuut'ina Nation shall not be held liable for any missed information that is inappropriate or inadvertently missed by the incomplete reading or assumptions made of these *Infrastructure Design Standards and Specifications*.

Use of the *Infrastructure Design Standards and Specifications* shall not absolve any party from professional liability and the obligation to exercise professional judgment and follow good engineering and construction practice.

These *Infrastructure Design Standards and Specifications* are intended to provide information to the Developer, Applicants, Consultants and Contractors who require knowledge of the standards

governing the design and construction of infrastructure within the Taza Development on the Tsuut'ina Nation.

1.4 General Document & Study Requirements for Development

1.4.1 Taza Development Studies

The following is a list of studies completed specifically for the Taza Development. These studies should be reviewed prior to beginning a Public Infrastructure (PI) Permit or Development Permit (DP) application.

- *Taza Development Guidelines by the Tsuut'ina-Canderel Land Development Limited Partnership*
- *Taza Developments – Detailed Environmental Review Report by Stantec Consulting Ltd.*
- *Taza Developments – Phase II Environmental Site Assessment Taza Park by Pinchin Ltd.*
- *Taza Developments – Phase II Environmental Site Assessment Taza Park East Parkway & Utilities by Pinchin Ltd.*
- *Phase II Environmental Site Assessment – Taza Park West by WSP Canada.*
- *Phase I Environmental Site Assessment – Taza Exchange by MCA Environmental Management*
- *Master Drainage Plans prepared for each Taza Village.*
- *Water and Sanitary Servicing Studies prepared for each Taza Village.*
- *Master Traffic Impact Assessments prepared for each Taza Village.*
- *Taza Exchange – Potable Water Reservoir and Pump Station by MPE Engineering Ltd.*
- *Taza Park – Water Network Analysis by WSP Canada.*
- *Taza Sustainability Policy Framework and Taza Sustainability Implementation Strategy by Light House Sustainable Building Centre.*

1.4.2 Relevant Guidelines, Manuals, Standards and Specifications

The design standards and construction specifications for Taza need to be in accordance with this document and the latest version of the following City of Calgary and Provincial/Federal Guidelines, Manuals, Standards and Specifications:

- *CAD Standard Guidance Document*
- *Design Guidelines for Development Site Servicing Plans*
- *Design Guidelines for Street Lighting*
- *Design Guidelines for Subdivision Servicing*
- *Development Guidelines and Standard Specifications – Landscape Construction*
- *Erosion and Sediment Control Guidelines*
- *Erosion and Sediment Control Field Manual*
- *Instruction Manual for Erosion and Sediment Control Plan Applications*
- *Standard Specifications & Design Guidelines – Potable Water Feedermain Construction*
- *Standard Specifications – Erosion and Sediment Control*

- *Standard Specifications – Roads Construction*
- *Standard Specifications – Sewer Construction*
- *Standard Specifications – Traffic Signal Construction*
- *Standard Specifications – Waterworks Construction*
- *Standard Block Profile Specifications for CAD and Manual Formats*
- *Stormwater Management and Design Manual*
- *Temporary Traffic Control Manual*
- *Wastewater Lift Station Design Guidelines*
- *Alberta Transportation Recommended Practices Guidelines for Signage, Traffic Operations and Traffic Signals*
- *Transportation Association of Canada Geometric Design Guide for Canadian Roads (GDC)*
- *Transportation Association of Canada Manual of Uniform Traffic Control Devices for Canada (MUTCD)*
- *Alberta Environment and Parks Standards and Guidelines for Municipal Waterworks, Wastewater, and Storm Drainage Systems*

The *Infrastructure Design Standards and Specifications* contain amendments, changes, additions and deletions to the above noted documents as they pertain to Taza on the Tsuut'ina Nation. This document shall always take precedence over the above noted documents in the event of conflict. Any reference to the City of Calgary shall be interpreted as the Tsuut'ina Nation, and any subsidiary shall be the TDA. Any deviation from these *Infrastructure Design Standards and Specifications* including any of the above listed standards and specifications will require written approval from the TDA.

1.5 Glossary of Terms

The following expressions or words, when used in these *Infrastructure Design Standards and Specifications*, shall carry the following meaning, unless otherwise stated within the context of this document:

APPLICANT means a person, or a representative, who makes an application for Development Permit, Public Infrastructure Permit, other permits and approvals referenced in this document including any permit amendments.

APPLICATION NUMBER is a number provided by the TDA for a given Development Permit application or Public Infrastructure Permit application.

BUFFALO RUN is the one of the three Villages on the Tsuut'ina Nation, located in the southernmost area. Buffalo Run is a 390-acre Development that combines regional retail, office, and residential with recreation, entertainment, and tourism. This Village was previously referred to as Taza Exchange.

CONSTRUCTION COMPLETION CERTIFICATE (CCC) shall mean the certificate accepted by the TDA or their Consultant, stating that all Infrastructure Improvements and materials have been constructed, installed and inspected in conformance with the Servicing Agreement and the Infrastructure Design Standards and Specifications. CCC signifies the start of the warranty period.

CONSULTANT shall mean the person or persons retained by the Applicant as the professional of record, and shall include the services of a consulting engineer, landscape architect, land surveyor and planner.

CONTRACTOR shall mean the individual or corporation hired by the Applicant to supply, construct and/or install the Infrastructure Improvements pursuant to the Agreement by or at the expense of the Applicant. The Contractor shall supply materials and carry out the construction and installation in strict accordance with the Infrastructure Design Standards and Specifications.

DEVELOPER shall mean the registered lessor of the Development lands that form the Public Infrastructure.

DEVELOPMENT means:

(a) the execution of any construction or excavation or their operation, in, on, over, or under land or water or,

(b) the making of any change in the use or intensity of use of any land, water, building or premises.

DEVELOPMENT COMPLETION CERTIFICATE (DCC) refers to an approval issued by the TDA confirming that the requirements of a Development Permit have been satisfactorily completed.

DEVELOPMENT GUIDELINES refer to the *Taza Development Guidelines* which are the document(s) that govern the vision and values against which proposed plans and design are assessed for Tsuut'ina Nation's approval.

DEVELOPMENT PERMIT means a document authorizing a Development, issued by the Taza Development Authority pursuant to this *Infrastructure Design Standards and Specifications* governing private land use within the Tsuut'ina Nation, and includes the plans and conditions of approval.

ENGINEERING CONSULTANT shall mean a professional member licensed to practice engineering in good standing with The Association of Professional Engineers and Geoscientists of Alberta (APEGA) or The Association of Science & Engineering Technology Professionals of Alberta (ASET). This includes a Professional Engineer (P.Eng.), a Professional Licensee (P.L. (Eng.)) or a Professional Technologist (P.Tech.).

ENGINEERING DRAWINGS shall mean the engineering plans and profiles prepared by the Engineering Consultant, showing the various details of the installations and Infrastructure Improvements within the Development using standard engineering symbols, labels and best practices, all of which shall conform to the minimum requirements as outlined in these *Infrastructure Design Standards and Specifications*.

EROSION AND SEDIMENT CONTROL (ESC) is a strategy that is implemented during construction activities to limit the amount of soil loss for all exposed slopes. A Plan consisting of an application and a series of drawings that showcase the different stages of construction for a Development is assembled by a Specialist whom is deemed a Certified Professional in Erosion and Sediment Control (CPESC), Professional Engineer (P. Eng.) Professional Licensed Engineer; called a Limited License in other jurisdictions (P.L.Eng.), or a Professional Agrologist (P.Ag.).

FINAL ACCEPTANCE CERTIFICATE (FAC) shall mean the certificate accepted by the TDA or their Engineering Consultant stating that the Infrastructure Improvements and materials have been constructed, installed and inspected in conformance with the Servicing Agreement and the *Infrastructure Design Standards and Specifications* and that all defects and deficiencies in the Infrastructure Improvements have been remedied by the Applicant. FAC signifies the end of the warranty period.

IRRIGATION CONSULTANT shall mean a professional member licensed to practice irrigation design in good standing with the Irrigation Association. This includes a Certified Irrigation Designer (CID).

LANDSCAPE ARCHITECTURAL CONSULTANT shall mean a professional member licensed to practice Landscape Architecture in good standing with the Alberta Association of Landscape Architects.

LANDSCAPE PLANS shall mean the landscape plans prepared by the Landscape Architect, showing the various details of the landscape installations in support of a Public Infrastructure Permit or Development Permit application.

PUBLIC INFRASTRUCTURE (PI) means all exterior public spaces within the Taza Development that are generally open and accessible to all people regardless of ownership. These public spaces include Streets, lanes, greenways, bridges, squares, plaza, parks, linkages, natural areas, transit hubs, views and the waterfront. In documents issued prior to 2024, this may also be referred to as Public Realm (PR).

PUBLIC INFRASTRUCTURE IMPROVEMENTS shall mean all on-site and off-site services, facilities and infrastructure required to be constructed as a condition of a Public Infrastructure Permit application.

RECORD DRAWING(S) shall mean drawings prepared by the Consultant that accurately depicts the final constructed configuration of Infrastructure Improvements and which shall show any construction deviations and all features of the Infrastructure Improvements as actually built.

SERVICING AGREEMENT shall mean the written contract agreement that is duly executed between the Applicant and the TDA which details the terms and conditions under which the Applicant is to construct or install the Infrastructure Improvements.

STREET shall mean any public road, including the boulevards, sidewalks, and improvements, but excluding a back lane, bridge, or walkway.

TAZA DEVELOPMENT is the Development on the Tsuut'ina Nation totaling over 1,200 acres and stretching ten kilometers along Tsuut'ina Trail. The Development will consist of three Villages that have been named Taza Park, Taza Crossing and Buffalo Run (formerly Taza Exchange).

TSUUT'INA DEVELOPMENT AUTHORITY (TDA) is the appointed board by Tsuut'ina Nation to review and approve Development Permit, Public Infrastructure Permit applications, including all other permits and approvals outlined in this document.

TAZA PARK is one of three Villages on the Tsuut'ina Nation, located in the northernmost area. Taza Park is a 530-acre planned as a dynamic mixed-use entertainment destination with a regional and a provincial draw. Taza Park consists of two (2) sub-villages: Taza Park West and Taza Park East.

TAZA CROSSING is one of three Villages on the Tsuut'ina Nation, located between Taza Park and Buffalo Run. Taza Crossing is a 360-acre Village that will act as a hub that supports entrepreneurial and high-tech industries and businesses, bringing new employment and educational opportunities to the Nation, and to the region.

TRAFFIC ACCOMODATION STRATEGY (TAS) refers to the plans or procedures detailing the traffic accommodation (i.e. detours, road closures, etc.) required to complete work within a public road right-of-way.

UTILITY LINE ASSIGNMENT (ULA) PERMIT is a document authorizing the installation of utility infrastructure within public right of ways by external agencies and private utility companies (i.e. Enmax, Telus, etc.).

2 Public Realm (Public Infrastructure Permits)

2.1 General

Public Infrastructure (PI) will encompass the infrastructure corridors and open public spaces situated between the privately designated parcels including any infrastructure facilities (i.e. water, sanitary, and stormwater facilities). It is publicly accessible and includes roads, sidewalks, pathways, parks, street lighting, plazas and open spaces. This section provides the design standards and construction specifications for all aspects that form Public Infrastructure such as roads, deep/shallow utilities, storm water management facilities and other related infrastructure. For documentation prior to 2024, Public Infrastructure may also be referred to as Public Realm (PR).

2.1.1 Public Infrastructure Permit Requirements

The construction of Public Infrastructure Improvements is subject to the terms and conditions of the Public Infrastructure Permit. Without an approved PI Permit, construction cannot proceed. In some cases, the TDA will issue a Conditional Public Infrastructure Permit, which will allow the Applicant to commence with construction or issue a PI Permit for a portion of the proposed Infrastructure Improvements (i.e. permitting construction of the underground infrastructure only). Conditional PI Permits will be issued if the applicant has substantially satisfied the TDA's comments. Conditional PI Permits will expire after 30 days, after which a stop work order will be issued until the conditional status is removed.

2.2 Submission Requirements

2.2.1 General

All PI Permit submission documents including drawings, letters, studies, reports and models shall be submitted in digital format (PDF and model files). PI Permit applications must be dated and submitted online via the TDA's website. All drawings shall conform to the drawing requirements outlined in Section 2.4 - Drawing Standards. Applications that are incomplete or found to not be in accordance with the requirements outlined in this standard will be rejected. Any specific requirements or special conditions for an application will be discussed and verified at the pre-application meeting with the TDA.

2.2.2 First Submission Requirements

The following are the key items that must be submitted for a Public Infrastructure Permit Application (refer to Appendix A for the complete checklist):

- Signed Cover Letter
- Public Infrastructure Permit Application Form
- Application Fee (see current TDA Fee Schedule, 2025 version is in Appendix C)
- Public Infrastructure Permit Checklist
- Letter of Authorization from the Developer of the land, or their agent (if required)
- Key plan showing the location of the Development area in relation to Taza as a whole
- A complete set of authenticated digital engineering and landscape drawings.
- Tentative Legal Plans of Survey
- Tentative Utility Right-of-Way Plans

- Completed and signed ISC Environmental Approval Application Form
- Stormwater Management Model/Report and Drainage Studies as per Section 2.3.6 and Appendix A, including Stormwater Management Checklist
- Erosion & Sediment Control Report and Drawing Application as per Section 2.3.8
- Other pertinent items as deemed necessary by the TDA, as outlined in Section 2.2.4

The TDA will require up to eight (8) weeks to review the first submission and provide Team Review Comments (TRC) or a Public Infrastructure Permit / Conditional Permit.

2.2.3 Second/Subsequent Submission Requirements

The following are a list of key items that must be provided for all subsequent submissions (refer to Appendix A for the complete checklist):

- Signed cover letter giving a description of the revisions to first (or previous) submission
- Revised Public Infrastructure Permit Checklist (if applicable)
- Additional Permit Fee Payment (if applicable and in accordance with the current Fee Schedule)
- Reponses to the previous set of Team Review Comments (TRC) provided directly in the issued TRC document. Comments will be closed out once they have been satisfied.
- A complete set of revised authenticated digital engineering and landscape drawings.
- Confirmation from the TDA of additional appropriate licenses, approvals, and permits as required for the construction and/or operation of the water utility, wastewater utility, stormwater utility, or other improvements as required.
- Letters from the Shallow Utility Companies acknowledging the proposed alignments and utility right-of-way plan(s) (as required)
- Other pertinent items as deemed necessary by the TDA, as outlined in Section 2.2.4

Further submissions may be required by the applicant to achieve PI Permit approval and to satisfy the comments provided by the TDA. Advisory Comments, Prior to Release Conditions and Permanent Conditions will be provided at each submission stage by the TDA.

Additional fees will be applied for reviews beyond the second submission of the PI Permit application, in accordance with the Fee Schedule in Appendix C.

2.2.4 Studies Prepared in Support of Application

The following are documents that may be required for submission in support of a Public Infrastructure Permit application:

- Access Management Plan – Construction Access
- Archaeological Sites
- Biophysical Impact Assessment (BIA)
- Chemical Management Plan
- Construction Management Plan
- Cost Feasibility and Sustainability Analysis (Water, Wastewater and Stormwater)
- Environmental Impact Assessment
- Environmental Site Assessment

- Erosion & Sediment Control Plan
- Geotechnical Report / Pavement Structure Design
- Groundwater Supply Evaluation
- Historical Studies
- Master Drainage Plan / Updates
- Natural Environment Park Restoration Plan
- Paleontological Sites
- Water Servicing Study
- Sanitary Servicing Study
- Stormwater Management Report
- Traffic Accommodation Strategy (TAS) Plan
- Traffic Impact Assessment
- Tree Protection Plan
- Other reports and agreements that the TDA deems necessary

The requirements for these studies and any other supporting documentation and software models, on a given PI Permit application, will be discussed at the Pre-Application Meeting with the TDA.

2.3 Design Guidelines

2.3.1 Road and Streetscape Design

2.3.1.1 General

The current editions of the following City of Calgary, and Provincial/Federal Design Guidelines, Standards and Specifications need to be utilized by the Applicant and the Engineering Consultant for the road design:

- *Design Guidelines for Subdivision Servicing*
- *Design Guidelines for Street Lighting*
- *Standard Specifications – Roads Construction*
- *Standard Specifications – Traffic Signal*
- *Transportation Association of Canada Geometric Design Guide for Canadian Roads (GDC)*
- *Alberta Transportation Recommended Practices Guidelines for Signage, Traffic Operations and Traffic Signals*

It will be the Applicant's responsibility to ensure that the design, construction and performance of all infrastructure constructed under the Servicing Agreement meets or exceeds the above-mentioned standards and guidelines.

In addition, the following documents have been specifically compiled for the Taza Development and shall be reviewed in support of the proposed road design:

- *Master Traffic Impact Assessment prepared for each Taza Village*

- *Taza Development Guidelines by the Tsuut'ina-Canderel Land Development Limited Partnership*
- *Tsuut'ina Nation Street Naming and Addressing Policies and Procedures*
- *Tsuut'ina Nation Signage Law*

2.3.1.2 Traffic Analyses

A Master Traffic Impact Assessment has been prepared for each of the Taza Villages which provides an overall traffic analysis of the phasing and complete build-out of each respective village. This analysis will need to be referenced for any road design, intersection configurations and laning changes within Public Infrastructure areas. An additional, more detailed, traffic analysis pertaining to a given PI Permit application may be requested from the Applicant and their Engineering Consultant.

2.3.1.3 Road Classification/Right-of-Way

Detailed Street Network Plans and unique Street Sections have been developed for each of the Taza Villages in the latest version of the *Taza Development Guidelines*. Road design within the Public Infrastructure will need to conform to the applicable sections, right-of-way requirements, landscape architecture requirements and Public Infrastructure requirements as outlined in these guidelines.

Refer to the latest edition of the *Taza Development Guidelines* for the Street Section requirements pertaining to each individual Taza Village.

2.3.1.4 Road Signage/Pavement Markings

Traffic control and regulation within the Taza Development includes traffic signage, directional signage, traffic signalization, and pavement markings.

The type and location of road signage are subject to the review and acceptance of the TDA and will need to be included as a drawing in the submission set. It will be the responsibility of the Applicant to install the approved street signage to reflect the street names approved by the TDA.

All pavement markings and regulatory traffic signage need to be in accordance with the current *Alberta Transportation Recommended Practices Guidelines*, and in accordance with the *Tsuut'ina Nation Signage Law*. The Applicant shall ensure all regulatory traffic signage is in place in their permanent locations prior to the acceptance of the Construction Completion Certificate.

Bilingual signage, in both English and Dene languages, is required for all traffic signage. This will need to be coordinated early in the project, at the Pre-Application stage or Permit Application stage, with the TDA. Refer to Appendix D for standard Tsuut'ina Nation signage specifications including translations. A request will need to be submitted to the TDA Cultural Advisory Group for any additional custom signage translations.

2.3.1.5 Traffic Signalization

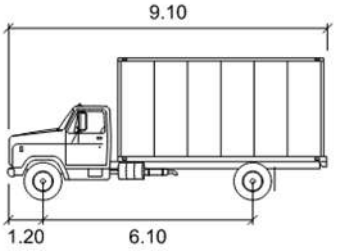
All traffic signalization must conform to the current *Alberta Transportation Recommended Practices Guidelines* and the *City of Calgary Standard Specifications – Traffic Signal Construction.* Signal phasing times need to be in accordance with the approved TIA or will require a letter of approval from the traffic engineering consultant of record.

2.3.1.6 Turning Movements

Turning movements should be provided at all intersections within the permit area to illustrate all anticipated maneuvers can be safely accommodated. A clearance of 0.50 meters between the

vehicular envelope and face-of-curb, edge-of-gravel/pavement, and any above ground objects (e.g. signs, bollards, etc) needs to be provided and shown for all turning movements. The following are the required design vehicle templates that need to be shown as part of a road and streetscape design submission:

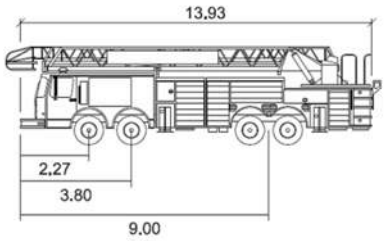
Waste & Recycling or Storm Water Maintenance:



SU9

	meters
Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 31.5

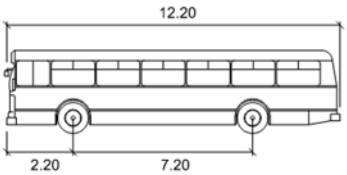
Fire Access:



CFD_Bronto_Skylift

	meters
Width	: 2.57
Track	: 2.57
Lock to Lock Time	: 6.0
Steering Angle	: 47.5
Turning Radius	: 10.18

Public Transit:



B-12
meters

Width	: 2.40
Track	: 2.40
Lock to Lock Time	: 6.0
Steering Angle	: 37.1

2.3.1.7 Street Naming

The TDA shall be responsible for the creation of all new Civic addresses within the Taza Development. The road naming will adhere to the *Tsuut'ina Nation Street Naming and Addressing Policies and Procedures* document.

2.3.2 Street Lighting / Public Space Lighting

Street lighting design shall provide adequate vertical luminance at the roadway while reducing sky glow, glare, and energy consumption and minimizing light trespass onto adjacent areas. Lighting levels shall be sufficient to address the safety and security needs of the Development area and Village. In accordance with the latest version of the *Taza Development Guidelines* Dark Sky Technology that align with the Dark Sky Lighting Principles should be incorporated to maintain and preserve the nighttime environment.

An electrical permit will be required from one of the designated Taza safety codes / building permit agencies. Applicants can reach out to the TDA for a list of current contacts.

The current edition of the following City of Calgary Standard Specifications for street lighting construction needs to be utilized in Taza's lighting design practice:

- *Design Guidelines for Street Lighting*
- *Standard Specifications – Street Lighting Construction*
- *Street Lighting Kit of Parts (forthcoming)*
- Road's streetlight & Mobility division design bulletins
- All electrical work shall comply with the latest edition of the Canadian Electrical Code
- Contractor shall obtain all required permits prior to construction

Submission shall include:

- Street lighting Plans
- Voltage drop calculations
- Photometric design calculations using AGi 32 software

2.3.3 Water Infrastructure

2.3.3.1 General

The current editions of the following City of Calgary Design Guidelines, Standards and Specifications need to be utilized by the Applicant and the Engineering Consultant for the waterworks design:

- *Design Guidelines for Subdivision Servicing*
- *Standard Specifications & Design Guidelines – Potable Water Feedermain Construction*
- *Standard Specifications – Waterworks Construction*

It will be the Applicant's responsibility to ensure that the design, construction and performance of all infrastructure constructed under the Servicing Agreement meets or exceeds the above-mentioned standards and guidelines.

In addition, the following documents have been specifically compiled for the Taza Development and shall be reviewed in support of the proposed waterworks design, including any other relevant approved water servicing studies/memorandums:

- *Water Servicing Studies prepared for each Taza Village.*
- *Taza Exchange – Potable Water Reservoir and Pump Station by MPE Engineering Ltd.*
- *Taza Park – Water Network Analysis by WSP Canada.*

2.3.3.2 Hydrants

2.3.3.2.1 Hydrant Type

Hydrants located within the Taza Development shall conform to the following sizing and manufacturers, unless otherwise approved by the TDA:

Sizing Characteristics:

- Two (2) 65mm (2.5") hose nozzles with threads matching national, provincial, municipal standard
- One 114mm (4.5") pumper nozzle with threads matching national, provincial, municipal standards

Preferred Manufacturers:

- McAvity (Clow Canada)
- Mueller
- Canada Valve

Refer to Appendix D for the preferred McAvity (Clow Canada) Hydrant Specification.

2.3.3.3 Water Network Analysis

A hydraulic network analysis may be requested for any new development which has not had a previously approved analysis completed or has the potential to significantly alter the current water servicing study and/or the capacity of the network. An authenticated report or letter by the appropriate Professional of Record will need to be submitted to the TDA for review and approval. This requirement will be determined as part of the pre-application meeting. All water network analyses should be in accordance with the relevant Taza Village water servicing study. All water network models need to be completed in WaterCAD.

2.3.3.4 Water Treatment / Storage / Distribution Facilities

Water treatment, storage and distribution facilities may be required to meet the water quality or supply demands of a proposed development. Each proposed facility will be reviewed by the TDA on a site-specific basis. A proposed water facility may require a separate Public Infrastructure Permit depending on the application and circumstances.

Monitoring and control requirements for any proposed water facilities need to be discussed and verified with the TDA at the pre-application meeting prior to the first submission.

The current editions of the following City of Calgary and Alberta Environment and Parks (AEP) Design Guidelines, Standards and Specifications need to be utilized by the Applicant and the Engineering Consultant for the design of water treatment, storage or distribution facilities:

- *Alberta Environment and Parks Standards and Guidelines for Municipal Waterworks, Wastewater, and Storm Drainage Systems – Part 1 and 2*
- *City of Calgary Standard Specifications – Waterworks Construction*

2.3.4 Wastewater Infrastructure (Sanitary Sewer)

2.3.4.1 General

The current editions of the following City of Calgary Design Guidelines, Standards and Specifications need to be utilized by the Applicant and their Engineering Consultant for the sanitary sewer design:

- *Design Guidelines for Subdivision Servicing*
- *Standard Specifications – Sewer Construction*

It will be the Applicant's responsibility to ensure that the design, construction and performance of all infrastructure constructed under the Servicing Agreement meets or exceeds the above-mentioned standards and guidelines.

In addition, the following documents have been specifically compiled for the Taza Development and shall be reviewed in support of the proposed sanitary sewer design, including any other relevant approved sanitary servicing studies/memorandums:

- *Sanitary Servicing Studies prepared for each Taza Village.*

2.3.4.2 Manholes

Manholes located within the Taza Development shall be composed of the following frame and cover unless otherwise approved by the TDA:

- *TF-50 Shallow Frame by Trojan Industries Inc.*
- *TF-50CT Tsuut'ina Cover by Trojan Industries Inc*.

Refer to Appendix D for the Manufacturer's Detailed Drawing of the Shallow Frame and Tsuut'ina Cover.

2.3.4.3 Lift Stations

Lift stations are generally required along mains that need to overcome the effects of gravity. Each installation will be reviewed by the TDA on a site-specific basis. A proposed lift station may require a separate Public Infrastructure Permit depending on the application and circumstances.

Monitoring and control requirements for any proposed lift stations need to be discussed and verified with the TDA at the pre-application meeting prior to the first submission.

The current editions of the following City of Calgary Design Guidelines, Standards and Specifications need to be utilized by the Applicant and their Engineering Consultant for the lift station design:

- *Wastewater Lift Station Design Guidelines*

2.3.5 Stormwater Management

2.3.5.1 General

The current editions of the following City of Calgary Design Guidelines, Standards and Specifications need to be utilized by the Applicant and their Engineering Consultant for the storm sewer design:

- *Design Guidelines for Subdivision Servicing*
- *Standard Specifications – Sewer Construction*

- *City of Calgary Stormwater Management & Design Manual*

It will be the Applicant's responsibility to ensure that the design, construction and performance of all infrastructure constructed under the Servicing Agreement meets or exceeds the above-mentioned standards and guidelines.

In addition, the following documents have been specifically compiled for the Taza Development and shall be reviewed in support of the proposed storm sewer design, including any other relevant approved stormwater management studies/memorandums:

- *Master Drainage Plan prepared for each Taza Village*
- *Taza Development Guidelines by the Tsuut'ina-Canderel Land Development Limited Partnership*

2.3.5.2 Submission Requirements

All public realm applications require the submission of a Stormwater Management Report which aligns to the governing Phase SWMR or Pond Report. In the case of smaller application areas, a memo may be acceptable, at the discretion of the TDA.

A complete SWMR first submission must be received before underground approvals can be considered. Surface approvals can only be granted alongside an approved SWMR.

2.3.5.2.1 Runoff Volume Targets

Areas subject to runoff volume targets (as per Phase or Pond Reports) must either use computer modelling (e.g. PCSWMM) to complete the analysis or use the City of Calgary Water Balance Spreadsheet.

2.3.5.2.2 Model Files

Submissions utilizing computer modelling must submit model files with the SWMR for TDA's records. Where applicable, these files should be packaged to include results and all files necessary for model run.

2.3.5.3 Analysis Methodology

2.3.5.3.1 Modeling Software

All public realm sites require computer analysis of the storm system. The following list of software suites will be accepted for the Taza Development:

- *SWMHYMO*
- *PCSWMM*

In limited situations, TDA may consider rational method for analysis of small areas, this needs to be discussed and approved by the TDA at the pre-application meeting prior to the first submission.

2.3.5.4 Stormwater Management Facilities / Ponds

Stormwater management facilities such as dry ponds, wet ponds, and wetlands receive stormwater runoff from conveyance systems (i.e. ditches, swales, roads and gutters and sewers) and discharge to downstream receiving water bodies or conveyance systems. The purpose of these facilities is to serve various functions including temporary storage, water quality enhancement, and runoff volume control.

Each facility will be reviewed by the TDA on a site-specific basis. A proposed stormwater management facility may require a separate Public Infrastructure Permit depending on the application and circumstances.

Monitoring and control requirements for any proposed facilities need to be discussed and verified with the TDA at the pre-application meeting prior to the first submission.

The current editions of the following City of Calgary Design Guidelines, Standards and Specifications need to be utilized by the Applicant and their Engineering Consultant for the stormwater facility design:

- *City of Calgary Stormwater Management & Design Manual*

2.3.6 Low Impact Development

Low Impact Development (LID) is an emerging stormwater servicing strategy and is strongly encouraged in the Taza Development.

Refer to the latest version of the *Taza Development Guidelines* for a list of possible LIDs that can be incorporated into the design of the Taza Villages. For more information on the role of LIDs in the management of stormwater, refer the following documents:

- *Master Drainage Plan prepared for each Taza Village*
- *Taza Development Guidelines by the Tsuut'ina-Canderel Land Development Limited Partnership*
- *City of Calgary Stormwater Management & Design Manual*
- *City of Calgary Low Impact Development Project Modules:*
    - *Geotechnical and Hydrological Considerations*
    - *Bioretention and Swales*
    - *Green Roofs*
    - *Permeable Pavement*

Where LIDs are proposed to achieve stormwater quality improvement targets, the methodology detailed in the above-mentioned Bioretention and Swales Module must be used.

2.3.7 Erosion and Sediment Control (ESC)

2.3.7.1 General

Erosion and Sediment Control needs to be developed and implemented throughout all stages of construction to limit the soil disturbance and ensure the protection of environmental resources, infrastructure and property within, and adjacent to construction sites.

Erosion and Sediment Control in the Taza Developments must be designed in accordance with the latest edition of the *City of Calgary Erosion and Sediment Control Guidelines, Specifications and Field Manual* detailed below:

- *Erosion and Sediment Control Guidelines*
- *Erosion and Sediment Control Field Manual*
- *Instruction Manual for Erosion and Sediment Control Plan Applications*
- *Standard Specifications – Erosion and Sediment Control*

2.3.7.2 Erosion and Sediment Control Requirements

For sites greater than 2.0 Ha in size: A full ESC Plan (report & drawings) needs to be developed and submitted for approval by the TDA. The ESC Plan must be implemented throughout all stages of construction. See Appendix C for a report template.

For sites between 0.40 - 2.0 Ha in size: ESC Construction Drawings need to be developed and submitted for approval by the TDA. The ESC Construction Drawings need to be implemented throughout all stages of construction.

For sites less than 0.40 Ha in size: A Good Housekeeping Letter Request must be submitted and followed throughout all stages of construction. See Appendix C for a letter template. Good Housekeeping Practices Include:

- Control of mud track out during construction, usually by means of a well-maintained construction entrance/exit on all access locations, supplemented with period street sweeping as required.
- Dust control must be implemented on site, when required.
- Install down-gradient perimeter protection (such as silt fence, compost sock, etc.) to protect off-site areas from stormwater runoff and sedimentation during construction.
- Proper placement and protection of stockpile soils and materials so they will not be eroded to off-site areas, including storm inlets.
- Inspections are required every 7 days and after rainfall or snowmelt events.

2.3.7.3 Winter Operations

A pre-winter inspection with the TDA is required to note any deficiencies that do not comply with the approved ESC Plan or to note any required maintenance. Examples include, but are not limited to:

- Confirm storm inlet controls have been removed.
- Ensuring sediment containment systems have adequate storage capacity
- Removal of sediment and repair of structures and controls designed to capture sediment
- Checking for adequate stabilization of all exposed areas and inspecting erosion controls to ensure proper installation and condition
- Review of potential run-on areas to see if additional measures will be required.

Winter is defined as the dates between November 1 and April 30 of each year.

Refer to the latest edition of The City of Calgary Erosion and Sediment Control Standard Specifications for winter operation requirements for each standard specification.

2.3.7.4 Erosion and Sediment Control Exceptions

Unless requested, RUSLE calculations are not required for areas that have permanent erosion and sediment control measures in place (i.e. grass/weeds with 80%+ ground cover, pavement, concrete, etc.).

2.3.8 Landscape

2.3.8.1 General

The current editions of the following City of Calgary Design Guidelines, Standards and Specifications need to be utilized by the Applicant and their Consultant for the landscape design:

- *Canadian Landscape Standard - the Guide for Landscape Construction Projects across Canada (Latest Version)*

- *Development Guidelines and Standard Specifications – Landscape Construction-Calgary Parks and Open Spaces (Latest Version)*
- *City of Calgary Seed Mixes. Recommendations and Guidelines to inform revegetation work in Calgary (Latest Version)*
- *City of Calgary Plant List (Latest Version)*
- *Residential Street Design Policy*

It will be the Applicant's responsibility to ensure that the design, construction and performance of all infrastructure constructed under the Servicing Agreement meets or exceeds the above-mentioned standards and guidelines.

In addition, the following documents have been specifically compiled for the Taza Development and shall be reviewed in support of the proposed landscape design. It is important to note that there is emphasis on the vegetation and tree species utilized in Taza to align with Tsuut'ina Nation cultural requirements.

- *Taza Development Guidelines by the Tsuut'ina-Canderel Land Development Limited Partnership (Latest version)*

2.4 Drawing Standards

2.4.1 Drawing Requirements

This Section lists the requirements specific to the Tsuut'ina Nation related to the preparation of Engineering Drawings for the Public Infrastructure Permit application. Refer to the checklist in Appendix A for further information on drawing requirements. For information not covered in this section, refer to the City of Calgary drawing specifications detailed within the latest edition of the following:

- *Standard Block Profile Specifications for CAD and Manual Formats*
- *CAD Standard Guidance Document*

2.4.2 General Drawing Requirements

2.4.2.1 Sheet Size

The following sheet sizes will be accepted:

- A1
- A3 shall be provided in addition to the above for field inspections

2.4.2.2 North Arrow

The north arrow is to be placed within the upper right-hand corner of the sheet. The drawing should be oriented such that north faces the upper edge of the drawing sheet. The north arrow may face to the left of the page, however this is dependent on the scope of the project.

2.4.2.3 Title Block

All drawings must be accompanied with a title block along the right side or bottom of the drawing. The following information must be detailed within the title block:

- Applicant's name

- Consultant(s) name
- Relevant TDA Application Number (if available at the time of application):
- Village name including staging and/or phasing, if applicable
- Legal plan, if available
- Civic address, if applicable
- Drawing number/name (Refer to Section 2.4.3.1)
- Horizontal and vertical scale used
- Fields for the initials of:
    - Designer
    - Draftsperson
    - Checker
- A revisions table documenting the issued drawings and the number of revisions including a number, date, description and relevant consultant approver initials.
- An allocated space for the name of the Consultant, the signed professional of record's stamp (P.Eng., P.L.(Eng.), P.Tech., Landscape Architect stamp (if applicable), and Permit to Practice stamp for engineering drawings.
- Legend
- Total site area in hectares
- Notes

2.4.2.4 Drawing Scale

The following scales are a guideline to be used for the preparation of the construction drawings. Exceptions will be noted for specific drawings.

- A scale of 1:1000 should be used for all key plans.
- A scale of 1:500 should be used for all plans.
- A scale of 1:50 to 1:100, shall be used for typical profile drawings. Discretion is to be used for vertical profiles in cases where steep profiles are present.
- All landscape construction plans must be in metric and preferred scales are 1:200, 1:300 1:500

2.4.3 Plan Drawing Requirements

2.4.3.1 List of Applicable Drawings

The following is a list of drawings that shall be submitted in support of a Public Infrastructure Permit application.

Table 2A – Public Infrastructure Drawing Requirements

The following drawing naming and numbering can be used as a guideline. Required drawings will be on a per application basis, which will be confirmed at the pre-application meeting with the TDA.

SHEET NUMBER	SHEET NAME
-	Cover Sheet c/w Location Plan
-	Land Use & Outline Plan
-	Legal Plan c/w: Utility Right of Way Survey Plan (Shallow Utilities), Utility Right of Way Survey Plan (Deep Utilities), and Utility Right of Way Survey Plan (Stormwater).
-	Index Plan
C1.0	Grading Plan c/w Original Ground Contours
C1.1	Cut & Fill Plan
C2.0	Test Hole Logs
C3.0	Overland Drainage
C4.0	Storm Sewer Design
C4.1	Storm Catchment Area Plan
C5.0	Sanitary Sewer Design
C6.0	Waterworks Design
C7.0	Surface Works
C8.0	Pavement Marking and Signage
C9.0	Cross-section Details
C10.0	Stormwater Facilities (Underground Storage Tank / Pond Details)
C11.0	Water / Wastewater Facilities
L1.0, L1.1, etc.	Landscape Plans, including but not limited to: Layout Plan, Grading Plan, Planting Plan
L2.0, L2.1, etc.	Landscape Details
IR1.0, IR1.1, etc.	Irrigation Plan
C11.0, C12.0, etc.	Other Details
PP1.0, PP2.0, etc.	Plan/Profiles
ESC1.0, ESC2.0, etc.	Erosion and Sediment Control Plan
SL1.0, SL1.1, etc.	Street Lighting
TS1.0, TS1.1, etc.	Traffic Signals

The details and minimum drawing requirements for each of the drawings listed above can be found in the subsequent sections.

2.4.3.2 Grading Plan

The following information must be clearly identified on the Grading Plan:

- Legal description (Lot/Block/Plan number) for each parcel of land
- Civic address
- Back of sidewalk and property line elevations at lot lines
- Lane/public utility lot elevations at lot lines

- Lot drainage pattern
- Location of traplows
- Location of hydrants, streetlights, transformers, switch gear cubicles, underground distribution, telephone pedestals, and cable television pedestals
- Indication of areas where depth of fill exceeds 2.0m (bearing capacity confirmation required)
- Service trench location
- Driveway location
- Property corner elevation
- Electrical service location
- Sump pump location
- Original ground elevation
- Minimum building opening elevation
- Suggested front grade
- Suggested rear grade
- Groundwater elevation
- Lowest top of footing
- Sanitary and storm service invert 5m inside the property line
- Rear property corner elevation
- Direction of grading

2.4.3.3 Cut/Fill Plan

The following information must be clearly identified on the Cut/Fill Plan:

- Construction boundary
- Depth of cut/fill elevations/contours
- Cut/fill volume table
- Information regarding subgrade/stripping depth(s)

2.4.3.4 Overland Drainage

The following information must be clearly identified on the Overland Drainage:

- Construction boundary
- Original ground contours
- Major drainage routes
- Slopes, highpoints and low points
- Location of traplows with traplow storage table
- Drainage catchment areas and labels
- ICDs, catchbasin types and interconnected catchbasins

- Q,v,d's for streets, gutters or swales
- Overland escape route arrows and associated Q,v,d.
- Legal base plan including easements
- Drainage easements

2.4.3.5 Storm Sewer Design

The following information must be clearly identified on the Storm Sewer Design:

- Construction boundary
- Storm main alignments
- Direction of pipe flow
- Pipe invert elevation(s) at all manholes
- Pipe length, pipe size, pipe material (general note acceptable), and grade between manholes
- Manholes, catch basin manholes, manhole type, rim elevation and identification numbers
- Catch basin leads
- Easement/right-of-way

2.4.3.6 Storm Drainage Plan

The following information must be clearly identified on the Storm Catchment Area Plan:

- Construction boundary
- Storm main alignments
- Direction of pipe flow
- Pipe length, pipe size, pipe material (general note acceptable), and grade between manholes
- Manholes, catch basin manholes, manhole type, rim elevation and identification numbers
- CDs, catchbasin types and interconnected catchbasins
- Stormwater catchment areas and labels
- Label UARR and/or imperviousness of each catchment
- Catchment tie-in locations
- Easements/right-of-way
- Minor System Table (i.e. stage, area, volume and discharge table, etc.)

2.4.3.7 Sanitary Sewer Design

The following information must be clearly identified on the Sanitary Sewer Design:

- Construction boundary
- Sanitary main alignments

- Direction of pipe flow
- Pipe invert elevation(s) at all manholes
- Pipe length, pipe size, pipe material (general note acceptable), and grade between manholes
- Manholes, and manhole rim elevations and identification numbers
- Identify drop manholes (interior/exterior)

2.4.3.8 Waterworks Design

The following information must be clearly identified on the Waterworks Design:

- Construction boundary
- Water main alignments and angle of bends
- Pipe material and size
- Hydrants (Hydrant identification numbers will be provided by Tsuut'ina Nation)
- Valves (Valve identification numbers will be provided by Tsuut'ina Nation)
- Locations of air/pressure release valves and pressure reducing valves
- Easement/right-of-way
- Water network analysis

2.4.3.9 Surface Works

The following information must be clearly identified on the Surface Works:

- Construction boundary
- Street name(s)
- Right-of-way alignments with dimensions
- Carriageway width (i.e. from edge of pavement to edge of pavement)
- Sidewalk and/or curb type and width
- Boulevard width
- Driving lane width(s)
- Approach details and locations
- Horizontal curve (HC) information
- Catch basin manholes and catch basins, including type and ICD details
- Curb ramps
- Drainage features including waterways, lakes, ponds, canals, swales, ditches and culverts, noting direction of flow
- Hydrants
- Temporary access roads and/or turnarounds
- Pathways and/or sidewalks, including bollard locations and cross sections
- Mailbox turnouts

- Transit stops/laybys
- Retaining wall and barrier locations

2.4.3.10 Pavement Marking and Signage

The following information must be clearly identified on the Pavement Marking and Signage:

- Traffic signage
- Pavement markings
- Street name identification signs
- Construction signs
- Pond warning signs
- Relevant detailed signage drawings
- Bilingual signage (i.e. English and Dene languages) will be required and will need to be coordinated with the TDA. Refer to Appendix D for all current signage specifications.

2.4.3.11 Cross-section Details

The following information must be clearly identified on the Cross-section Details:

- Road structure design details (in accordance with Pavement Design Report)
- Dimensions of lanes, boulevards, sidewalks/pathways, road right-of-way, etc.
- Deep and shallow utilities
- Light standard locations
- Relevant road grades, side sloping, back sloping, etc.

  Separate cross-sections should be provided for any LID infiltration features

2.4.3.12 Stormwater Facilities / Pond Details

The following information must be clearly identified on the Stormwater Facilities drawings:

- Construction Boundary
- Drainage boundaries, areas and sizes
- Stage – Storage – Discharge table
- Pond outline with pond bottom, NWL, (L)NWL, (U)NWL, HWL, FB and 1:100 year elevations (if different than HWL), where applicable.
- Area of inundation corresponding to non-operational water re-use system for zero-discharge facilities
- Sediment forebay(s) or alternative (design and sediment storage capacity)
- Pond staging shown when permitted
- Land use for surrounding area
- Location of structures
- Location of monitoring panel

- Access road to inlet and outlet structures and boat ramp: location, width and structure requirements
- Pathway: locations, width and structure requirements
- Overland escape route and details (longitudinal profile and cross sections)
- Signage locations and type
- Details of SCPs (if within pond boundary)

2.4.3.13 Landscape Plans

A landscape drawing submission will consist of a Layout Plan, Grading Plan, Planting Plan, and Irrigation Plan (as required). The General Requirements for all landscape plans and specific requirements for each type of plan has been detailed below:

2.4.3.13.1 Concept Plan

Concept Plans are a visual representation of the written Design Statement required as part of the Public Infrastructure Permit Approval Process. Concept Plans should clearly indicate how the Public Infrastructure responds to the Vision, Values and four Pillars (as identified in the *Taza Development Guidelines*) in its own unique way.

Concept plans precede the preparation of detailed Layout, Grading, Planting and Irrigation Plans. These concept plans are to ensure that the *Taza Development Guidelines* and site-specific Design Statement objectives are being achieved in the proposed open space design.

Concept Plans that reinforce the Design Statement shall consist of:

- The type, function and/or theme of the Open Space, including parks and/or streetscape based on its context within the Village.
- Rendered plans showing the high-level relationships of spaces, functions and design features within the site.
- Conceptual grading information including contours and minimum and maximum slopes.
- Conceptual planting design.
- Property lines, easements and utility right of ways.

2.4.3.13.2 General Requirements for all Landscape Construction Plans

- Refer to the *Taza Development Guidelines* and *City of Calgary Development Guidelines and Standard Specifications – Landscape Construction* for additional detailed requirements.
- All landscape construction plans must be sealed and signed by a Registered Landscape Architect with current membership in the Alberta Association of Landscape Architects.
- All drawings and supplemental material(s) for irrigation systems that will be turned over to the Tsuut'ina Nation, must be stamped and signed by a Certified Irrigation Designer (CID) - Commercial. This certification must be issued by the Irrigation Association (IA). The certified designer must be in good standing with the association.
- Be a maximum scale of 1:500 to be used for all landscape plans. Preferred smaller scales are 1:200 and 1:250.

- Include the legal description, municipal address (if available), site property lines, legal easements, encumbrances and rights-of-way.
- Existing and proposed infrastructure/Infrastructure Improvements located within and/or adjacent to the site.
- Adjacent land uses, roads, utilities, structures.
- Include curbs, sidewalks, fences, and any other boundary conditions.
- Include existing tree locations, diameter at breast height (DBH), and species (where possible).
- All berms, parks, roadway boulevards, medians and traffic islands, utility lots and rights of way, buffers, and dry ponds.
- Details of items that are not included in the Standard Specifications for Landscape Construction (as required).

2.4.3.13.3 Layout Plan

In addition to the General Requirements for Landscape Plans, the following must be identified on Layout Plans:

- Existing site features and vegetation to be retained.
- Proposed layout of all open space infrastructure and site amenities including but not limited to parks, recreational facilities, playgrounds, baseball diamonds, sports fields, buildings, pathways, trails, bollards, gates, garbage receptacles, site furnishings, benches, basketball courts, outdoor rinks, tennis courts, mailboxes, signage (including dog bylaw signs, pathway signs, and trail signs), fencing, etc.
    - All playground equipment layout must be shown as per CSA guidelines, including non-encroachment zones, fall zones and protective surfacing zones. Provide supplier elevations, cross sections, photos or 3D renderings for playground designs (where possible).
    - Provide a detailed section for poured-in-place fall surface indicating the depth of the clay base, gravel layer, rubber crumb base layer and rubber crumb top layer.
- Fencing or other property delineation specifications and alignment.
- Pedestrian crossing locations and details.

2.4.3.13.4 Grading Plan

In addition to the General Requirements for Landscape Plans, the following must be identified on Grading Plans:

- Major items associated with layout but not including dimensions, i.e. walkways, play fields, roads, curbs, structures, and natural areas.
- Surrounding grade information affecting site development.
- Existing and proposed contours at 0.5 m contour intervals.
- Elevations at each break point (top and toe of slope).
- Existing and proposed spot elevations including, but not limited to, manhole rim, catch basin rim and invert elevations (as required), top of wall, top of curb, and finished floor elevations (as required).

- Existing and proposed concrete gutters.
- All trap lows with their 1:100 inundation area and emergency spill routes.

2.4.3.13.5 Planting Plan

In addition to the General Requirements for Landscape Plans, the following must be identified on Planting Plans:

- Major items associated with “Layout” but not including dimensions, i.e. walkways, roads, curbs, hard surface areas, structures, natural areas.
- Contours at 0.5 m intervals.
- Planting bed outlines.
- Existing trees, vegetation and other natural features to be retained or removed.
- Topsoil depths for plant beds and areas to be sodded or seeded.
- The type and depth of mulch for shrub beds and tree wells.
- Proposed seed mixes.
- The location of proposed plants including trees, shrubs and groundcovers.
- Include a plant list identifying species botanical and common names, quantities, sizes, habit, spacing, and specific remarks (as required).

2.4.3.13.6 Irrigation Plan

In addition to the General Requirements for Landscape Plans, the following must be identified on Irrigation Plans:

- Major items associated with “Layout” but not including dimensions, i.e. walkways, roads, curbs, hard surface areas, structures, natural areas.
- Major items associated with the Grading and Planting Plans (faded back).
- Locations of all lines, sprinkler heads, valves, drains, sleeves, electrical drop-offs, 100-volt wire, 110-volt conduit, and electrical controllers and dimensions from adjacent property lines.
- Whether the system will be trenched or “plowed in” and whether the system will be gravity drained, blown out, or a combination.
- A schedule of materials/products describing sizes, manufacturers and model numbers, pipe fitting method, performance standards, and sources of materials/products.
- Minimum Static Water Pressure.
- Irrigation Scheduling Chart.
- Additional detailed requirements for Irrigation Plans to be referenced in Section 2.3.8 of the City of Calgary Development Guidelines and Standard Specifications: Landscape Construction.

2.4.3.14 Plan/Profile

2.4.3.14.1 Plan View

See requirements as described in Section 2.4.3.

2.4.3.14.2 Profile View

The profile view needs to show the following road and utility information:

- Stationing for road, lane, and/or utility lot center lines
- Vertical and horizontal scale indexing the survey datum
- Vertical and horizontal point of intersection (P.I) elevations for utility mains and surface improvements
- Length and grade between P.I.'s for utility mains and surface improvements
- Vertical curve information including chainage and elevations of BVC, PVI and EVC; length of curve; K values and M values
- Approach locations including culvert locations with invert elevations
- Vertical alignments of manholes, valves, and hydrants
- Manhole rim and invert elevations
- Utility main lengths, sizes, materials, and gradients

2.4.3.15 Erosion and Sediment Control (ESC)

The ESC drawings must comply with the latest edition of *The City of Calgary Instruction Manual for ESC Plan applications.*

2.4.3.16 Street Lighting

The following information must be clearly identified on the Street Lighting drawings:

2.4.3.16.1 Plan Layout

- Titleblock
- Notes
- Road names and future roadworks
- North arrow
- Design consultant permit to practice and professional seal
- Offsets and dimensions
- Curbs and walkways
- Utilities
- Lot line and property lines
- Call-outs
- Electrical and street lighting infrastructure
- Electrical loads
- Electrical panel schedule
- Coordinates
- Photometric Drawing
- Luminaire schedule

- Numeric summary
- Road classifications and pedestrian conflict
- Single line diagram
- Details
- Street light elevation drawing details
- Voltage drop calculations

2.4.3.17 Traffic Signals

Traffic signals drawing requirements should include plan views, details, and profiles. The signal design drawings shall show, but are not limited to the following:

- Plan drawings at a scale of 1:200 (ideal) showing pole locations, signals, pushbuttons, audibles, luminaires, junction boxes and vaults, conduit, conductors and cables, detector loops, detection cameras, signs, signal controller cabinet, service equipment, Electrical service location, underground utilities, civil works (curbs, sidewalks, etc.), all pavement markings, property lines and any other elements of significance.
- Conduit offset dimensions.
- Title blocks, legend, notes, north arrow, and key plan
- Conductor colour coding/cable table
- Electrical panel schedule
- Equipment coordinates schedule
- Video detector zone details
- Signal timing plan
- Details including signal phasing diagram
- Pole elevations with references to roadway pavement markings and curbs
- Detector loop table
- Single line diagrams
- Luminaire schedule
- Kiosk base plan detail for nonstandard service kiosk/cabinets.
- The proposed installation details and all related existing signal, lighting, and electrical information
- Trench cross-section details
- A table with recognized products listed by manufacturer, make, and model number (including any approved alternates), as per current Lighting and Signal Approved Product List.
- Any additional information the TDA deems necessary for the review of a design submission.

2.4.4 Record Drawing Requirements

Record drawings will need to be prepared and submitted at both the CCC and FAC stages.

Record drawings are detailed engineering drawings showing the surface and the underground features such as legal, roadworks, waterworks, sanitary, storm sewers, landscape, streetlighting, and traffic signals. Depending on the application, the record drawings shall include the following plans, as described below:

- Plan view displaying the final surface features such as legal descriptions and bordering property data, curbs, sidewalks, etc.
- Utility plan view displaying the as-built underground utilities such as, the waterworks, sanitary, and storm sewers, including profile views showing the utility grades, elevations and related data.
- Facility drawing packages displaying as-built water, sanitary facilities and stormwater facilities (i.e. ponds, storage facilities) including and any respective underground utilities and services for these facilities.
- Electrical plans displaying streetlighting and traffic signals.

For all road / streetscape applications, plan / profile views need to be combined to show underground utilities in both.

All record drawings will need to be authenticated by the professional of record. An authenticated PDF of the record drawings including the CAD and GIS files will be required at both the CCC and FAC stages. Refer to the relevant CCC and FAC checklists in Appendix A for further detail.

2.4.4.1 Infrastructure Asset Numbering System

An Applicant's local numbering system (for manholes, stormwater facilities and hydrants) may be used on design drawings submitted in support of a Permit application. However, the numbering of the new infrastructure should not conflict with the numbering of existing infrastructure for design clarity.

2.4.4.1.1 Manhole Numbering

The Infrastructure Asset Numbering System is provided as a guideline and pertains to sanitary and stormwater manholes. The system uses an alphabetical prefix for sanitary and stormwater, followed by a digit for the Taza Village/Zone, two digits for the catchment area and three digits for the manhole number, summarized as follows:

Sanitary or Storm Manhole	Taza Village/Zone	Catchment Area	Manhole Number
S or ST	1	06	005

Examples: ST1-06-005 (Stormwater manhole #5 for Catchment Area 6 in Taza Park)
S2-121 (Sanitary manhole #121 in Taza Crossing)

2.4.4.1.2 Water/Sanitary/Stormwater Facilities Numbering

Prefixes for other water, sanitary and stormwater facilities are summarized as follows:

Catch basin	Drywell	Oil/Grit Separator	Outfall	Isolation Valve	Pressure-Reducing Valve	Hydrant	Lift Station	Air-Relief Valve
CB	DW	OGS	OL	IV	PRV	H	LS	ARV

Examples: PRV3-002 (Pressure-Reducing Valve #2 in Taza Exchange)
OGS3-01-001 (Oil/Grit Separator #1 for Catchment Area 1 in Taza Park)

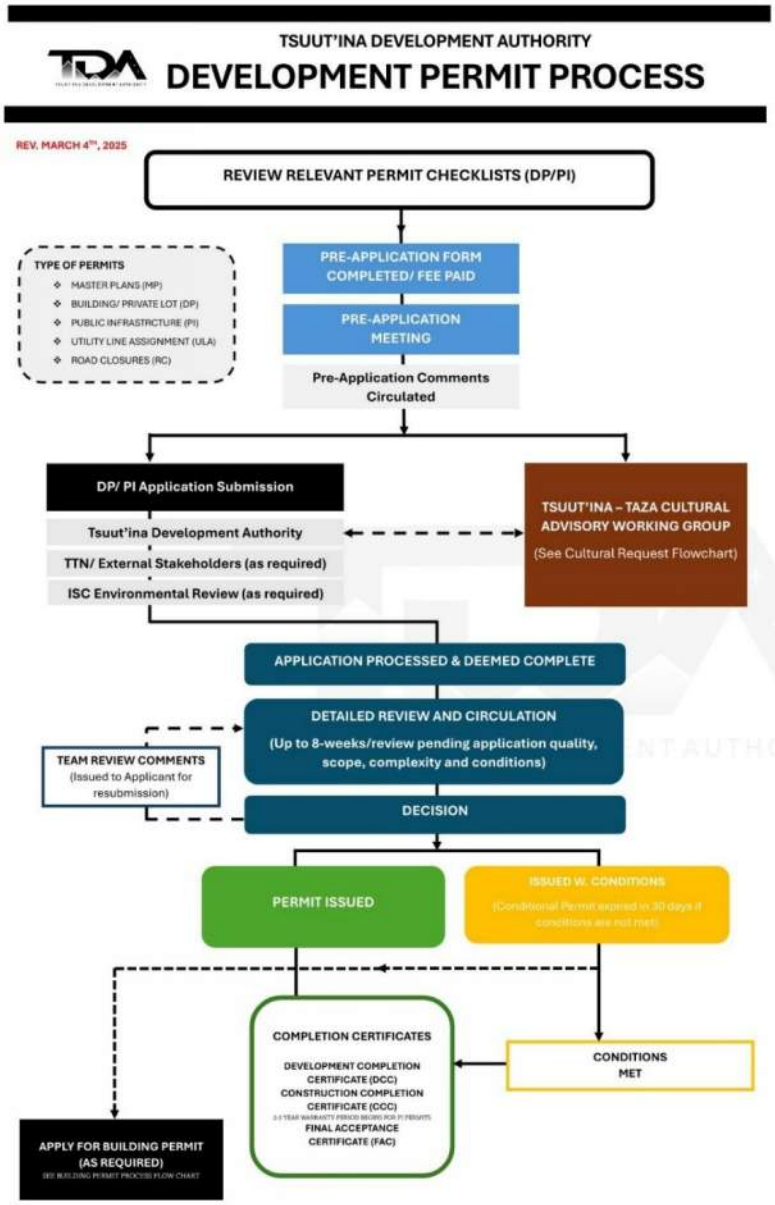
2.4.4.1.3 Irrigation As-built Drawings

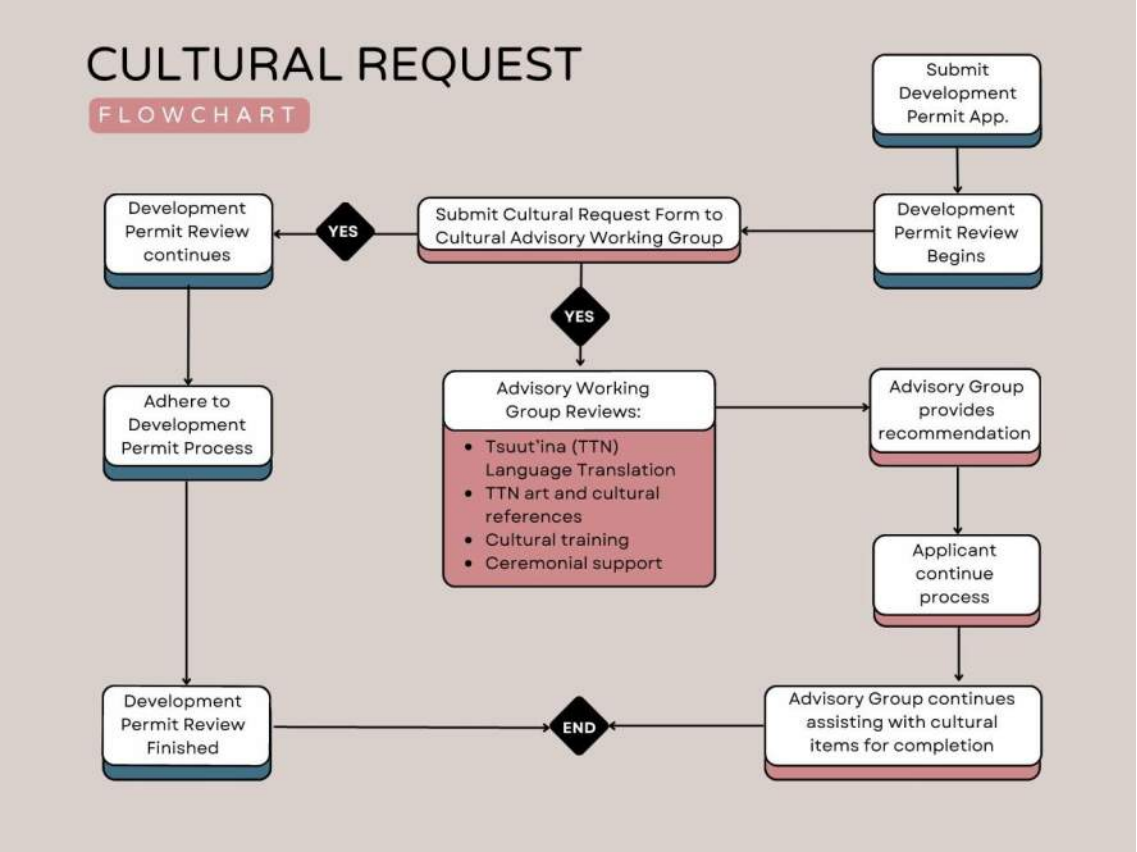
Irrigation As-built drawings will be required at the Construction Completion Stage and shall be prepared per the detailed requirements outlined in the latest edition of the City of Calgary Development Guidelines and Standard Specifications: Landscape Construction.

2.5 Review and Approval Process

2.5.1 Public Infrastructure Permit Application Circulation Process

The following figure is the circulation, review and approvals process administered by the TDA for a given Public Infrastructure Permit Application. Refer to Appendix A for the applicable Public Infrastructure Permit application forms and checklists.





2.5.2 Public Infrastructure Amendment Process

2.5.2.1 Procedure

In the event design revisions are required because of unexpected and/or unforeseen field conditions following a Public Infrastructure Permit drawing approval; a Public Infrastructure Amendment may be accepted by the TDA. To initiate the Amendment process, the following must be submitted:

- A cover letter detailing project information such as the PI Permit Application Number, Servicing Agreement Number, any other relevant project information as well as a description of the redline revisions and justification for the changes.
- An authenticated digital drawing set documenting the proposed design revisions.
- Amendment fee, as outlined in the Fee Schedule in Appendix C.

2.5.3 Construction Completion Certificate (CCC)

The TDA utilizes a Construction Completion Certificate (CCC) and Final Acceptance Certificate (FAC) procedure to sign off on all Public Infrastructure Improvements completed by the Applicant.

Once the Applicant completes a Public Infrastructure Improvement, the Consultant must follow the procedure below, in the order shown:

1. Inspect the Public Infrastructure Improvement with the Applicant's Contractor and record any deficiencies.

2. Conduct further inspection(s) once the Applicant's Contractor repairs the initial deficiencies until all deficiencies are repaired to a satisfactory level.
3. Resolve any outstanding field orders related to the Public Infrastructure Improvement.
4. Schedule and conduct an inspection with the TDA. Any further outstanding deficiencies are to be repaired to a satisfactory level. A second/final inspection may be required to confirm the satisfactory completion of works. Note that inspections will be weather permitting at the discretion of the TDA inspector.
5. Submit to the TDA the signed and stamped CCC, relevant checklist(s), Record Drawings and the required documentation for the Public Infrastructure Improvement, as outlined in the checklists in Appendix A (i.e. PDF, CAD, GIS files).

The Public Infrastructure Improvements are categorized as follows:

A. Underground Infrastructure – Water Services
B. Underground Infrastructure –Sanitary Sewer Services
C. Underground Infrastructure –Storm Sewer Services
D. Surface Works – Concrete – Curb, Gutter & Sidewalk
E. Surface Works – Asphalt – Parking Lots, Roads and Recreational Pathways
F. Surface Works – Landscape
G. Facilities (Stormwater Management Facilities, Lift Stations, Water and Wastewater Treatment Facilities, and Booster Pump Stations)
H. Electrical Infrastructure – Street Lighting
I. Electrical Infrastructure – Traffic Signals
J. Demolition and Removals

Infrastructure improvements for underground can be combined into one or more certificates upon request from the applicant and acceptance / approval from the TDA.

The CCC application package for each Public Infrastructure Improvement category shall be submitted to the TDA and must include the following key items:

- Detailed Cover Letter
- CCC Checklist found in Appendix A for the respective Infrastructure Improvement
- One (1) digital copy of the Construction Completion Certificate, duly signed and sealed by the appropriate Professional of Record. The template for the Construction Completion Certificate can be found in Appendix A.
- One (1) full digital set of authenticated engineering and landscape record drawings indicating the completed Improvements and marked "Record Drawings" with the Consultant's stamp and signature being dated to reflect the CCC application date. Testing Material / Requirements as listed in Table B
- One (1) digital copy of a list identifying the Contractors that the Applicant has retained to carry out underground infrastructure, surface works, surface grading and facility maintenance. The list, at a minimum shall include the following:
    - Contractor name and area of responsibility
    - Contractor business phone number and contact information
    - Contractor after hours phone number

- Contractor emergency phone number

- One (1) list of deficiencies and/or defects indicating when they were repaired.

Refer to Appendix A for all CCC Checklists and the Construction Completion Certificate template. Once the CCC application package for the respective Improvement is approved by the TDA, the Construction Completion Certificate will be signed and issued to the Applicant, signifying the start of the warranty period as per the documented date in the CCC.

Table B – CCC Requirements

This table outlines the Testing Material / Requirements required to be submitted for each Infrastructure Improvement Category in support of a Construction Completion Certificate submission. These requirements are also outlined on each of the respective CCC Checklists in Appendix A.

Infrastructure Improvement Category	Testing Material / Requirements
UNDERGROUND INFRASTRUCTURE	
Water Infrastructure	Pressure Test Results Water Quality Test – Chlorine/Bacteriological Testing Compaction Test Results and Authenticated Acceptance Letter with Location Plan Grade Sheets Bedding Sand Report Hydrant Pressure & Flow Testing in accordance with current Specifications (including summary letter / report with photos)
Sanitary Infrastructure	Video Inspection completed after backfill and prior to surface completion. Inspection video and mandrel test should be submitted as separate files. (Submit electronically or via a CD/DVD/USB) Video Inspection Log / Consultant Review Report Compaction Test Results and Authenticated Acceptance Letter with Location Plan Grade Sheets Bedding Sand Report Infiltration / Exfiltration Testing (at TDA discretion)
Storm Infrastructure	Video Inspection completed after backfill and prior to surface completion. Inspection video and mandrel test should be submitted as separate files. (Submit electronically or via a CD/DVD/USB) Video Inspection Log / Consultant Review Report Compaction Test Results and Authenticated Acceptance Letter with Location Plan Grade Sheets Bedding Sand Report Infiltration / Exfiltration Testing (at TDA discretion)
SURFACE WORKS	
Concrete – Curb, Gutter & Sidewalk	Concrete Test Results Compaction Test Results and Authenticated Acceptance Letter with Location Plan (subgrade and trench backfill)

	Grade Sheets Erosion & Sediment Control Inspection Logs
Asphalt – Parking Lots, Roads, Recreational Pathways (Paved and Gravel)	Asphalt Test Results Compaction Test Results and Authenticated Acceptance Letter with Location Plan (subgrade and trench backfill) Proof Roll Report (Subgrade) Erosion & Sediment Control Inspection Logs
LANDSCAPE	
	Digital Landscape "As-built Drawings" stamped and signed by a Landscape Architect Topsoil Test Open Trench Inspection Log (for Mains and Laterals) Certificate of CSA Compliance Letter (for Playgrounds) Poured in Place Rubber Fall Surface Drop Test Asphalt Compaction/ Density Reports (as required) Annual Double Check Valve (DCV) Report Seed Testing Certificate (as required) Concrete Mix Design (as required) Geotechnical recommendations for construction Compaction Testing for Backfill Fusion Test Logs Back Bend Test (as required) Leak Test as per ASTM F2164 - 13 (or most current) Standard Practice for Field Leak Testing of Polyethylene (PE) Pressure Piping Systems Using Hydrostatic Pressure Irrigation "As-built Drawings" C.N.L.A. Specification Met List of outdoor furniture, specifications As-built grading plan for Quality Control LIDs, authenticated by Engineering Consultant
STORMWATER MANAGEMENT FACILITIES	
Storm Ponds Underground / Above Ground Storage Tanks Lift Stations	Erosion & Sediment Control Inspection Log Operation & Maintenance Manual and Plan Log Registrations and copies of existing / new Code of Practice Pond and/or Outfall registrations and approvals transferred to the Tsuut'ina Nation
WATER AND WASTEWATER FACILITIES	
Lift Stations Treatment Facilities Booster Pump Stations Reservoirs	Substantial or Construction Complete Certificates for the construction contract TDA Approval to Operate (If applicable) Operation & Maintenance Plans and Manuals

	Registrations and copies of existing / new Code of Practice (If applicable) Commission reports and summaries
ELECTRICAL INFRASTRUCTURE – STREET LIGHTING	
	Copy of electrical permit(s) Ground connection testing (if applicable) Fillcrete testing for concrete bases (if applicable) Pole powder coating quality control reports (if applicable) Shop drawings and product information sheets for all non-standard products (if applicable)
ELECTRICAL INFRASTRUCTURE - SIGNALS	
	Cabinet wiring diagrams Cabinet bench test results Checklist for flashing operation Commissioning report for full operation Phasing and timing sheets Copy of electrical permit(s)
DEMOLITION AND REMOVALS	
	Submission of FAC Only (pending review and confirmation by the TDA)

2.5.4 Final Acceptance Certificate (FAC)

The Final Acceptance Certificate (FAC) can be applied for after the noted maintenance period expiry date shown on the CCC. The maintenance period will be two (2) years for underground / surface infrastructure improvement and water / wastewater facilities, and three (3) years for stormwater facilities. The FAC application categories will be the same as the CCC application categories.

A final inspection with the TDA will need to be scheduled prior to FAC acceptance. Any outstanding deficiencies are to be repaired to a satisfactory level. A second/final inspection may be required to confirm the satisfactory completion of works. Note that inspections will be weather permitting at the discretion of the TDA inspector.

The FAC application package for each Infrastructure Improvement category shall be submitted to the TDA and must include:

- Detailed Cover letter
- FAC Checklist found in Appendix A for the respective Infrastructure Improvement
- One (1) digital copy of the Final Acceptance Certificate, duly signed and sealed by the Consultant with tabloid (11”x17”) plans attached highlighting the Improvement constructed
- One (1) full digital set of engineering, landscape and/or irrigation drawings indicating the completed Improvements and marked as “As-built Drawing” with the Consultant’s stamp and signature being dated to reflect the FAC application date
- Testing Material / Requirements as listed in Table C
- One (1) digital copy of “As-built” engineering, landscape drawings as per Section 2.2.4.

- One (1) list of deficiencies and/or defects indicating when they were repaired.

Refer to Appendix A for all FAC Checklists and the Final Acceptance Certificate template. Once the FAC application package for the respective Improvement is approved by the TDA, the Final Acceptance Certificate will be signed and issued to the Applicant.

Table C – FAC Requirements

This table outlines the Testing Material / Requirements required to be submitted for each Infrastructure Improvement Category in support of a Final Acceptance Certificate submission. These requirements are also outlined on each of the respective FAC Checklists in Appendix A.

Infrastructure Improvement Category	Testing Material / Requirements
UNDERGROUND INFRASTRUCTURE	
Water Infrastructure	Pressure Test Results – Completed at CCC Water Quality Test – Completed at CCC Hydrant Pressure & Flow Testing in accordance with current Specifications – Completed at CCC
Sanitary Infrastructure	Video Inspection completed within 90 days of the maintenance expiry date. Inspection video and mandrel test should be submitted as separate files. (Submit electronically or via a CD/DVD/USB) Video Inspection Log / Consultant review report Infiltration / Exfiltration Testing (at TDA discretion)
Storm Infrastructure	Video Inspection completed within 90 days of the maintenance expiry date. Inspection video and mandrel test should be submitted as separate files. (Submit electronically or via a CD/DVD/USB) Video Inspection Log / Consultant review report Infiltration / Exfiltration Testing (at TDA discretion)
SURFACE WORKS	
Concrete – Curb, Gutter & Sidewalk	Concrete Test Results (For repaired areas) Erosion & Sediment Control Inspection Logs
Asphalt – Parking Lots, Roads, Recreational Path (Paved and gravel)	Asphalt Test Results (Top-lift and any repaired areas) Compaction Test Results and Authenticated Acceptance Letter with Location Plan Erosion & Sediment Control Inspection Logs
LANDSCAPE	
	Maintenance Log Irrigation Meter Information Sheet Irrigation Information Sheet Maintenance Manuals Annual Double Check Valve (DCV) Report Irrigation "As-built Drawings" stamped and signed by a Certified Irrigation Designer. Digital "As-built Drawings" stamped and signed by a Landscape Architect
STORMWATER MANAGEMENT FACILITIES	

Storm Ponds Underground / Above Ground Storage Tanks Lift Stations	Erosion & Sediment Control Inspection Log Operation & Maintenance Manual and Plan Log – with final comments addressed Water Table Testing Reports Confirmation of landscape establishment
WATER AND WASTEWATER FACILITIES	
Lift Stations Treatment Facilities Booster Pump Stations Reservoirs	Submission of FAC only
ELECTRICAL INFRASTRUCTURE – STREET LIGHTING	
	Copy of electrical permit(s) Ground connection testing (if applicable) Fillcrete testing for concrete bases (if applicable) Pole powder coating quality control reports (if applicable) Shop drawings and product information sheets for all non-standard products (if applicable)
ELECTRICAL INFRASTRUCTURE - SIGNALS	
	Cabinet wiring diagrams Cabinet bench test results Checklist for flashing operation Commissioning report for full operation Phasing and timing sheets Copy of electrical permit(s)
DEMOLITION AND REMOVALS	
	Compaction Test Results and Authenticated Acceptance Letter with Location Plan

2.5.5 Professional of Record

For the entire duration of the Public Infrastructure Permit, the Applicant must retain an Engineering / Landscape Consultant(s) to design, supervise, inspect, monitor and certify all work carried out. The Engineering / Landscape Consultant is deemed to be an agent of the Applicant for the purposes of the Public Infrastructure Permit. If they cease to be the Professional of Record, the TDA will need to be notified. In this case, the Applicant must immediately retain the services of a new Professional of Record.

2.5.6 Proximity Agreements and Utility Line Assignment (ULA) Permits

2.5.6.1 Crossing, Proximity, Ground Disturbance and / or Encroachment Agreements

It is the Applicant’s responsibility to obtain all necessary Agreements, Approvals, and/or Permits from any applicable Utility company prior to construction. Separate agreements related to crossing, proximity, ground disturbance and/or encroachment may be required if the Applicant’s proposed work or offsite upgrade requirements includes crossings of and/or construction activity adjacent to the following:

- Oil or gas pipelines
- Well sites
- Overhead or underground telecommunication lines
- Overhead or underground power lines
- Railways
- Other rights-of-ways

2.5.6.2 Utility Line Assignment (ULA) Permits for Shallow and Overhead Utilities

The Applicant is responsible for coordinating the location of the existing and proposed power, gas, street lighting, and telecommunication lines with the respective utility companies including any conflict resolutions. Any new proposed shallow utilities will require a ULA Permit from the TDA. Plans will need to be provided showing the offsets of the proposed ULA from property lines and existing underground infrastructure. A final set of record drawings or redline as-built drawings of the proposed utility will be required by the TDA to close out the ULA permit. It will be the Applicant's responsibility to ensure all utilities are properly registered within the right-of-way. Confirmation that the line assignment has been reviewed by the Applicant and their Engineer of Record will also be required prior to approval.

See Appendix A for the Utility Line Assignment (ULA) Permit application form.

2.5.7 Traffic Accommodation Strategy (TAS) Plans

For any works which will be performed within a public road right-of-way and require a modification to the existing traffic patterns or a road/lane closure, a Traffic Accommodation Strategy (TAS) Plan will be required to be submitted and approved by the TDA.

The following City of Calgary and Transportation Association of Canada (TAC) documents can be utilized to inform the development of a TAS Plan:

- *City of Calgary Temporary Traffic Control Manual*
- *TAC Manual of Uniform Traffic Control Devices for Canada (MUTCD)*

Any works which encroach into the Alberta Infrastructure Transportation Utility Corridor (TUC) or City of Calgary rights-of-way, or any other jurisdiction will require a separate submission and approval from the relevant approving authority.

For any TAS Plan submission, the TDA requires minimum of 10 business days' notice. Traffic detours or road closures cannot commence without an approved TAS Plan by the TDA. See Appendix C for TAS Plan application form and checklist.

2.5.8 Demolition & Removal Permits

A demolition permit will be required for any proposed demolition or removal of any existing structure or infrastructure. This permit will fall under the Public Infrastructure Permit Application. Applicants will need to select the appropriate category and provide the relevant information required.

3 Private Realm (Development Permits)

3.1 General

Site Servicing Plans (SSP) are the detailed civil engineering and landscape drawings provided with a Development Permit (DP) application. These drawings outline the supply and distribution of potable water, the network of sanitary sewer service, the collection of stormwater, road geometrics / grading, parking lot configuration, vehicular movements, traffic analysis, site electrical / lighting, landscape design, erosion and sediment control, landscape architecture, and various supporting studies as outlined below in Section 3.2.4. The submission of these drawings ensures that private developments are designed to comply with the design standards and construction specifications outlined herein. Approval of a Development Permit application, including all drawings and supporting studies will grant the applicant permission to commence with the proposed site development work and connect to the Tsuut'ina Nation water, sanitary, stormwater and road networks. In some cases, a Public Infrastructure permit will be required for any offsite construction work that falls within the Public Realm.

3.1.1 Development Permit Requirements

A Development Permit (DP) Application is required for all new private developments where utility connections (water, sanitary and stormwater) are proposed or where the existing water service, metering, or on-site sewers will be changed. It is also required in situations where the proposed private Development will increase the stormwater release from site or where there are significant changes to the site grading. These proposed changes must be reviewed by the TDA to ensure that any new or altered utility service systems are designed and installed to meet the requirements of all applicable standards and specifications.

The Professional of Record maintains full responsibility to exercise competence and good engineering judgement for the entirety of the design and construction. Further, they must adhere to the most current versions of standards and specifications as outlined and listed in Section 1.4. The Professional of Record is also responsible for ensuring any other applicable federal, provincial, and Nation laws and policies are adhered to and for performing inspection and documentation for all site development and retaining these records for the use of the Applicant. The Contractor maintains full responsibility for the entirety of their construction, installation or alteration activities, during construction until development completion is certified by the TDA, ensuring their work is as per the approved plans and meets all the above requirements.

Review and inspection by the TDA is not to be considered a substitute for supervision by the Professional of Record, Applicant, and Contractor. The professional responsibility of the design and construction of the proposed development remains with the Applicant and their Professional of Record and Contractor.

Construction cannot commence without a Development Permit issued by the TDA. In some cases, the TDA will issue a Conditional Development Permit which will allow the Applicant to commence with construction. The Conditional Development Permit will expire in thirty (30) calendar days until the final conditions are addressed by the Applicant to a satisfactory level at which point the conditional status will be removed.

3.1.2 Building Permit Requirements

To apply for and obtain a building permit from the TDA, an approved or conditionally approved Development Permit will be required.

3.2 Submission Requirements

3.2.1 General

All Development Permit (DP) submission documents including drawings, letters, studies, reports and models shall be submitted in digital format (PDF and model files). Development Permit applications must be dated and submitted online via the TDA's website. All drawings shall conform to the drawing requirements outlined in Section 3.4 - Drawing Standards. Applications that are incomplete or found to not be in accordance with the requirements outlined in this standard will be rejected. The requirements and any special conditions will be confirmed at the pre-application meeting with the TDA.

Development Permit Checklists have been prepared to assist the Applicant in the preparation of a DP application for the site servicing and landscape requirements. Refer to Appendix B for a copy of Development Permit Checklists. Applications that are incomplete or found to not be in accordance with the requirements will be rejected.

It is recommended that the Engineering Drawings / Site Servicing Plans are submitted with the Development Permit application for a timely review of the submission. Site Servicing Plans that are submitted following the Development Permit application may experience a longer application circulation period.

3.2.2 First Submission Requirements

The following are the key items that must be submitted for a Development Permit Application (refer to Appendix B for the complete checklists):

- Signed cover letter
- Development Permit Application Form (refer to *the Taza Development Approval Process Law* for further details on DP requirements)
- Design Statement (in accordance with the *Taza Development Approval Process Law)*
- Development Permit Checklist
- Application Fee (refer to current version of the TDA Fee Schedule)
- Development Permit Number (to be provided by the TDA)
- Current copies of any Restrictive Covenants, Utility Rights-of-Way, Easements, Drainage Agreements or Caveats registered on the Title(s)
- Site DP Drawings, including building elevations
- A complete set of authenticated digital engineering and landscape drawings
- Cultural Advisory Group Form (if applicable)
- Letter of Authorization from the owner / developer or their agent including legal plans (if required)
- Indigenous Services Canada (ISC) / Health Canada Approval(s)
- Tentative Legal Plans of Survey, as required.
- Tentative Utility Right-of-Way Plan(s), as required.
- Geotechnical Report, including pavement structure design, as required.
- Environmental Site Assessment or any other relevant environmental studies, if required.

- Stormwater Management Model/Report and any relevant studies as per Section 3.3.4 and Appendix C, including Stormwater Management Checklist
- Erosion & Sediment Control Report and Drawing Application as per Section 3.3.6 and Appendix C. The requirement for a report will be determined at the pre-application meeting.
- Traffic Impact Assessment, as required.
- Other pertinent items as deemed necessary by the TDA as per Section 3.2.4.

Depending on the scope and magnitude of the Development Permit Application, Bonding by the Applicant and their Contractor may be a requirement. This will be confirmed at the Pre-Application meeting.

The TDA will require up to eight (8) weeks to review the first submission and provide Team Review Comments (TRC) or a Development Permit approval or a conditional permit.

3.2.3 Second/Subsequent Submission Requirements

The following are a list of key items that must be provided for all subsequent submissions (refer to Appendix B for the complete checklists):

- Signed cover letter giving a description of the revisions to first (or previous) submission
- Revised DP Checklist
- Reponses to the previous set of Team Review Comments (TRC) can be provided directly in the provided document. Comments will be closed out once they have been satisfied.
- Resubmission of any drawings, plans, or reports, including DP site plans and building elevations, as required.
- A complete set of revised, authenticated engineering and landscape drawings. Partial drawing submissions will not be accepted.
- Design Statement (if revised)
- Other pertinent items as deemed necessary by the TDA, as outlined in Section 3.2.4.

Further submissions may be required by the Applicant to achieve Development Permit approval and to satisfy the comments provided by the TDA. Advisory Comments, Prior to Release Conditions and Permanent Conditions will be provided at each submission stage by the TDA.

Conditional DP Permits will be issued if the applicant has substantially satisfied the TDA's comments. Conditional DP Permits will expire after thirty (30) calendar days, after which a stop work order will be issued until the conditional status is removed.

Additional fees will be applied for additional reviews beyond the second submission of the Development Permit application, in accordance with the Fee Schedule in Appendix C.

3.2.4 Studies Prepared in Support of Application

The following are documents that may be required for submission in support of a Development Permit application:

- Access Management Plan – Construction Access
- Archaeological Sites
- Biophysical Impact Assessment (BIA)
- Chemical Management Plan

- Construction Management Plan
- Cost Feasibility and Sustainability Analysis (Water, Wastewater and Stormwater)
- Environmental Impact Assessment
- Environmental Site Assessment
- Erosion & Sediment Control Plan
- Groundwater Supply Evaluation
- Historical Studies
- Master Drainage Plan / Updates
- Natural Environment Park Restoration Plan
- Paleontological Sites
- Water Servicing Study
- Sanitary Servicing Study
- Stormwater Management Report
- Traffic Accommodation Strategy (TAS) Plan
- Traffic Impact Assessment
- Tree Protection Plan
- Other reports and agreements that the TDA deems necessary

The requirements for these studies and any other supporting documentation on a given Development Permit application will be discussed at the Pre-Application Meeting with the TDA.

3.3 Design Guidelines

3.3.1 Road and Streetscape Design

3.3.1.1 General

The current editions of the following City of Calgary, and Provincial/Federal Design Guidelines, Standards and Specifications need to be utilized by the Applicant and the Engineering Professional of Record for any road design within the Development Permit property:

- *Design Guidelines for Development Site Servicing Plans*
- *Design Guidelines for Street Lighting*
- *Standard Specifications – Roads Construction*
- *Standard Specifications – Traffic Signal*
- *Transportation Association of Canada (TAC) Manual*
- *Alberta Transportation Recommended Practices Guidelines* for Signage, Traffic Operations and Traffic Signals

It will be the Applicant’s responsibility to ensure that the design, construction and performance of all infrastructure constructed meets or exceeds the above-mentioned standards and guidelines.

In addition, the following documents have been specifically compiled for the Taza Development and shall be reviewed in support of the proposed road design:

- *Master Traffic Impact Assessment prepared for each Taza Village*
- *Taza Development Guidelines by the Tsuut'ina-Canderel Land Development Limited Partnership*
- *Land-Use Document*
- *Tsuut'ina Nation Street Naming and Addressing Policies and Procedures*
- *Tsuut'ina Nation Signage Law*

3.3.1.2 Traffic Analyses

A Master Traffic Impact Assessment for each Taza Village has been prepared, which provides an overall traffic analysis for each Village. This analysis will need to be referenced for any road design, intersection configurations and laning changes. An additional, more detailed, traffic analysis pertaining to the DP application may be requested from the Applicant and their Engineering Consultant.

3.3.1.3 Road Classification/Right-of-Way

Detailed Street Network Plans and unique Street Sections have been developed for each of the Taza Villages in the latest version of the *Taza Development Guidelines.* Road design will need to conform to the applicable sections, right-of-way requirements, and landscape architecture requirements as outlined in these development plans.

Refer to the latest edition of the *Taza Development Guidelines* for the Street Section requirements pertaining to each individual Taza Village.

3.3.1.4 Traffic Signage/Directional Signage/Pavement Markings

Traffic control and regulation within the Taza Development includes traffic signage, directional signage, traffic signalization and pavement markings.

The type and location of road signage are subject to the review and acceptance of the TDA and will need to be included as a drawing in the submission set. It will be the responsibility of the Applicant to install the approved street signage to reflect the street names approved by the TDA, if applicable

All pavement markings and regulatory traffic signage need to be in accordance with the current *Alberta Transportation Recommended Practices Guidelines*, and in accordance with the *Tsuut'ina Nation Signage Law*. The Applicant shall ensure all regulatory traffic signage is in place in their permanent locations prior to the acceptance of the Development Completion Certificate.

Bilingual signage, in both English and Dene languages, is required for all traffic and directional signage in Taza. This will need to be coordinated early in the project, at the Pre-application stage or Development Permit application stage, with the TDA. Refer to Appendix D for standard Tsuut'ina Nation signage specifications including translations. A request will need to be submitted to the TDA for any additional custom signage translations. All translated signage within a Development Permit Application will need to be included in the application and will require review and approval by the Tsuut'ina Nation Cultural Committee. In some instances, a separate signage DP application will be accepted by the TDA in accordance with the Signage Law.

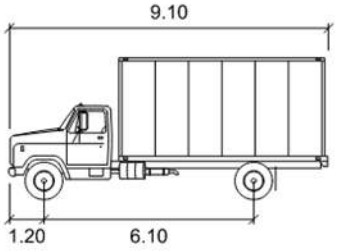
3.3.1.5 Traffic Signalization

All traffic signalization must conform to the current *Alberta Transportation Recommended Practices Guidelines* and the *City of Calgary Standard Specifications – Traffic Signal Construction.*

3.3.1.6 Turning Movements

Turning movements should be provided at key locations within the Development Permit area including site egress / ingress points and internal intersections to illustrate all anticipated maneuvers can be safely accommodated. A clearance of 0.50 meters should typically be provided between the vehicular envelope and face-of-curb, edge-of-gravel/pavement, and any above ground objects (e.g. signs, bollards, etc). The following vehicle templates should be used for this analysis. Site specific vehicles may be requested by the TDA during the pre-application meeting depending on the nature of the proposed development.

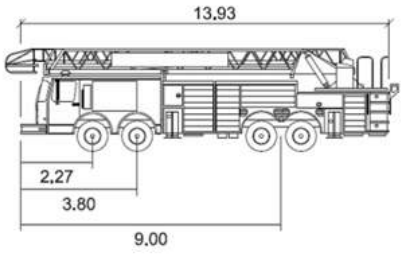
Waste & Recycling:



SU9

	meters
Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 31.5

Fire Access:



CFD_Bronto_Skylift

	meters
Width	: 2.57
Track	: 2.57
Lock to Lock Time	: 6.0
Steering Angle	: 47.5
Turning Radius	: 10.18

3.3.1.7 Street Naming

The TDA shall be responsible for the creation of all new Civic addresses within the Taza Development, if applicable to the Development Permit application. The road naming will adhere to the *Tsuut'ina Nation Street Naming and Addressing Policies and Procedures* document.

3.3.2 Street and Site Lighting

Street and site lighting design shall provide adequate vertical luminance at the roadway while reducing sky glow, glare, and energy consumption and minimizing light trespass onto adjacent areas. Lighting levels shall be sufficient to address the safety and security needs of the Development area and Village. In accordance with the latest version of the *Taza Development Guidelines*, Dark Sky Technology that align with the Dark Sky Lighting Principles should be incorporated to maintain and preserve the nighttime environment.

An electrical permit will be required from one of the designated Taza safety codes / building permit agencies. Applicants can reach out to the TDA for a list of current contacts.

The current edition of the following City of Calgary Standard Specifications for street lighting construction needs to be utilized in Taza's lighting design practice:

- *Design Guidelines for Street Lighting*
- *Standard Specifications – Street Lighting Construction*

- *Street Lighting Kit of Parts (forthcoming)*
- Road's streetlight & Mobility division design bulletins
- All electrical work shall comply with the latest edition of the Canadian Electrical Code
- Contractor shall obtain all required permits prior to construction

Submission shall include:

- Street lighting Plans
- Voltage drop calculations
- Photometric design calculations using AGi 32 software

3.3.3 Water Infrastructure

3.3.3.1 General

The water system on a private site is evaluated from the connection at the Tsuut'ina Nation's main to the master control valve inside the building. All design of the water system up to and including the water valve must conform to the applicable potable water study completed for each Taza Village. following document(s) compiled for the Taza Development:

- *Water Servicing Studies prepared for each Taza Village.*
- *Taza Exchange – Potable Water Reservoir and Pump Station by MPE Engineering Ltd.*
- *Taza Park – Water Network Analysis by WSP Canada.*

For any aspect of water supply or distribution not detailed within the above-mentioned documents, Tsuut'ina Nation retains the ability to defer to the current edition of the City of Calgary Design Guidelines, Standards and Specifications listed below:

- *Design Guidelines for Development Site Servicing Plans*
- *Standard Specifications – Waterworks Construction*

It will be the Applicant's responsibility to ensure that the design, construction and performance of all infrastructure constructed meets or exceeds the above-mentioned standards and guidelines.

3.3.3.2 Hydrants

3.3.3.2.1 Hydrant Type

Hydrants located within the Taza Development shall be of the following hydrant model unless otherwise approved by the TDA:

Sizing Characteristics:

- Two (2) 65mm (2.5") hose nozzles with threads matching national, provincial, municipal standard
- One 114mm (4.5") pumper nozzle with threads matching national, provincial, municipal standards

Preferred Manufacturers:

- McAvity (Clow Canada)
- Mueller
- Canada Valve

Refer to Appendix D for the preferred McAvity (Clow Canada) Hydrant Specification.

3.3.3.3 Meter Units

3.3.3.3.1 General

All water connections to the Tsuut'ina Nation water system will require the installation of a water meter. Applicants will need to contact and coordinate with the TDA for water meter specifications and requirements. All current contact information for Tsuut'ina Nation departments can be requested from the TDA or found in the *Taza Development Level of Service* document.

3.3.3.3.2 Metering

Utility billing will be effective from the date that the water meter is installed. Once the meter is installed, the water shall be turned on by the TDA only. The following stipulations for metering apply:

- One water meter is required for each registered Applicant.
- No branch line or tap between the water meter and service line are permitted.
- The TDA will determine the meter make / model to ensure the meter is compatible with our remote reading system.
- If a building is equipped with an irrigation system, it must be connected to a dedicated meter to accurately measure water consumption. This ensures compliance with water usage regulations and facilitates monitoring during periods of water restrictions. Additionally, customers will not be subject to service charges during the winter months if no water usage is recorded.
- The TDA will determine the type and number of water meters to be supplied and installed for each Applicant. However, the TDA will not determine the meter size, necessary flow rate, or fire flow demand for any building or renovation, regardless of its intended use. Meter sizing is the responsibility of the Applicant and their Professional of Record, who must assess factors such as peak demand, fixture units, and fire protection requirements in accordance with the National Plumbing Code of Canada (NPC), National Fire Protection Association (NFPA) guidelines, and local plumbing codes.

3.3.3.4 Water Network Analysis

A hydraulic network analysis may be requested for any new development which has not had a previously approved analysis completed or has the potential to significantly alter the current water servicing study and/or the capacity of the network. An authenticated report or letter by the appropriate Professional of Record will need to be submitted to the TDA for review and approval. This requirement will be determined as part of the pre-application meeting. All water network analyses should be in accordance with the relevant Taza Village water servicing study. All water network models need to be completed in WaterCAD.

3.3.4 Wastewater Infrastructure (Sanitary Sewer)

3.3.4.1 General

The following document(s) have been compiled for the Taza Development and shall be reviewed prior to designing the wastewater network on the Tsuut'ina Nation:

- *Sanitary Servicing Studies prepared for each Taza Village.*

For any aspect of the wastewater network not detailed within the above-mentioned documents, the TDA retains the ability to defer to the current edition of the City of Calgary Design Guidelines, Standards and Specifications listed below:

- *Design Guidelines for Development Site Servicing Plans*
- *Standard Specifications – Sewer Construction*

It will be the Applicant's responsibility to ensure that the design, construction and performance of all infrastructure constructed meets or exceeds the above-mentioned standards and guidelines.

3.3.4.2 Manhole Covers

Manholes located within the Taza Development shall be composed of the following frame and cover unless otherwise approved by the TDA:

- *TF-50 Shallow Frame by Trojan Industries Inc.*
- *TF-50CT Tsuut'ina Cover by Trojan Industries Inc*.

Refer to Appendix D for the Manufacturer's Detailed Drawing of the Shallow Frame and Tsuut'ina Cover.

3.3.5 Stormwater Management

3.3.5.1 General

The following document(s) have been compiled for the Taza Development and shall be reviewed prior to beginning stormwater analysis on a Private Development within the Taza Development:

- *Master Drainage Plan prepared for each Taza Village*
- *Taza Development Guidelines by the Tsuut'ina-Canderel Land Development Limited Partnership*
- *The applicable Pond or Phase Report for the site.*

For any aspect of stormwater management or storm sewer design not detailed within the above-mentioned documents, the TDA retains the ability to defer to the current edition of the City of Calgary Design Guidelines, Standards and Specifications listed below:

- *Design Guidelines for Development Site Servicing Plans*
- *Standard Specifications – Sewer Construction*
- *Stormwater Management & Design Manual*

It will be the Applicant's responsibility to ensure that the design, construction and performance of all infrastructure constructed meets or exceeds the above-mentioned standards and guidelines.

3.3.5.2 Submission Requirements

Private realm applications may use the Rational Method for stormwater analysis when the following conditions are met:

- Site is under 2.0ha,
- No runoff volume targets apply to the site,
- And there are fewer than 5 traplows onsite.

- Final requirements are at the discretion of the TDA.

All other private realm applications require the submission of a Stormwater Management Report which aligns to the governing Phase SWMR or Pond Report. In the case of smaller application areas, a memo may be acceptable, at the discretion of the TDA.

A complete SWMR first submission must be received before underground approvals can be considered. Surface approvals can only be granted alongside an approved SWMR.

3.3.5.2.1 Runoff Volume Targets

Areas subject to runoff volume targets (as per Phase or Pond Reports) must either use computer modelling (e.g. PCSWMM) to complete the analysis or use the City of Calgary Water Balance Spreadsheet.

3.3.5.2.2 Model Files

Submissions utilizing computer modelling must submit model files with the SWMR. Where applicable, these files should be packaged to include results and all files necessary for model run.

3.3.5.3 Modeling Programs

The following list of software suites will be accepted for the Taza Development:

- *SWMHYMO*
- *PCSWMM*

3.3.6 Low Impact Developments

Low Impact Development (LID) is an emerging stormwater servicing strategy and is strongly encouraged in the Taza Development.

Refer to the *Taza Development Guidelines* for a list of possible or required LIDs to be incorporated in the design of the Taza Villages. For more information on the role of LIDs in the management of stormwater, refer to the Master Drainage Plan detailed below:

- *Master Drainage Plan prepared for each Taza Village*
- *Taza Development Guidelines by the Tsuut'ina-Canderel Land Development Limited Partnership*
- *City of Calgary Stormwater Management & Design Manual*
- *City of Calgary Low Impact Development Guidelines:*
    - *Geotechnical and Hydrological Considerations*
    - *Bioretention and Swales*
    - *Green Roofs*
    - *Permeable Pavement*

Where LIDs are proposed to achieve stormwater quality improvement targets, the methodology detailed in the above-mentioned Bioretention and Swales Module noted above, must be used.

3.3.7 Erosion and Sediment Control

3.3.7.1 General

Erosion and Sediment Control needs to be developed and implemented throughout all stages of construction to limit the soil disturbance and ensure the protection of environmental resources, infrastructure and property within, and adjacent to construction sites.

Erosion and Sediment Control in the Taza Developments must be designed in accordance with the latest edition of the *City of Calgary Erosion and Sediment Control Guidelines, Specifications and Field Manual* detailed below:

- *Erosion and Sediment Control Guidelines*
- *Erosion and Sediment Control Field Manual*
- *Instruction Manual for Erosion and Sediment Control Plan Applications*
- *Standard Specifications – Erosion and Sediment Control*

3.3.7.2 Erosion and Sediment Control Requirements

For sites greater than 2.0 Ha in size: A full ESC Plan (report & drawings) needs to be developed and submitted for approval by the TDA. The ESC Plan must be implemented throughout all stages of construction. See Appendix C for a report template.

For sites between 0.40 - 2.0 Ha in size: ESC Construction Drawings need to be developed and submitted for approval by the TDA. The ESC Construction Drawings need to be implemented throughout all stages of construction.

For sites less than 0.40 Ha in size: A Good Housekeeping Letter Request must be submitted and followed throughout all stages of construction. See Appendix C for a letter template. Good Housekeeping Practices Include:

- Control of mud track out during construction, usually by means of a well-maintained construction entrance/exit on all access locations, supplemented with period street sweeping as required.
- Dust control must be implemented on site, when required.
- Install down-gradient perimeter protection (such as silt fence, compost sock, etc.) to protect off-site areas from stormwater runoff and sedimentation during construction.
- Proper placement and protection of stockpile soils and materials so they will not be eroded to off-site areas, including storm inlets.
- Inspections are required every 7 days and after rainfall or snowmelt events.

3.3.7.3 Winter Operations

A pre-winter inspection with the TDA is required to note any deficiencies that do not comply with the approved ESC Plan or to note any required maintenance. Examples include, but are not limited to:

- Confirm storm inlet controls have been removed.
- Ensuring sediment containment systems have adequate storage capacity
- Removal of sediment and repair of structures and controls designed to capture sediment
- Checking for adequate stabilization of all exposed areas and inspecting erosion controls to ensure proper installation and condition
- Review of potential run-on areas to see if additional measures will be required.

Winter is defined as the dates between November 1 and April 30 of each year.

Refer to the latest edition of The City of Calgary Erosion and Sediment Control Standard Specifications for winter operation requirements for each standard specification.

3.3.7.4 Erosion and Sediment Control Exceptions

Unless otherwise requested, RUSLE calculations are not required for areas that have permanent erosion and sediment control measures in place (i.e. existing grass/weeds with 80%+ ground cover, pavement, concrete, etc.).

3.3.8 Landscape

The following document(s) have been compiled for the Taza Development and shall be reviewed prior to landscape design on the Tsuut'ina Nation:

- *Taza Development Guidelines by the Tsuut'ina-Canderel Land Development Limited Partnership*

The current editions of the following City of Calgary Design Guidelines, Standards and Specifications need to be utilized by the Applicant and the Consultant for the landscape design:

- *Canadian Landscape Standard - the Guide for Landscape Construction Projects across Canada)*
- *Development Guidelines and Standard Specifications – Landscape Construction-Calgary Parks and Open Spaces (Latest Version)*
- *City of Calgary Seed Mixes. Recommendations and Guidelines to inform revegetation work in Calgary (Latest Version)*
- *City of Calgary Plant List (Latest Version)*
- *Residential Street Design Policy*

It will be the Applicant's responsibility to ensure that the design, construction and performance of all infrastructure constructed under the Servicing Agreement meets or exceeds the above-mentioned standards and guidelines.

3.3.9 Waste and Recycling Requirements

Waste and recycling services will be the responsibility of the Applicant. Refer to the *Taza Development Level of Service* for further information.

3.4 Drawing Standards

3.4.1 Drawing Requirements

This Section lists the requirements specific to the TDA related to the preparation of Engineering Drawings for Development Permit application. For information not covered in this section, refer to the City of Calgary drawing specifications detailed within the latest edition of the following:

- *Design Guidelines for Development Site Servicing Plans*
- *Standard Block Profile Specifications for CAD and Manual Formats*
- *CAD Standard Guidance Document*
- *Development Guidelines and Standard Specifications – Landscape Construction*

3.4.2 General Drawing Requirements

3.4.2.1 Sheet Size

The following sheet sizes will be accepted:

- A1
- A3 shall be provided in addition to the above for field inspections

3.4.2.2 North Arrow

The north arrow is to be placed within the upper right-hand corner of the sheet. The drawing should be oriented such that north faces the upper edge of the drawing sheet. The north arrow may face to the left of the page however, this is dependent on the scope of the project.

3.4.2.3 Title Block

All drawings must be accompanied with a title block along the right side or bottom of the drawing. The following information must be detailed within the title block:

- Applicant's name
- Consultant's name
- Relevant TDA Development Permit (DP) Application Number
    - The Application Number may not be available at the First Submission therefore, it may be provided by the Second Submission.
- Village name including staging and/or phasing, if applicable
- Legal plan
- Civic address
- Drawing number/name (refer to Section 3.4.3.1)
- Horizontal and vertical scale used
- Fields for the signature of:
    - Designer
    - Draftsperson
    - Checker
- A table documenting the issued drawings and the number of revisions including a number, date, description and initials of the Consultant's Approver.
- An allocated space for the name of the Consultant, the signed professional of record's stamp (P.Eng., P.L.(Eng.), P.Tech., Landscape Architect stamp (if applicable), and Permit to Practice stamp for engineering drawings.
- Legend
- Total site area in hectares
- Notes

3.4.2.4 Drawing Scale

The following scales are to be used for the preparation of plan drawings. Exceptions will be noted for specific drawings.

- A minimum scale of 1:100 and a maximum scale of 1:1000 should be used for all plan drawings.

3.4.3 Plan Drawing Requirements

3.4.3.1 List of Applicable Plan Drawings

The following is a list of plan drawings that may be submitted in support of a Development Permit application.

The following drawing naming and numbering can be used as a guideline. Required drawings will be on a per application basis, which will be confirmed at the pre-application meeting with the TDA.

SHEET NUMBER	SHEET NAME
C1.1, C1.2, etc.	Underground Layout Plans
C2.1, C2.2, etc.	Surface and Grading Plans
C3.1, C3.2, etc.	Stormwater Management Plans
C4.1, C4.2, etc.	Low Impact Development Plans
C5.1, C5.2, etc.	Road/Pavement Marking and Signage Plans
C6.1, C6.2, etc.	Cross-Sections
C8.1, C8.2, etc.	Details
C9.0, 10.0, etc.	Additional Site Plans
SL1.1, SL1.2, etc.	Site Photometric/Lighting Plans
L1.0, L1.1, etc.	Landscape Plans, including but not limited to: Concept Plan, Layout Plan, Grading Plan, Planting Plan
L2.0, L2.1, etc.	Landscape Details as Required
IR1.0, IR1.1, etc.	Irrigation Plan
ESC1.0, ESC2.0, etc.	Erosion and Sediment Control Plans

The details and minimum drawing requirements for each of the plan drawings listed above can be found in the subsequent sections.

3.4.3.2 Underground Layout Plans

The following information must be clearly identified on the Underground Layout Plan:

- Alignments for all deep utility services including water, sanitary and stormwater (within and adjacent to the Site)
- Location of manholes and catch basins including their associated identification numbers,
- Pipe length, pipe size, pipe material (general note acceptable), pipe invert elevations at manholes, and grade between manholes and catch basins,
- Rim elevations at all manholes and catch basins,
- Direction of pipe flow,
- Location of all shallow utilities (within and adjacent to the Site),
- Off-site connections (outside the proposed development boundary),
- Water meter room and,
- Stormwater calculations – Minor System Table.

3.4.3.3 Surface and Grading Plans

The following information must be clearly identified on the Surface and Grading Plans:

- Existing and proposed surface grades along the property line and on site,
- Grade changes and ramps within all driveways and parking areas,
- Drainage pattern indicated by boundary lines and arrows,
- Surface material, curbs, sidewalks, parking areas,
- Existing ground contour lines at 0.5m intervals,
- Location of depression storage by trap lows,
- Emergency spill route including spill elevation and location and,
- Stormwater calculations – Overland Flow Summary Table and Graph, and Traplow Storage Table.

3.4.3.4 Storm Drainage Plans

Storm Drainage Plans are required for all private Developments. Refer to Section 3.3.4 for Stormwater Management Submissions. The following should be identified on the Storm Drainage Plan:

- Catchment labels including catchment number, total area (m^2) and the runoff coefficient (C factor),
- Location of all underground storm infrastructure including pipe inverts,
- Direction of pipe flow,
- Location of manholes and catch basins including their associated identification numbers and rim elevations,
- Stormwater features such as storm ponds, trap lows, ICDs, oil/grit separators, BMPs, or Low Impact Developments Practices and,
- ICD and Oil/Grit Separator details.
- Sub-drain plans and details, if applicable.

3.4.3.5 Low Impact Development Plan

If a Low Impact Development (LID) has been incorporated on the private Development, identify the location and type of Low Impact Development proposed. If necessary, a separate Low Impact Development Plan may be submitted within the Development Permit Application Submission.

- Cross-sections
- Detailed grading
- Associated landscape plans
- Product details if included
- Layout or key plan for multiple features

3.4.3.6 Road/Pavement Marking and Signage Plan

A Road/Pavement Marking and Signage Plan will outline the road or parking lot pavement marking design details and site/road signage locations. Bilingual signage, in both English and Dene

languages, will be required for onsite traffic/directional signage. This will need to be coordinated early in the project, at the Pre-application stage or Development Permit application stage, with the TDA.

Refer to Appendix D for all current signage specifications.

3.4.3.7 Cross-sections

Detailed cross-sections will need to be provided outlining the pavement structure details in accordance with the Geotechnical Report and Pavement Structure Design. The cross-sections need to be sequential in both directions.

3.4.3.8 Details

Detail sheets may be included with a Development Permit application drawing submission when site-specific details are required for the submission yet exceed the available space on the above plan drawings. This includes but is not limited to the following:

- Signage details
- Structural details (bollards, light pedestals, monuments, etc.)
- Stormwater facility details
- Water/wastewater infrastructure details

3.4.3.9 Additional Site Plans

Additional site plans covering project specific items will be required as part of the Development Permit application drawing submission. These include but are not limited to the following:

- Heat trace plans
- Regional pathway plans
- Site electrical plans
- Other applicable site plans as required by the project or requested at the Pre-application meeting

3.4.3.10 Erosion and Sediment Control (ESC)

The ESC drawings must comply with the latest edition of *The City of Calgary Instruction Manual for ESC Plan applications.*

3.4.3.11 Landscape Plans

A landscape drawing submission will consist of a Layout Plan, Grading Plan, Planting Plan, and Irrigation Plan (as required). The General Requirements for all landscape plans and specific requirements for each type of plan has been detailed below:

3.4.3.11.1 Concept Plan

Concept Plans are a visual representation of the written Design Statement required as part of the Development Permit Approval Process. Concept Plans should clearly indicate how the Private Site responds to the Vision, Values and four Pillars (as identified in the *Taza Development Guidelines*) in its own unique way.

Concept plans precede the preparation of detailed Layout, Grading, Planting and Irrigation Plans. These concept plans are to ensure that the *Taza Development Guidelines* and site-specific Design Statement objectives are being achieved in the proposed open space design.

Concept Plans that reinforce the Design Statement shall consist of:

- The type, function and/or theme of the Open Space, including parks and/or streetscape based on its context within the Village.
- Rendered plans showing the high-level relationships of spaces, functions and design features within the site.
- Conceptual grading information including contours and minimum and maximum slopes.
- Conceptual planting design.
- Property lines, easements and utility right of ways.

3.4.3.11.2 General Requirements for all Landscape Plans

- Refer to the *Taza Development Guidelines* and *City of Calgary Development Guidelines and Standard Specifications – Landscape Construction* for additional detailed requirements.
- All landscape construction plans must be sealed and signed by a Registered Landscape Architect with current membership in the Alberta Association of Landscape Architects.
- All drawings and supplemental material(s) for irrigation systems that will be turned over to the Tsuut'ina Nation, must be stamped and signed by a Certified Irrigation Designer (CID) - Commercial. This certification must be issued by the Irrigation Association (IA). The certified designer must be in good standing with the association.
- Be a maximum scale of 1:500 to be used for all landscape plans. Preferred smaller scales are 1:200 and 1:250.
- Include the legal description, municipal address (if available), site property lines, legal easements, encumbrances and rights-of-way.
- Existing and proposed infrastructure/Infrastructure Improvements located within and/or adjacent to the site.
- Adjacent land uses, roads, utilities, structures.
- Include curbs, sidewalks, fences, and any other boundary conditions.
- Include existing tree locations, diameter at breast height (DBH), and species (where possible).
- All berms, parks, roadway boulevards, medians and traffic islands, utility lots and rights of way, buffers, and dry ponds.
- Details of items that are not included in the Standard Specifications for Landscape Construction (as required).

3.4.3.11.3 Layout Plan

In addition to the General Requirements for Landscape Plans, the following must be identified on Layout Plans:

- Existing site features and vegetation to be retained.

- Proposed layout of all open space infrastructure and site amenities including but not limited to parks, recreational facilities, playgrounds, baseball diamonds, sports fields, buildings, pathways, trails, bollards, gates, garbage receptacles, site furnishings, benches, basketball courts, outdoor rinks, tennis courts, mailboxes, signage (including dog bylaw signs, pathway signs, and trail signs), fencing, etc.
    - All playground equipment layout must be shown as per CSA guidelines, including non-encroachment zones, fall zones and protective surfacing zones. Provide supplier elevations, cross sections, photos or 3D renderings for playground designs (where possible).
    - Provide a detailed section for poured-in-place fall surface indicating the depth of the clay base, gravel layer, rubber crumb base layer and rubber crumb top layer.
- Fencing or other property delineation specifications and alignment.
- Pedestrian crossing locations and details.

3.4.3.11.4 Grading Plan

In addition to the General Requirements for Landscape Plans, the following must be identified on Grading Plans:

- Major items associated with layout but not including dimensions, i.e. walkways, play fields, roads, curbs, structures, and natural areas.
- Surrounding grade information affecting site development.
- Existing and proposed contours at 0.5 m contour intervals.
- Elevations at each break point (top and toe of slope).
- Existing and proposed spot elevations including, but not limited to: manhole rim, catch basin rim and invert elevations (as required), top of wall, top of curb, and finished floor elevations (as required).
- Existing and proposed concrete gutters.
- All trap lows with their 1:100 inundation area and emergency spill routes.

3.4.3.11.5 Planting Plan

In addition to the General Requirements for Landscape Plans, the following must be identified on Planting Plans:

- Major items associated with “Layout” but not including dimensions, i.e. walkways, roads, curbs, hard surface areas, structures, natural areas.
- Contours at 0.5 m intervals.
- Planting bed outlines.
- Existing trees, vegetation and other natural features to be retained or removed.
- Topsoil depths for plant beds and areas to be sodded or seeded.
- The type and depth of mulch for shrub beds and tree wells.
- Proposed seed mixes.
- The location of proposed plants including trees, shrubs and groundcovers.

- Include a plant list identifying species botanical and common names, quantities, sizes, habit, spacing, and specific remarks (as required).

3.4.3.11.6 Irrigation Plan

In addition to the General Requirements for Landscape Plans, the following must be identified on Irrigation Plans:

- Major items associated with “Layout” but not including dimensions, i.e. walkways, roads, curbs, hard surface areas, structures, natural areas.
- Major items associated with the Grading and Planting Plans (faded back).
- Locations of all lines, sprinkler heads, valves, drains, sleeves, electrical drop-offs, 100-volt wire, 110-volt conduit, and electrical controllers and dimensions from adjacent property lines.
- Whether the system will be trenched or “plowed in” and whether the system will be gravity drained, blown out, or a combination.
- A schedule of materials/products describing sizes, manufacturers and model numbers, pipe fitting method, performance standards, and sources of materials/products.
- Minimum Static Water Pressure.
- Irrigation Scheduling Chart.
- Additional detailed requirements for Irrigation Plans to be referenced in Section 2.3.8 of the City of Calgary Development Guidelines and Standard Specifications: Landscape Construction.

3.4.4 Record Drawing Requirements

Record drawings will need to be prepared and submitted at the Development Completion Certificate (DCC) stage. Record drawings are detailed engineering drawings showing the surface and underground features such as legal, roadworks, waterworks, sanitary and storm sewers, spill elevations, as they have been constructed.

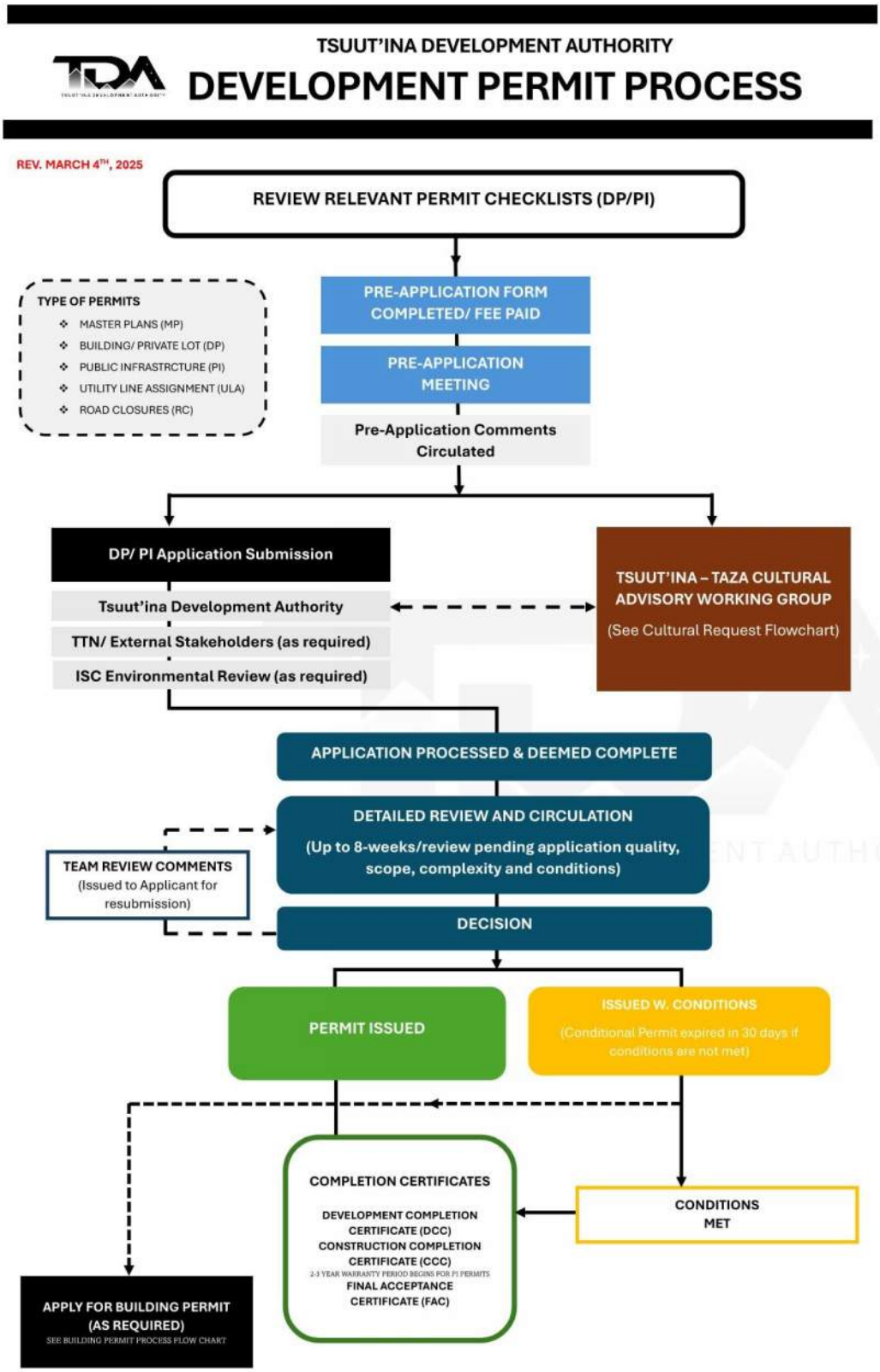
All record drawings will need to be authenticated by the Professional of Record. An authenticated PDF of the record drawings including CAD and GIS files will be required at the DCC stage.

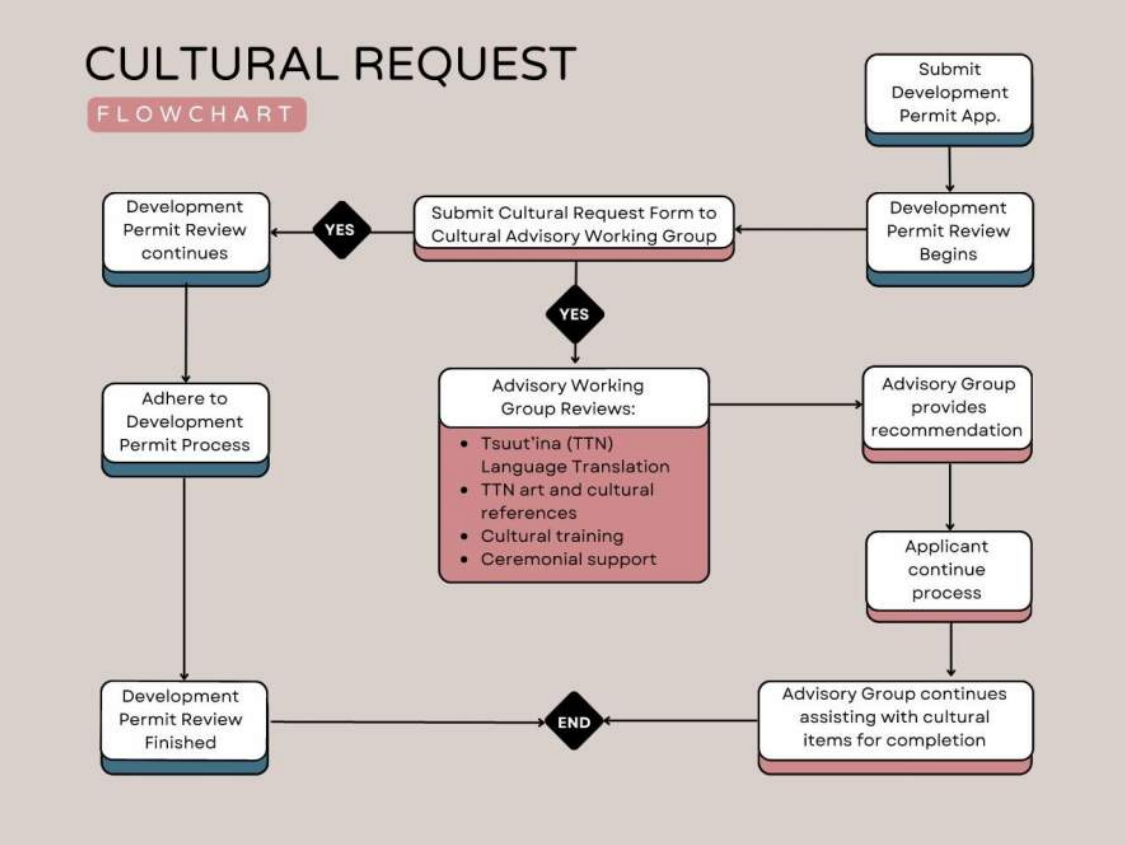
An authenticated letter should also be included, which confirms all underground and surface works, including site grades and spill elevations have been constructed in accordance with the approved design. See Section 3.5.3 for additional Development Completion Certificate requirements.

3.5 Reviews/Approvals Process

3.5.1 Development Permit Application Circulation Process

The following figure is the circulation, review and approvals process administered by the TDA for a given Development Permit application in accordance with the *Taza Development Approval Process Law*. Refer to Appendix B for the applicable Development Permit application forms and checklists.


TSUUT'INA DEVELOPMENT AUTHORITY
DEVELOPMENT PERMIT PROCESS
REV. MARCH 4TH, 2025
REVIEW RELEVANT PERMIT CHECKLISTS (DP/PI)
TYPE OF PERMITS
MASTER PLANS (MP)
BUILDING/ PRIVATE LOT (DP)
PUBLIC INFRASTRCTURE (PI)
UTILITY LINE ASSIGNMENT (ULA)
ROAD CLOSURES (RC)
PRE-APPLICATION FORM COMPLETED/ FEE PAID
PRE-APPLICATION MEETING
Pre-Application Comments Circulated
DP/ PI Application Submission
Tsuut'ina Development Authority
TTN/ External Stakeholders (as required)
ISC Environmental Review (as required)
TSUUT'INA – TAZA CULTURAL ADVISORY WORKING GROUP
(See Cultural Request Flowchart)
APPLICATION PROCESSED & DEEMED COMPLETE
DETAILED REVIEW AND CIRCULATION
(Up to 8-weeks/review pending application quality, scope, complexity and conditions)
TEAM REVIEW COMMENTS
(Issued to Applicant for resubmission)
DECISION
PERMIT ISSUED
ISSUED W. CONDITIONS
(Conditional Permit expired in 30 days if conditions are not met)
COMPLETION CERTIFICATES
DEVELOPMENT COMPLETION CERTIFICATE (DCC)
CONSTRUCTION COMPLETION CERTIFICATE (CCC)
2-3 YEAR WARRANTY PERIOD BEGINS FOR PI PERMITS
FINAL ACCEPTANCE CERTIFICATE (FAC)
CONDITIONS MET
APPLY FOR BUILDING PERMIT (AS REQUIRED)
SEE BUILDING PERMIT PROCESS FLOW CHART



3.5.2 Development Permit Amendment

In the event of design revisions may be required because of unexpected and/or unforeseen field conditions following a Development Permit Approval, a Development Permit Amendment can be submitted to the TDA for review. A Development Permit Amendment consists of the following:

- A cover letter detailing project information such as the DP Application Number, any other relevant project information, as well as a description of the proposed amendments and justification for the changes.
- An authenticated digital drawing set documenting the proposed design revisions.
- Amendment fee, as outlined in the Fee Schedule in Appendix C.

3.5.3 Development Completion Certificate

The TDA utilizes a Development Completion Certificate (DCC) procedure to sign off on all Development Permits completed by the Applicant.

To initiate the request for a Development Completion Certificate (DCC). It will be the responsibility of the Applicant to contact the TDA for a DCC inspection. A DCC will only be issued to the Applicant once the Development has been fully constructed to the satisfaction of the TDA and in accordance with the following procedure:

- Inspect the Development with the Applicant's Contractor and record any deficiencies. Note that inspections will be weather permitting at the discretion of the TDA inspector.
- Conduct further inspection(s) once the Applicant's Contractor repairs the initial deficiencies until all deficiencies are repaired to a satisfactory level.

- Resolve any outstanding field orders related to the Development.
- Schedule and conduct an inspection with the TDA. Any further outstanding deficiencies are to be repaired to a satisfactory level. A second/final inspection may be required to confirm the satisfactory completion of works.
- Submit the signed and stamped DCC, including Record drawings in accordance with Section 3.4.4 to the TDA (i.e. PDF, CAD, GIS files).

The DCC application package shall be submitted to the TDA and must include:

- Detailed Cover Letter
- One (1) full digital set of authenticated engineering and landscape record drawings indicating the completed Improvements and marked "Record Drawings" with the Consultant's stamp and signature being dated to reflect the DCC application date.
- One (1) list of deficiencies and/or defects indicating when they were repaired.
- Authenticated letter which confirms all underground and surface works, including site grades and spill elevations have been constructed in accordance with the approved design.

Once the DCC application package for the respective Development is approved by the TDA, a Development Completion Certificate will be signed and issued to the Applicant.

An Occupancy Permit will not be issued without an approved DCC.

3.5.4 Offsite Public Infrastructure Modifications

Any work, excavation, reconstruction or service extensions within Public Infrastructure areas related to the work associated with a Development Permit will require a separate Public Infrastructure Permit in accordance with Section 2. This includes but is not limited to streets, sidewalks, driveway crossings, landscaping, boulevards, curbs and gutters, back lanes/alleys, walkways, utilities, and any modifications within Public Infrastructure areas.

A Public Infrastructure Permit authorizes an Applicant and their Contractor to excavate, break or reconstruct all or any portion of a Street for a particular project. This Permit will:

- Protect Tsuut'ina Nation from potential lawsuits that could arise from work performed within Public Infrastructure areas;
- Ensures that construction within Public Infrastructure areas complies with the Infrastructure Design Standards and Specifications; and
- Requires the Applicant who enters into the Agreement to maintain the work for two years under the CCC and FAC process.

Appendix A – Public Realm (Public Infrastructure Permits)

1. Public Infrastructure Permit Application Form
2. Public Infrastructure Permit Application Checklist
3. Construction Completion Certificate (CCC) Checklists:
    a. Checklist CCC for UI –Water Services
    b. Checklist CCC for UI – Sanitary Sewer Services
    c. Checklist CCC for UI – Storm Sewer Services
    d. Checklist CCC for SW – Concrete – Curb, Gutter & Sidewalk
    e. Checklist CCC for SW – Asphalt – Parking Lots, Roads & Recreational Pathways
    f. Checklist CCC for SW – Landscape
    g. Checklist CCC for Facilities – Stormwater Management Facilities, Lift Stations, Water and Wastewater Treatment Facilities & Booster Pump Stations
    h. Checklist CCC for EI – Street Lighting Installation
    i. Checklist CCC for EI – Traffic Signals Installation
    j. Checklist CCC for Demolition and Removals
    k. Construction Completion Certificate Template
4. Final Acceptance Certificate Checklists:
    a. Checklist FAC for UI –Water Services
    b. Checklist FAC for UI – Sanitary Sewer Services
    c. Checklist FAC for UI – Storm Sewer Services
    d. Checklist FAC for SW – Concrete – Curb, Gutter & Sidewalk
    e. Checklist FAC for SW – Asphalt – Parking Lots, Roads & Recreational Pathways
    f. Checklist FAC for SW – Landscape
    g. Checklist FAC for Facilities – Stormwater Management Facilities, Lift Stations, Water and Wastewater Treatment Facilities & Booster Pump Stations
    h. Checklist FAC for EI – Street Lighting Installation
    i. Checklist FAC for EI – Traffic Signals Installation
    j. Checklist FAC for Demolition and Removals
    k. Final Acceptance Certificate Template
5. Utility Line Assignment (ULA) Application Form

TSUUT'INA DEVELOPMENT AUTHORITY
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PUBLIC INFRASTRUCTURE PERMIT APPLICATION FORM

APPLICATION FOR:

UNDERGROUND / UTILITIES / ELECTRICAL

☐ SANITARY SEWERS / TRUNKS (INCL. APPURTENANCES) ☐ STORM SEWERS / TRUNKS (INCL. APPURTENANCES)

☐ WATERMAINS / FEEDERMAINS (INCL. APPURTENANCES) ☐ SHALLOW UTILITIES ☐ STREETLIGHTING ☐ SIGNALIZATION

SURFACE WORKS

☐ ROADWORKS ☐ SIDEWALKS ☐ BOULEVARDS ☐ LANES / PATHWAYS ☐ PARKS / PUBLIC SPACE

FACILITIES

☐ STORM FACILITIES / PONDS ☐ WATER FACILITIES ☐ WASTEWATER FACILITIES

EARTHWORKS / ESC

☐ EARTHWORKS / EXCAVATION ☐ STRIPPING AND GRADING ☐ EROSION AND SEDIMENT CONTROL (ESC)

OTHER

☐ SIGNAGE ☐ DEMOLITION (SURFACE / LINEAR INFRASTRUCUTRE) ☐ OTHER

PI PERMIT #	PERMIT FEE $	DATE RECEIVED (*Office Use Only*)

Contact Information

OWNER / DEVELOPER:	APPLICANT/ AGENT (if different from owner / developer):
CONTACT NAME:	CONTACT NAME:
MAILING ADDRESS:	MAILING ADDRESS:
PHONE (OFFICE):	PHONE (OFFICE):
PHONE (CELL):	PHONE (CELL):
EMAIL:	EMAIL:

Legal Description of the Property

LEGAL DESCRIPTION / PLAN NUMBER(S):
EXISTING / APPROVED LAND USE UNDER THE TTN ZONING LAW:
STREET ADDRESS / PROPOSED ROAD NAME (IF AVAILABLE):

Public Infrastructure Permit Application Information

DESCRIPTION OF PROPOSED PUBLIC INFRASTRUCTURE (Provide area of works (ha) and approx. quantities of proposed infrastructure). (*attach additional pages if necessary)*

NOTE: If the applicant is not the owner / developer for the property concerned, the owner / developer will be required to sign this application, or a letter of authorization shall accompany this application.

I acknowledge that all information provided that is associated with the application, including technical studies, will be treated as public information in the course of the Tsuut'ina Development Authority's consideration of the public infrastructure permit application, pursuant to the Taza Development Zoning Law and other legislative documents. By providing this information, you (Owner / Developer / Applicant / Agent) are deemed to consent to its public release.

I accept responsibility for delays in processing caused by incorrect or insufficient submissions. Contact the Tsuut'ina Development Authority at (403) 258-4016, if you have any further questions.

_____ _____

Signature of Applicant / Agent Date

_____ _____

Signature of Owner / Developer Date

OFFICE USE ONLY:

Initial Consideration. (5 working days) The TDA will review the information submitted with the attached checklist, where they may:

1) Deem the application complete and circulate to commenting agencies; or
2) Hold the application pending submission of additional information;

APPLICATION IS: ☐ COMPLETE ☐ INCOMPLETE (PROVIDE COMMENTS BELOW)

CHECKED FOR COMPLETION BY:

Tsuut'ina Development Authority Date

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PUBLIC INFRASTRUCTURE PERMIT APPLICATION CHECKLIST

The Public Infrastructure Permit Application Checklist outlines all the information necessary to evaluate and provide a timely decision on your application.

Refer to the Taza Development Guidelines and the Infrastructure Design Standards and Specifications for the applicable guidelines and standards.

Only applications that are complete will be accepted. Applications and supporting documentation that are submitted must be clear, legible and precise. Plans must be to a professional drafting standard and be clear of any previous approval stamps and notations.

Submission Requirements:

- ☐ Signed Cover Letter (if subsequent submission, giving a description of the revisions to first (or previous) submission)
- ☐ Application Form (The form is to be completed in full and signed by the Owner / Developer of the land and/or the Person authorized to act on their behalf, if applicable)
- ☐ Application Fee (see current TDA Fee Schedule)
- ☐ Letter of Authorization from the Developer of the land, or their agent (if required)
- ☐ Key plan showing the location of the Development area in relation to Taza as a whole
- ☐ A complete set of authenticated digital engineering and landscape drawings
- ☐ Tentative Legal Plans of Survey
- ☐ Tentative Utility Right-of-Way Plans
- ☐ Completed and signed ISC Environmental Approval Application Form
- ☐ Stormwater Management Model/Report and Drainage Studie, including Stormwater Management Checklist
- ☐ Erosion & Sediment Control Report and Drawing Application
- ☐ Other pertinent items as deemed necessary by the TDA (additional reports or studies may be required based on the pre-application meeting)
  - ☐ Access Management Plan – Construction Access
  - ☐ Archaeological Sites
  - ☐ Biophysical Impact Assessment (BIA)
  - ☐ Chemical Management Plan
  - ☐ Construction Management Plan
  - ☐ Cost Feasibility and Sustainability Analysis (Water, Wastewater. Stormwater)
  - ☐ Environment Impact Assessment
  - ☐ Environmental Site Assessment
  - ☐ Geotechnical Reports
  - ☐ Groundwater Supply Evaluation

- ☐ Historical Studies
- ☐ Master Drainage Plan / Updates
- ☐ Natural Environment Park Restoration Plan
- ☐ Paleontological Sites
- ☐ Sanitary Servicing Studies
- ☐ Traffic Accommodation Strategy (TAS) Plan
- ☐ Traffic Impact Assessment
- ☐ Tree Protection Plan
- ☐ Water Servicing Studies
- ☐ Other reports and agreements that the TDA deems necessary

☐ One (1) un-editable and printer-friendly electronic copy (PDF) of the complete Public Infrastructure Design Application package including all authenticated/sealed drawings/documentation.

Subsequent Submission Requirements:

☐ Additional Permit Fee Payment (if applicable and in accordance with the current Fee Schedule)

☐ Reponses to the previous set of Team Review Comments (TRC) provided directly in the issued TRC document. Comments will be closed out once they have been satisfied.

☐ Confirmation from the TDA of additional appropriate licenses, approvals, and permits as required for the construction and/or operation of the water utility, wastewater utility, stormwater utility, or other improvements as required.

☐ Letters from the Shallow Utility Companies acknowledging the proposed alignments and utility right-of-way plan(s) (as required)

NOTE: All Public Infrastructure Permit Applications must be submitted without personal information on any plans. Omitting this information will protect builders and tenants by reducing the risk of any personal information being wrongfully displayed. Failure to follow this requirement may result in an incomplete application. If you consider the information to be personal, do not put it on the plans.

The Tsuut'ina Development Authority may require additional supporting documentation considered necessary to properly evaluate the proposed development.

COMPLETED BY APPLICANT	Office use only	*REQUIRED ITEMS*
		Drafting Requirements:
☐	☐	Plans to be in metric scale, minimum 1:100, all elevations in metric are NAD 83 Geodetic Datum Ground Coordinates
☐	☐	North arrow, pointing to top or left of page
☐	☐	Address (i.e. street address) and legal address (i.e. plan/block/lot)
☐	☐	Size of parcel (ha)
☐	☐	Label all elements of plan as existing or proposed (proposed to be used in circulation elements)
☐	☐	Existing contours on the site with a minimum contour interval of 1.5m.
		Legal Information:
☐	☐	Plot and dimension precise Public Infrastructure boundary lines
☐	☐	Provide legal description
		Adjacent to Parcel:
☐	☐	Street names
☐	☐	Sidewalks and public paths
☐	☐	Curb cuts, medians and breaks in medians
☐	☐	Dimension and label road widening setbacks and corner cuts
		Easements, Utility Rights-of-Way, etc.:
☐	☐	Dimension (width and location)
☐	☐	Label type of easement and registration number
		Required Post & Cable Fencing for:
☐	☐	All temporary dead-end streets
☐	☐	Streets and lanes adjacent to major roads
☐	☐	Lanes adjacent to Public Infrastructure
		Proposed and Existing Utilities on and adjoining the parcel:
☐	☐	Water, storm, and sanitary sewer
☐	☐	Gas, electrical, cable, and telephone (i.e. high-pressure gas lines, pipelines, overhead powerline relocations, etc.)
		Geodetic point datum/ contours:
☐	☐	At the corners of a parcel
☐	☐	At the back of sidewalk or curb
☐	☐	At primary corners of the building
☐	☐	Proposed geodetic contours at 0.5 m intervals, including berming for the site
☐	☐	Label existing and proposed geodetic datum points
		Outline and dimension buildings:
☐	☐	Label projections and structures
☐	☐	Detached buildings and structures
☐	☐	Mechanical equipment and screening proposed
☐	☐	Label use area within the building (i.e. Tenant locations)
☐	☐	Label existing and proposed buildings (or portions of buildings with gross floor area)
☐	☐	Location of all openings (i.e., windows, doors, overhead doors)

COMPLETED BY APPLICANT	Office use only	*REQUIRED ITEMS*
		Setbacks:
☐	☐	Dimension front, side, and rear building setbacks from property lines
☐	☐	Draw, label, and dimension required setback areas (As prescribed in Taza Development Zoning Law)
		Garbage and recycling collection:
☐	☐	Plot location
☐	☐	Dimensions of enclosures or buildings
☐	☐	Type of container
☐	☐	Method of screening
		Parking areas, drive aisles, circulation roads, sidewalks and pathways:
☐	☐	Include curbs and sidewalks, cross walks and pathways (Provide detail if raised)
☐	☐	Label all surface materials used (Both vehicular and pedestrian)
☐	☐	Dimension widths of all aisles and roads
☐	☐	Provide details of vehicle circulation (i.e. Direction of travel and signage)
☐	☐	Provide details on hydrant placement, turning radius, and driveway widths for Fire Department access
		Motor vehicle parking stalls:
☐	☐	Provide calculations for motor vehicle parking stall requirement provided within the Taza Development Guidelines
☐	☐	Label as commercial vehicles, visitor, or employees
☐	☐	Dimension width and depth
☐	☐	Provide barrier-free stalls (detail width and depth)
		Loading stalls:
☐	☐	Dimension width and depth
☐	☐	Dimension overhead clearance
☐	☐	Label surface material of loading areas
☐	☐	Large vehicle turning diagrams for access to drive aisle, garbage collection and loading areas
		Approaches:
☐	☐	Label proposed or existing
☐	☐	Dimension width of driveway at throat and flare (Adjacent to street)
☐	☐	Dimension distance to adjacent approaches
		Fences and retaining walls:
☐	☐	Cross reference to an elevation (For each type of fence/wall and label all materials)
☐	☐	Provide proposed geodetic datum points at top and bottom of wall
☐	☐	For retaining walls 1.2 m or higher, provide structural design drawings, including a cross-section
		Lighting:
☐	☐	Plot locations of building light fixtures and free-standing light standards
☐	☐	Plot maximum wattage of fixtures
☐	☐	Provide detail of light fixtures, including method of shielding (Drawing or specification)

COMPLETED BY APPLICANT	Office use only	*REQUIRED ITEMS*
		Signage:
☐	☐	Outline and label the location of all proposed canopy, freestanding, for fascia signage
☐	☐	Label the source of illumination (e.g., backlit)
☐	☐	Plot location of all existing signage on the parcel (if applicable)
☐	☐	Dimension distance from property lines to signage

COMPLETED BY APPLICANT	OFFICE USE ONLY	*REQUIRED ITEMS – LANDSCAPE PLANS*
		Outline and dimension buildings:
☐	☐	Label projections and structures
☐	☐	Detached buildings and structures
☐	☐	Mechanical equipment and screening proposed
☐	☐	Label existing and proposed buildings (Portions of buildings with gross floor area)
		Setbacks:
☐	☐	Dimension front, side, and rear building setbacks from property lines
☐	☐	Draw, label and dimension required setback areas (as prescribed in Taza Development Zoning Law)
		Plot and label:
☐	☐	Fencing, retaining walls, and sidewalks (dimension width)
☐	☐	Location of any proposed community association facility
☐	☐	Any specific built features that may require special attention in site design
☐	☐	Identify any sloped lands between 7% to 15% and greater than 15%
		Trees and shrubs:
☐	☐	Plot location of trees by symbol (Each symbol should be unique to size and type of tree)
☐	☐	Plot shrubbed areas
☐	☐	Label number of shrubs in each shrubbed area (Only include shrubs that are greater than 0.6m in height or spread)
☐	☐	Indicate trees and shrubs to be added, removed and retained
☐	☐	Show final calculation of all trees and shrubs including ratios (Coniferous to Deciduous) and any substitutions
		Landscape Legend:
☐	☐	Label by symbol (Each symbol should be unique to the size and type of tree/shrub)
☐	☐	Provide caliper of deciduous trees
☐	☐	Provide height of coniferous trees
☐	☐	Provide height of shrubs (Greater than 0.6m)
		Provide total of each type of tree and shrub (By height and size)
		Landscaped Area:
☐	☐	Surface treatment of all soft surfaced landscaped areas (i.e. grass, plant cover)
☐	☐	Surface treatment of all hard surfaced landscaped areas (i.e. decorative pavers, brick, stamped concrete)

☐	☐	Label new landscaped areas and areas to be retained
		Irrigation:
☐	☐	Method of irrigation (Watering)
☐	☐	Label all soft surface landscaping to be irrigated or plot specific areas

COMPLETED BY APPLICANT	OFFICE USE ONLY	***REQUIRED ITEMS – ELEVATION DRAWINGS***
		Include elevations for:
☐	☐	Buildings
☐	☐	Fences
☐	☐	Retaining walls (over 1.2 m in height)
☐	☐	Screening (i.e. mechanical equipment)
☐	☐	Additional walls or structures (i.e. exhaust fan shed)
☐	☐	Cross reference with other plans, where applicable
		Include on elevations:
☐	☐	Doors, windows, overhead doors
☐	☐	Projections and decorative elements
☐	☐	Screening (i.e. service meters, privacy screens)
☐	☐	Dimension all doors, windows, and overhead doors
		Label finishing materials:
☐	☐	Exterior materials (i.e. brick, stucco, vinyl siding)
☐	☐	Roof materials (i.e. asphalt, cedar shakes, concrete tile)
☐	☐	Colours of all major exterior materials
		Lighting:
☐	☐	Plot location of light fixtures
☐	☐	Dimension height of fixtures from grade to bottom of fixture
		Grade:
☐	☐	Plot existing and proposed grade
		Signage:
☐	☐	Label materials, lettering details, copy and colours
☐	☐	Dimension sign and signable area
☐	☐	Dimension distance from grade to bottom of sign
☐	☐	Label means of supporting sign (i.e., structures, guy wires, brackets, bracing)
☐	☐	Label physical form of sign (i.e., cabinet, box, individual letters)
☐	☐	Provide details on external lighting, label if internally illuminated

NOTE: This application does not relieve the applicant from full compliance with the requirements of any federal, provincial or other municipal legislation, or the terms and conditions of any easement, covenant, building scheme or agreement affecting the building or land.

Applicant's Signature: _____ **Date:** _____

(Confirming that all required information has been provided and is correct)

Checked for Completion by: **Date:**

Tsuut'ina Development Authority

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CHECKLIST

CONSTRUCTION COMPLETION CERTIFICATE
FOR UNDERGROUND INFRASTRUCTURE: WATER AND WATER SERVICES

	Submission Item	Comment(s)
A.	Detailed Cover Letter	
B.	One (1) digital copy of the Construction Completion Certificate (CCC), duly signed and sealed by the appropriate Professional of Record with 11"x17" plans attached highlighting the improvement(s) constructed	
C.	One (1) full set of authenticated Engineering Drawings indicating the completed Improvements and marked "Record Drawings" with the Professional of Record's stamp and signature being dated to reflect the CCC application date	
D.	Testing Material/Requirements	
D.1.	Pressure Test Results	
D.2.	Water Quality Test - Chlorine/Bacteriological Testing	
D.3.	Compaction Test Results and Acceptance Letter with Location Plan	
D.4.	Grade Sheets	
D.5.	Bedding Sand Report	
D.6.	Hydrant Pressure & Flow Testing in accordance with current Specifications (including report / letter with photos)	
D.7.	Copies of Crossing Agreements Required for construction	
D.8.	Copies of Registered Easement and Restrictive Covenant Documents	
E.	One (1) digital copy of "As-built" Engineering Design Drawings as per the Infrastructure Design Standards and Specifications	
F.	One (1) digital copy of a list identifying the Contractors that the Applicant has retained to carry out underground infrastructure, surface works, surface grading and facility maintenance. The list, at a minimum shall include the following: • Contractor name and area of responsibility • Contractor business phone number and contact information • Contractor after hours phone number • Contractor emergency phone number	
G.	One (1) list of deficiencies and/or defects indicating when they were repaired.	

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CHECKLIST
CONSTRUCTION COMPLETION CERTIFICATE
FOR UNDERGROUND INFRASTRUCTURE: SANITARY SEWER AND SANITARY SEWER SERVICES

	Submission Item	Comment(s)
A.	Detailed Cover Letter	
B.	One (1) digital copy of the Construction Completion Certificate (CCC), duly signed and sealed by the appropriate Professional of Record with 11"x17" plans attached highlighting the improvement(s) constructed	
C.	One (1) full set of authenticated Engineering Drawings indicating the completed Improvements and marked "Record Drawings" with the Professional of Record's stamp and signature being dated to reflect the CCC application date	
D.	Testing Material/Requirements	
D.1.	Video Inspection completed after backfill and prior to surface completion. (Submit electronically or via a CD/DVD/USB)	
D.2.	Video Inspection Log / Consultant Review Report	
D.3.	Compaction Test Results and Acceptance Letter with Location Plan	
D.4.	Grade Sheets	
D.5.	Bedding Sand Report	
D.6.	Copies of Crossing Agreements Required for construction	
D.7.	Copies of Registered Easement and Restrictive Covenant Documents	
D.8.	Infiltration / Exfiltration Testing (at TDA discretion)	
E.	One (1) digital copy of "As-built" Engineering Design Drawings as per the Infrastructure Design Standards and Specifications	
F.	One (1) digital copy of a list identifying the Contractors that the Applicant has retained to carry out underground infrastructure, surface works, surface grading and facility maintenance. The list, at a minimum shall include the following: • Contractor name and area of responsibility • Contractor business phone number and contact information • Contractor after hours phone number • Contractor emergency phone number	
G.	One (1) list of deficiencies and/or defects indicating when they were repaired.	

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CHECKLIST

CONSTRUCTION COMPLETION CERTIFICATE
FOR UNDERGROUND INFRASTRUCTURE: STORM SEWER AND STORM SEWER SERVICES

	Submission Item	Comment(s)
A.	Detailed Cover Letter	
B.	One (1) digital copy of the Construction Completion Certificate (CCC), duly signed and sealed by the appropriate Professional of Record with 11"x17" plans attached highlighting the improvement(s) constructed	
C.	One (1) full set of authenticated Engineering Drawings indicating the completed Improvements and marked "Record Drawings" with the Professional of Record's stamp and signature being dated to reflect the CCC application date	
D.	Testing Material/Requirements	
D.1.	Video Inspection completed after backfill and prior to surface completion. (Submit electronically or via a CD/DVD/USB)	
D.2.	Video Inspection Log / Consultant Review Report	
D.3.	Compaction Test Results and Acceptance Letter with Location Plan	
D.4.	Grade Sheets	
D.5.	Bedding Sand Report	
D.6.	Copies of Crossing Agreements Required for construction	
D.7.	Copies of Registered Easement and Restrictive Covenant Documents	
D.8.	Copy of Provincial and Federal Approval Letter (SWMF and Outfalls)	
D.9.	Infiltration / Exfiltration Testing (at TDA discretion)	
E.	One (1) digital copy of redline "As-built" Engineering Design Drawings as per the Infrastructure Design Standards and Specifications	
F.	One (1) digital copy of a list identifying the Contractors that the Applicant has retained to carry out underground infrastructure, surface works, surface grading and facility maintenance. The list, at a minimum shall include the following: • Contractor name and area of responsibility • Contractor business phone number and contact information • Contractor after hours phone number • Contractor emergency phone number	
G.	One (1) list of deficiencies and/or defects indicating when they were repaired.	

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CHECKLIST

CONSTRUCTION COMPLETION CERTIFICATE
FOR SURFACE WORKS: CONCRETE – CURB, GUTTER AND SIDEWALK

	Submission Item	Comment(s)
A.	Detailed Cover Letter	
B.	One (1) digital copy of the Construction Completion Certificate (CCC), duly signed and sealed by the appropriate Professional of Record with 11"x17" plans attached highlighting the improvement(s) constructed	
C.	One (1) full set of authenticated Engineering Drawings indicating the completed Improvements and marked "Record Drawings" with the Professional of Record's stamp and signature being dated to reflect the CCC application date	
D.	Testing Material/Requirements	
D.1.	Concrete Test Results	
D.2.	Compaction Test Results and Acceptance Letter with Location Plan	
D.3.	Grade Sheets	
D.4.	Erosion & Sediment Control Inspection Logs	
E.	One (1) digital copy of "As-built" Engineering Design Drawings as per the Infrastructure Design Standards and Specifications	
F.	One (1) digital copy of a list identifying the Contractors that the Applicant has retained to carry out underground infrastructure, surface works, surface grading and facility maintenance. The list, at a minimum shall include the following: • Contractor name and area of responsibility • Contractor business phone number and contact information • Contractor after hours phone number • Contractor emergency phone number	
G.	One (1) list of deficiencies and/or defects indicating when they were repaired.	

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CHECKLIST
CONSTRUCTION COMPLETION CERTIFICATE
FOR SURFACE WORKS: LANDSCAPE

	Submission Item	Comment(s)
A.	Detailed Cover Letter	
B.	One (1) digital copy of the Construction Completion Certificate (CCC), duly signed and sealed by the appropriate Professional of Record with 11"x17" plans attached highlighting the improvement(s) constructed	
C.	One (1) full set of authenticated Landscape Drawings indicating the completed Improvements and marked "Record Drawings" with the Professional of Record's stamp and signature being dated to reflect the CCC application date	
D.	Testing Material/Requirements	
D.1.	Plumbing Permit	
D.2.	Topsoil Test	
D.3.	Open Trench Inspection Log (for Mains and Laterals)	
D.4.	Certificate of CSA Compliance Letter (for playgrounds)	
D.5.	Poured in Place Rubber Fall Surface Drop Test	
D.6.	Asphalt/ Compaction Density Reports (as required)	
D.7.	Annual Double Check Valve (DCV) Report	
D.8.	Seed Testing Certificate (as required)	
D.9.	Concrete Mix Design Letter (as required)	
D.10.	Geotechnical recommendations for construction	
D.11.	Compaction Testing for Backfill	
D.12.	Fusion Test Logs	
D.13.	Back Bend Test (as required)	
D.14.	Leak Test as per ASTM F2164 - 13 (or most current) Standard Practice for Field Leak Testing of Polyethylene (PE) Pressure Piping Systems Using Hydrostatic Pressure	
D.15.	Irrigation "As-Built Drawings" (as required)	
D.16.	C.N.L.A. Specification Confirmation	
D.17.	List of outdoor furniture and specifications	

D.18. As-built grading plan for Quality Control LIDs, authenticated by an Engineering Consultant

E. One (1) digital copy of a list identifying the Contractors that the Applicant has retained to carry out underground infrastructure, surface works, surface grading and facility maintenance. The list, at a minimum shall include the following:

- Contractor name and area of responsibility
- Contractor business phone number and contact information
- Contractor after hours phone number
- Contractor emergency phone number

G. One (1) list of deficiencies and/or defects indicating when they were repaired.

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CHECKLIST

CONSTRUCTION COMPLETION CERTIFICATE
FOR FACILITIES: STORMWATER MANAGEMENT FACILITIES, WATER AND WASTEWATER FACILITIES

	Submission Item	Comment(s)
A.	Detailed Cover Letter	
B.	Design Compliance Statement executed by the Consultant	
C.	One (1) digital copy of the Construction Completion Certificate (CCC), duly signed and sealed by the appropriate Professional of Record with 11"x17" plans attached highlighting the improvement(s) constructed	
D.	One (1) full set of authenticated Engineering Drawings indicating the completed Improvements and marked "Record Drawings" with the Professional of Record's stamp and signature being dated to reflect the CCC application date	
E.	Testing Material/Requirements	
E.1.	Stormwater Management Facilities	
E.1.a.	Erosion & Sediment Control Inspection Log	
E.1.b.	Operation & Maintenance Manual	
E.1.c.	Operation & Maintenance Plan Log	
E.1.d.	Registrations and copies of existing / new Code of Practice	
E.1.e.	Pond and/or Outfall registrations and approvals transferred to the Tsuut'ina Nation	
E.2.	Water and Wastewater Facilities	
E.2.a.	Substantial or Construction Complete Certificates for the construction contract	
E.2.b.	TDA Approval to Operate (If applicable)	
E.2.c.	Operation & Maintenance Plans and Manuals	
E.2.d.	Registrations and copies of existing / new Code of Practice (If applicable)	
E.2.e.	Commission reports and summaries	
F.	One (1) digital copy of "As-built" Engineering Design Drawings as per the Infrastructure Design Standards and Specifications	

G. One (1) digital copy of a list identifying the Contractors that the Applicant has retained to carry out underground infrastructure, surface works, surface grading and facility maintenance. The list, at a minimum shall include the following:

- Contractor name and area of responsibility
- Contractor business phone number and contact information
- Contractor after hours phone number
- Contractor emergency phone number

H. One (1) list of deficiencies and/or defects indicating when they were repaired.

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CHECKLIST

CONSTRUCTION COMPLETION CERTIFICATE
FOR ELECTRICAL INFRASTRUCTURE: STREET LIGHTING INSTALLATION

	Submission Item	Comment(s)
A.	Detailed Cover Letter	
B.	A digital copy of the approved "Redline Mark-ups" indicating the on-site as-built installation dated and signed by the Electrical Contractor.	
C.	Testing Material/Requirements	
C.1.	Copy of the electrical permit (Passing Electrical Inspection)	
C.2.	Ground connection testing (if applicable)	
C.3.	Fillcrete testing for the concrete bases (if applicable)	
C.4.	Pole powder coating quality control reports (if applicable)	
C.5.	Shop drawings and product information sheets for all non-standard products (if applicable)	
D.	A digital copy of Signed and Sealed "Record Drawings" as per the Infrastructure Design Standards and Specifications in PDF format complete with an AutoCAD format in NAD83 / UTM coordinates.	

TSUUT'INA DEVELOPMENT AUTHORITY
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E: TDA@TSUUTINA.COM
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CHECKLIST

CONSTRUCTION COMPLETION CERTIFICATE
FOR TRAFFIC SIGNALS INFRASTRUCTURE: TAFFIC SIGNALS INSTALLATION

	Submission Item	Comment(s)
A.	Detailed Cover Letter on the consultant's letterhead, signed by the consultant. At a minimum, the letter should specify the submission details, compliance with the design, include general project information, and outline key elements and issues.	
B.	A digital copy of the approved "Redline Mark-ups" indicating the on-site as-built installation dated and signed by the Electrical Contractor.	
C.	Cabinet wiring diagrams	
D.	Cabinet bench test results	
E.	Checklist for "flashing" operation	
F.	Commissioning report for "full" operation	
G.	Phasing and timing sheets	
H.	Copy of electrical permit(s)	
I.	A digital copy of Signed and Sealed "Traffic Signals Record Drawings" in PDF format complete with an AutoCAD format in NAD83 / UTM coordinates (with a copy to be placed within the traffic controller cabinet in a weather protected pouch).	

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CHECKLIST

CONSTRUCTION COMPLETION CERTIFICATE
DEMOLITION AND REMOVAL PERMITS

	Submission Item	Comment(s)
A.	Detailed Cover Letter	
B.	One (1) digital copy of the Construction Completion Certificate (CCC), duly signed and sealed by the appropriate Professional of Record with 11"x17" plans attached highlighting the removals / demolition completed.	
C.	One (1) full set of authenticated Engineering Drawings indicating the completed removals / demolition areas and marked "Record Drawings" with the Professional of Record's stamp and signature being dated to reflect the CCC application date	
D.	Testing Material/Requirements	
D.1.	Compaction Test Results and Acceptance Letter with Location Plan	
E.	One (1) digital copy of "As-built" Engineering Design Drawings as per the Infrastructure Design Standards and Specifications	
F.	One (1) list of deficiencies and/or defects indicating when they were repaired	

Note: A CCC for Demolition and Removal Permits is only required upon request by the TDA. Most Demolition and Removal Permits will go straight to FAC.

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CONSTRUCTION COMPLETION CERTIFICATE

Date Issued: _____

Application Number: _____

Taza Village / Phase: _____

Developer: _____

Infrastructure: _____

Design Professional: _____

Contractor: _____

I, _____, (Professional Engineer / Landscape Architect), am employed by the Professional of Record who is engaged by the Developer to design and inspect the construction of the noted infrastructure for this development phase. I do hereby certify that the infrastructure noted in the development area has been constructed and inspected in conformance with all Tsuut'ina Development Authority standards and specifications, and the approved designs and drawings, and that all defects and deficiencies in work and materials have been remedied and corrected.

_____ _____

Professional's Stamp and Date Permit to Practice Stamp (If applicable)

_____ _____

Tsuut'ina Development Authority Date

Conditions of Approval / Comments:

_____

_____

_____

The maintenance period, which is due to expire on _____ shall only expire upon the approval of a Final Acceptance Certificate by the Tsuut'ina Development Authority.

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CHECKLIST

FINAL ACCEPTANCE CERTIFICATE
FOR UNDERGROUND INFRASTRUCTURE: WATER AND WATER SERVICES

	Submission Item	Comment(s)
A.	Detailed Cover Letter	
B.	One (1) digital copy of the Final Acceptance Certificate (FAC), duly signed and sealed by the appropriate Professional of Record with 11"x17" plans attached highlighting the improvement(s) constructed	
C.	One (1) full set of authenticated Engineering Drawings indicating the completed Improvements and marked "Record Drawings" with the Professional of Record's stamp and signature being dated to reflect the FAC application date	
D.	Testing Material/Requirements	
D.1.	Pressure Test Results – Completed at CCC	
D.2.	Water Quality Test – Completed at CCC	
D.3.	Hydrant Pressure & Flow Testing in accordance with current Specifications – Completed at CCC	
E.	One (1) digital copy of "As-built" Engineering Design Drawings as per the Infrastructure Design Standards and Specifications	
F.	One (1) list of deficiencies and/or defects indicating when they were repaired	

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CHECKLIST

FINAL ACCEPTANCE CERTIFICATE
FOR UNDERGROUND INFRASTRUCTURE: SANITARY SEWER AND SANITARY SEWER SERVICES

	Submission Item	Comment(s)
A.	Detailed Cover Letter	
B.	One (1) digital copy of the Final Acceptance Certificate (FAC), duly signed and sealed by the appropriate Professional of Record with 11"x17" plans attached highlighting the improvement(s) constructed	
C.	One (1) full set of authenticated Engineering Drawings indicating the completed Improvements and marked "Record Drawings" with the Professional of Record's stamp and signature being dated to reflect the FAC application date	
D.	Testing Material/Requirements	
D.1.	Video Inspection completed within 90 days of the maintenance expiry date. (Submit electronically or via a CD/DVD/USB)	
D.2.	Video Inspection Log / Consultant review report	
E.	One (1) digital copy of "As-built" Engineering Design Drawings as per the Infrastructure Design Standards and Specifications	
F.	One (1) list of deficiencies and/or defects indicating when they were repaired	

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CHECKLIST

FINAL ACCEPTANCE CERTIFICATE
FOR UNDERGROUND INFRASTRUCTURE: STORM SEWER AND STORM SEWER SERVICES

	Submission Item	Comment(s)
A.	Detailed Cover Letter	
B.	One (1) digital copy of the Final Acceptance Certificate (FAC), duly signed and sealed by the appropriate Professional of Record with 11"x17" plans attached highlighting the improvement(s) constructed	
C.	One (1) full set of authenticated Engineering Drawings indicating the completed Improvements and marked "Record Drawings" with the Professional of Record's stamp and signature being dated to reflect the FAC application date	
D.	Testing Material/Requirements	
D.1.	Video Inspection completed within 90 days of the maintenance expiry date. (Submit electronically or via a CD/DVD/USB)	
D.2.	Video Inspection Log / Consultant review report	
E.	One (1) digital copy of "As-built" Engineering Design Drawings as per the Infrastructure Design Standards and Specifications	
F.	One (1) list of deficiencies and/or defects indicating when they were repaired	

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CHECKLIST

FINAL ACCEPTANCE CERTIFICATE
FOR SURFACE WORKS: CONCRETE – CURB, GUTTER AND SIDEWALK

	Submission Item	Comment(s)
A.	Detailed Cover Letter	
B.	One (1) digital copy of the Final Acceptance Certificate (FAC), duly signed and sealed by the appropriate Professional of Record with 11"x17" plans attached highlighting the improvement(s) constructed	
C.	One (1) full set of authenticated Engineering Drawings indicating the completed Improvements and marked "Record Drawings" with the Professional of Record's stamp and signature being dated to reflect the FAC application date	
D.	Testing Material/Requirements	
D.1.	Concrete Test Results (For repaired areas)	
D.2.	Erosion & Sediment Control Inspection Logs	
E.	One (1) digital copy of "As-built" Engineering Design Drawings as per the Infrastructure Design Standards and Specifications	
F.	One (1) list of deficiencies and/or defects indicating when they were repaired	

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CHECKLIST
FINAL ACCEPTANCE CERTIFICATE
FOR SURFACE WORKS: LANDSCAPE

	Submission Item	Comment(s)
A.	Detailed Cover Letter	
B.	One (1) digital copy of the Final Acceptance Certificate (FAC), duly signed and sealed by the appropriate Professional of Record with 11"x17" plans attached highlighting the improvement(s) constructed	
C.	One (1) full set of authenticated Landscape Drawings indicating the completed Improvements and marked "Record Drawings" with the Professional of Record's stamp and signature being dated to reflect the FAC application date	
D.	Testing Material/Requirements	
D.1.	Maintenance Log	
D.2.	Irrigation Meter Information Sheet	
D.3.	Irrigation Information Sheet	
D.4.	Maintenance Manuals	
D.5.	Annual Double Check Valve (DCV) Report	
E.	One (1) list of deficiencies and/or defects indicating when they were repaired	

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CHECKLIST

FINAL ACCEPTANCE CERTIFICATE
FOR FACILITIES: STORMWATER MANAGEMENT FACILITIES, WATER AND WASTEWATER FACILITIES

	Submission Item	Comment(s)
A.	Detailed Cover Letter	
B.	One (1) digital copy of the Final Acceptance Certificate (FAC), duly signed and sealed by the appropriate Professional of Record with 11"x17" plans attached highlighting the improvement(s) constructed	
C.	One (1) full set of authenticated Engineering Drawings indicating the completed Improvements and marked "Record Drawings" with the Professional of Record's stamp and signature being dated to reflect the FAC application date	
D.	Testing Material/Requirements	
D.1.	Stormwater Management Facilities	
D.1.a.	Erosion & Sediment Control Inspection Log	
D.1.b.	Operation & Maintenance Plan Log	
D.1.c.	Water Table Testing Reports	
D.1.d.	Confirmation of Landscape Establishment	
D.2.	Water and Wastewater Facilities	
D.2.a.	Submission of FAC only	
E.	One (1) digital copy of "As-built" Engineering Design Drawings as per the Infrastructure Design Standards and Specifications	
F.	One (1) list of deficiencies and/or defects indicating when they were repaired	

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CHECKLIST

FINAL ACCEPTANCE CERTIFICATE
FOR ELECTRICAL INFRASTRUCTURE: STREET LIGHTING INSTALLATION

	Submission Item	Comment(s)
A.	Detailed Cover Letter	
B.	A digital copy of the approved "Redline Mark-ups" indicating the on-site as-built installation dated and signed by the Electrical Contractor.	
C.	Testing Material/Requirements	
C.1.	Copy of the electrical permit	
C.2.	Ground connection testing (if applicable)	
C.3.	Fillcrete testing for the concrete bases (if applicable)	
C.4.	Pole powder coating quality control reports (if applicable)	
C.5.	Shop drawings and product information sheets for all non-standard products (if applicable)	
D.	A digital copy of Signed and Sealed "Record Drawings" as per the Infrastructure Design Standards and Specifications in PDF format complete with an AutoCAD format in NAD83 / UTM coordinates.	
E.	One (1) list of deficiencies and/or defects indicating when they were repaired	

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CHECKLIST

FINAL ACCEPTANCE CERTIFICATE
FOR TRAFFIC SIGNALS INFRASTRUCTURE: TRAFFIC SIGNALS INSTALLATION

	Submission Item	Comment(s)
A.	Detailed Cover Letter on the consultant's letterhead, signed by the consultant. At a minimum, the letter should specify the submission details, compliance with the design, include general project information, and outline key elements and issues.	
B.	A digital copy of the approved "Redline Mark-ups" indicating the on-site as-built installation dated and signed by the Electrical Contractor.	
C.	Cabinet wiring diagrams	
D.	Cabinet bench test results	
E.	Checklist for "flashing" operation	
F.	Commissioning report for "full" operation	
G.	Phasing and timing sheets	
H.	Copy of electrical permits	
I.	A digital copy of Signed and Sealed "Traffic Signals Record Drawings" in PDF format complete with an AutoCAD format in NAD83 / UTM coordinates (with a copy to be placed within the traffic controller cabinet in a weather protected pouch).	
J.	One list of deficiencies and/or defects indicating when they where repaired.	

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CHECKLIST

FINAL ACCEPTANCE CERTIFICATE
DEMOLITION AND REMOVAL PERMITS

	Submission Item	Comment(s)
A.	Detailed Cover Letter	
B.	One (1) digital copy of the Final Acceptance Certificate (FAC), duly signed and sealed by the appropriate Professional of Record with 11"x17" plans attached highlighting the removals / demolition completed.	
C.	One (1) full set of authenticated Engineering Drawings indicating the completed removals / demolition areas and marked "Record Drawings" with the Professional of Record's stamp and signature being dated to reflect the FAC application date	
D.	Testing Material/Requirements	
D.1.	Compaction Test Results and Acceptance Letter with Location Plan	
E.	One (1) digital copy of "As-built" Engineering Design Drawings as per the Infrastructure Design Standards and Specifications	
F.	One (1) list of deficiencies and/or defects indicating when they were repaired	

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FINAL ACCEPTANCE CERTIFICATE

Date Issued: _____

Application Number: _____

Taza Village / Phase: _____

Developer: _____

Infrastructure: _____

Design Professional: _____

Contractor: _____

I, _____, (Professional Engineer / Landscape Architect), am employed by the Professional of Record who is engaged by the Developer to design and inspect the construction of the noted infrastructure for this development phase. I do hereby certify that the infrastructure noted in the development area has been constructed and inspected in conformance with all Tsuut'ina Development Authority standards and specifications, and in accordance with the approved designs and drawings, and that all defects and deficiencies in work and materials have been remedied and corrected.

_____ _____

Professional's Stamp and Date | Permit to Practice Stamp (If applicable)

_____ _____

Tsuut'ina Development Authority | Date

Conditions of Approval / Comments:

_____

_____

_____

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UTILITY LINE ASSIGNMENT (ULA) PERMIT APPLICATION FORM

OFFICE USE ONLY		
ULA PERMIT # *(if available)*	**FEES $** $650	**DATE RECEIVED**

APPLICANT CONTACT INFORMATION

APPLICANT:
CONTACT NAME:
MAILING ADDRESS:
PHONE:
EMAIL:

ULA PERMIT APPLICATION INFORMATION

LOCATION / ROADWAY(S):
PROPOSED UTILITY *(i.e. ATCO, TELUS, ROGERS, etc.)*:
DESCRIPTION OF PROPOSED UTILITY LINE ASSIGNMENT / CONSTRUCTION WORKS (*attach additional pages if necessary)*:

NOTE: Confirmation from the Developer and their Engineer of Record that the line assignment has been reviewed will be required prior to approval of any Utility Line Assignment (ULA) Permit. See the Developer Review Confirmation Statement on Page 2 of this application.

I acknowledge that all information provided that is associated with the application, including technical studies, will be treated as public information in the course of the Tsuut'ina Development Authority's consideration of the utility line assignment permit application, pursuant to the Taza Development Zoning Law and other legislative documents. By providing this information, you are deemed to consent to its public release.

I accept responsibility for delays in processing caused by incorrect or insufficient submissions. Contact the Tsuut'ina Development Authority if you have any further questions.

_____ _____

Signature of Applicant Date

DEVELOPER REVIEW CONFIRMATION STATEMENT

We the Developer and our Engineer of Record have jointly reviewed the above noted application for a Utility Line Assignment Permit and can confirm that the proposed utility line assignment(s) present no conflict with the other proposed public infrastructure along the alignment.

DEVELOPER:
CONTACT NAME:
MAILING ADDRESS:
PHONE:
EMAIL:
_____ _____ Signature of Developer Date

ENGINEER OF RECORD:
COMPANY:
MAILING ADDRESS:
PHONE:
EMAIL:
_____ _____ Signature of Engineer of Record Date

Approval Timeline (min. 10 working days). Submitted drawings must follow the current version of the Taza Infrastructure Design Standards and Specifications.

TDA will review the information submitted where they may:

1) Deem the application complete and issue an APPROVED PERMIT or
2) Issue review comments which must be addressed prior to approval and implementation.

AN APPROVED PERMIT IS REQUIRED PRIOR TO CONSTRUCTION WITHIN THE TAZA DEVELOPMENT AND TSUUT'INA NATION LANDS.

Appendix B – Private Realm (Development Permits)

1. Development Permit Application Checklist
2. Development Permit Pre-Application Form
3. Development Permit Application Form
4. Stripping and Grading Permit Checklist

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DEVELOPMENT PERMIT APPLICATION CHECKLIST

This application is to be used for:

☐ 1) New commercial / residential development permit application

☐ 2) Addition or amendment to an existing commercial / residential development

☐ 3) New or change in use to an existing building without proposed changes to the exterior of the building.

This requirement list outlines all the information necessary to evaluate and provide a timely decision on your application.

Refer to the Taza Development Guidelines and the Infrastructure Design Standards and Specifications for the applicable guidelines and standards.

Only applications that are complete will be accepted. Applications and supporting documentation that are submitted must be clear, legible and precise. Plans must be to a professional drafting standard and be clear of any previous approval stamps and notations.

Submission Requirements:

- ☐ Signed cover letter indicating the project scope and description. For re-submissions the letter must address each item from the previous review and specify any additional changes.
- ☐ Application Form (the form is to be completed in full and signed by the owner / developer of the land and / or the person authorized to act on their behalf)
- ☐ Detailed project design statement for the development (showing how the project aligns with the approved site context and cultural elements)
- ☐ Application Fee (refer to current version of the TDA Fee Schedule)
- ☐ Development Permit Number (to be provided by the TDA).
- ☐ Current copies of any Restrictive Covenants, Utility Rights-of-Way, Easements, Drainage Agreements or Caveats registered on the Title(s).
- ☐ Color Photographs (minimum of 4 different views, label and identify each photograph)
- ☐ Site DP Drawings, including building elevations
- ☐ A complete set of authenticated digital engineering and landscape drawings
- ☐ Cultural Advisory Group Form *(if required)*
- ☐ Letter of Authorization from the owner / developer or their agent including legal plans *(if required)*
- ☐ ISC / Health Canada Approval(s)
- ☐ Tentative Legal Plans of Survey, as required
- ☐ Tentative Utility Right-of-Way Plan(s), as required
- ☐ Other technical reports and support information that may be required (Additional reports or studies may be required to support the development permit application based on the pre-application meeting)
  - ☐ Access Management Plan – Construction Access
  - ☐ Archaeological Sites

- ☐ Biophysical Impact Assessment (BIA)
- ☐ Chemical Management Plan
- ☐ Construction Management Plan
- ☐ Cost Feasibility and Sustainability Analysis (Water, Wastewater. Stormwater)
- ☐ Environment Impact Assessment
- ☐ Environmental Site Assessment
- ☐ Erosion & Sedimentation Control Plan
- ☐ Geotechnical Reports (including pavement structure design)
- ☐ Groundwater Supply Evaluation
- ☐ Historical Studies
- ☐ Master Drainage Plan / Updates
- ☐ Natural Environment Park Restoration Plan
- ☐ Paleontological Sites
- ☐ Sanitary Servicing Studies
- ☐ Stormwater Management Report
- ☐ Traffic Accommodation Strategy (TAS) Plan
- ☐ Traffic Impact Assessment
- ☐ Tree Protection Plan
- ☐ Water Servicing Studies
- ☐ Other reports and agreements that the TDA deems necessary

NOTE: All development permit applications must be submitted without personal information on any plans. Omitting this information will protect builders and tenants by reducing the risk of any personal information being wrongfully displayed. Failure to follow this requirement may result in an incomplete application. If you consider the information to be personal, do not put it on the plans.

General Drafting Requirements:

☐ ***Contain a title block with information such as:***

- Applicant and consultant(s) names
- TDA Development Permit (DP) Application Number (if available)
- Village name including staging and/or phasing, if applicable
- Adress and Legal Description (i.e. section number, plan, block, lot)
- Drawing number/name
- Drawing Scale
- Revision Table
- An allocated space for the name of the Consultant, professional stamp (P.Eng., P.L.(Eng.), P.Tech.) and Permit to Practice stamp, as required.
- Legend
- Total site area in hectares
- Additional Notes as required

☐ ***Paper size:***

- All plans submitted must be on the same sized paper and be clear and legible maximum size of drawing not to exceed A1 610mmx914mm

COMPLETED BY APPLICANT	OFFICE USE ONLY	*REQUIRED ITEMS – SITE PLANS*
		DRAFTING REQUIREMENTS
☐	☐	Plans to be in metric scale, minimum 1:100, all elevations in metric are NAD 83 Geodetic Datum Ground Coordinates
☐	☐	All plans submitted must be on the same sized paper and be clear and legible maximum size of drawing not to exceed A1 610mmx914mm.
☐	☐	North arrow, pointing to top or left of page
☐	☐	Address (i.e. street address) and legal address (i.e. plan/block/lot)
☐	☐	Size of parcel (ha)
☐	☐	Label all elements of plan as existing or proposed (proposed to be used for in circulation elements)
☐	☐	Name of consultant(s)
☐	☐	Name of applicant and contact information
☐	☐	Project name / use
		LEGAL INFORMATION
☐	☐	Plot and dimension lease lines
☐	☐	Provide lease plan where applicable
		ADJACENT TO PARCEL
☐	☐	Streets, label street names
☐	☐	Sidewalks and public paths
☐	☐	Curb cuts, medians and breaks in medians
☐	☐	Road widening setbacks and corner cuts, dimensioned and labelled
		EASEMENTS, UTILITY RIGHTS-OF-WAY, ETC.
☐	☐	Dimension (width and location)
☐	☐	Label type of easement and registration number
		PROPOSED AND EXISTING UTILITIES ON AND ADJOINING THE PARCEL
☐	☐	Water, storm, and sanitary sewer
☐	☐	Gas, electrical, cable, and telephone
		GEODETIC POINT DATUM/ CONTOURS
☐	☐	At the corners of a parcel
☐	☐	At the back of sidewalk or curb
☐	☐	At primary corners of the building
☐	☐	Main floor and roof peak of building
☐	☐	Proposed geodetic contours at 0.5 m intervals, including berming for the site
☐	☐	Label existing and proposed geodetic datum points
		OUTLINE AND DIMENSION BUILDINGS
☐	☐	Label projections and structures
☐	☐	Detached buildings and structures
☐	☐	Mechanical equipment and screening proposed
☐	☐	Use area within the building (i.e., tenant locations
☐	☐	Label uses to be located in each use area
☐	☐	Label existing and proposed buildings (or portions of buildings with gross floor area)
☐	☐	Location of all openings (i.e., windows, doors, overhead doors)

		SETBACKS
☐	☐	Dimension front, side, and rear building setbacks from property lines
☐	☐	Draw, label, and dimension required setback areas (as prescribed in Taza Development Zoning Law)
		GARBAGE AND RECYCLING COLLECTION
☐	☐	Plot location
☐	☐	Dimensions of enclosures or buildings
☐	☐	Type of container
☐	☐	Method of screening
		PARKING AREAS, DRIVE AISLES, CIRCULATION ROADS, SIDEWALKS AND PATHWAYS
☐	☐	Include curbs and sidewalks, cross walks and pathways (provide detail if raised)
☐	☐	Label all surface materials used (both vehicular and pedestrian)
☐	☐	Dimension widths of all aisles and roads
☐	☐	Provide details of vehicle circulation (i.e., direction of travel and signage)
☐	☐	Provide details on hydrant placement, turning radius, and driveway widths for Fire Department access
		MOTOR VEHICLE PARKING STALLS
☐	☐	Provide calculations for motor vehicle parking stall requirement provided within the Taza Development Zoning Law
☐	☐	Label as commercial vehicles, visitor, or employees
☐	☐	Dimension width and depth
☐	☐	Provide barrier-free stalls (detail width and depth)
		LOADING STALLS
☐	☐	Dimension width and depth
☐	☐	Dimension overhead clearance
☐	☐	Label surface material of loading areas
☐	☐	Large vehicle turning diagrams for access to drive aisle, garbage collection and loading areas
		APPROACHES
☐	☐	Label proposed or existing
☐	☐	Dimension width of driveway at throat and flare (adjacent to street)
☐	☐	Dimension distance to adjacent approaches
		FENCES AND RETAINING WALLS
☐	☐	Label height (include height of retaining walls)
☐	☐	Cross reference to an elevation (for each type of fence/wall and label all materials)
☐	☐	Provide proposed geodetic datum points at top and bottom of wall
☐	☐	For retaining walls 1.2 m or higher, provide structural design drawings, including a cross-section
		LIGHTING
☐	☐	Plot locations of building light fixtures and free-standing light standards
☐	☐	Plot maximum wattage of fixtures
☐	☐	Provide detail of light fixtures, including method of shielding (drawing or specification)

		SIGNAGE
☐	☐	Outline and label the location of all proposed canopy, freestanding, for fascia signage
☐	☐	Label the source of illumination (e.g., backlit)
☐	☐	Plot location of all existing signage on the parcel (if applicable)
☐	☐	Dimension distance from property lines to signage
		PHASING FOR MULTI-BUILDING DEVELOPMENTS
☐	☐	Outline areas encompassed by each phase
☐	☐	Label the sequencing of phasing

COMPLETED BY APPLICANT	OFFICE USE ONLY	***REQUIRED ITEMS – LANDSCAPE PLANS***
		OUTLINE AND DIMENSION BUILDINGS
☐	☐	Label projections and structures
☐	☐	Detached buildings and structures
☐	☐	Mechanical equipment and screening proposed
☐	☐	Label existing and proposed buildings (or portions of buildings with gross floor area)
		SETBACKS
☐	☐	Dimension front, side, and rear building setbacks from property lines
☐	☐	Draw, label, and dimension required setback areas (as prescribed in Taza Development Zoning Law)
		PLOT AND LABEL
☐	☐	Fencing, Retaining walls, and sidewalks (dimension width)
		TREES AND SHRUBS
☐	☐	Plot location of trees by symbol (each symbol should be unique to size and type of tree)
☐	☐	Plot shrubbed areas
☐	☐	Label number of shrub in each shrubbed area (only include shrubs that are greater than 0.6 m in height or spread)
☐	☐	Indicate trees and shrubs to be added, removed, and retained)
☐	☐	Show final calculation of all trees and shrubs including ratios (coniferous to deciduous) and any substitutions
		LANDSCAPE LEGEND
☐	☐	Label by symbol (each symbol should be unique to the size and type of tree/ shrub)
☐	☐	Provide caliper of deciduous trees
☐	☐	Provide height of coniferous trees
☐	☐	Provide height of shrubs (greater than 0.6 m)
☐	☐	Provide total of each type of tree and shrub (by height and size)
		LANDSCAPED AREA
☐	☐	Surface treatment of all soft surfaced landscaped areas (i.e., grass, plant cover)
☐	☐	Surface treatment of all hand surfaced landscaped areas (i.e., decorative pavers, brick, stamped concrete)
☐	☐	Label new landscaped areas and areas to be retained
		IRRIGATION
☐	☐	Method of irrigation (watering)

☐	☐	Label all soft surface landscaping to be irrigated or plot specific areas

COMPLETED BY APPLICANT	OFFICE USE ONLY	*REQUIRED ITEMS – ELEVATION DRAWINGS*
		INCLUDE ELEVATIONS FOR
☐	☐	Buildings
☐	☐	Fences
☐	☐	Retaining walls (over 1.2 m in height)
☐	☐	Screening (i.e., mechanical equipment)
☐	☐	Additional walls or structures (i.e., exhaust fan shed)
☐	☐	Cross reference with other plans, where applicable
		INCLUDE ON ELEVATIONS
☐	☐	Doors, windows, overhead doors
☐	☐	Projections and decorative elements
☐	☐	Screening (i.e., service meters, privacy screens)
☐	☐	Dimension all doors, windows, and overhead doors
		LABEL FINISHING MATERIALS
☐	☐	Exterior materials (i.e., brick, stucco, vinyl siding)
☐	☐	Roof materials (i.e., asphalt, cedar shakes, concrete tile)
☐	☐	Colours of all major exterior materials
		LIGHTING
☐	☐	Plot location of light fixtures
☐	☐	Dimension height of fixtures from grade to bottom of fixture
		GRADE
☐	☐	Plot existing and proposed grade
		BUILDING HEIGHT (INDICATE ON ALL ELEVATIONS)
☐	☐	Plot line for main floor
☐	☐	Plot line for roof when concealed by parapet
☐	☐	Dimension height of building from existing and proposed grade
☐	☐	Dimension height of main floor from existing and proposed grade
☐	☐	Dimension height of structures (i.e., fences, retaining walls) from existing and proposed grade
		SIGNAGE
☐	☐	Label materials, lettering details, copy and colours
☐	☐	Dimension sign and signable area
☐	☐	Dimension distance from grade to bottom of sign
☐	☐	Label means of supporting sign (i.e., structures, guy wires, brackets, bracing)
☐	☐	Label physical form of sign (i.e., cabinet, box, individual letters)
☐	☐	Provide details on external lighting, label if internally illuminated

COMPLETED BY APPLICANT	OFFICE USE ONLY	*REQUIRED ITEMS – FLOOR PLANS*
		OUTLINE AND DIMENSION WALLS
☐	☐	Interior and exterior dimensions (dimension to centre line of common walls)
☐	☐	Plot location of interior and exterior openings (i.e., windows, doors, overhead doors)
☐	☐	Label uses to be located in each area
☐	☐	Identify the purpose of spaces
☐	☐	Label existing and proposed rooms and portions of the building
		AREAS FOR THE CONSUMPTION OF FOOD/ BEVERAGES
☐	☐	Plot and label public areas where food will be consumed or served
☐	☐	Include a seating plan that clearly indicates the area to which the public will have access
☐	☐	Plot and label areas where entertainment is provided to patrons, in the form of a dance floor, live music stage, live performances, or recorded music
☐	☐	Plot and label areas for food preparation
☐	☐	Letter of intent stating the provincial license regulations (i.e., will minors be allowed, will the establishment have a liquor license)
		USE OF BUILDING
☐	☐	Describe the purposes of spaces
☐	☐	Indicate use areas (tenant areas)

COMPLETED BY APPLICANT	OFFICE USE ONLY	*REQUIRED ITEMS – SITE STUDIES*
		SNOW MANAGEMENT PLAN
☐	☐	Outline areas of site where snow is to be stored temporarily
☐	☐	Outline methods of removal of snow from the development site
		SUN/SHADOW STUDY
☐	☐	Required for the following development sites:
☐	☐	F.A.R. is greater than 1.0
☐	☐	Structures greater than 4 storeys
☐	☐	Structures within or adjacent to a SP-PK Zone
☐	☐	Drawings indicating shadow conditions for March 21 and September 21 at the following hours: 10:00 AM 12:00 PM 2:00 PM 4:00 PM 6:00 PM

COMPLETED BY APPLICANT	OFFICE USE ONLY	*REQUIRED ITEMS – SITE SERVICING PLANS*
		DRAFTING REQUIREMENTS
☐	☐	Plans to be in metric scale, minimum 1:100, all elevations in metric are NAD 83 Geodetic Datum Ground Coordinates
☐	☐	North arrow, pointing to top or left of page

COMPLETED BY APPLICANT	OFFICE USE ONLY	*REQUIRED ITEMS – SITE SERVICING PLANS*
☐	☐	Municipal address (i.e. street address) and legal address (i.e. plan/block/lot)
☐	☐	Size of parcel (ha)
☐	☐	Label all elements of plan as existing or proposed (proposed to be used for in circulation elements)
		LEGAL INFORMATION
☐	☐	Plot and dimension property lines
☐	☐	Specify elevations at back of sidewalk – at property line corners and VPIs
☐	☐	Specify lane grade design elevations – at property line corners and VPIs
☐	☐	Provide tentative legal plan where applicable (consolidation, subdivision, or strata)
		ADJACENT TO PARCEL
☐	☐	City streets, label street names
☐	☐	Sidewalks, City and public paths (Regional Pathway System)
☐	☐	Curb cuts, medians and breaks in medians
☐	☐	Road widening setbacks and corner cuts, dimensioned and labelled
		EASEMENTS, UTILITY RIGHTS-OF-WAY, ETC.
☐	☐	Dimension (width and location)
☐	☐	Label type of easement and registration number
		SITE DETAILS
☐	☐	Architectural floor plan showing water meter room location (indicated by M)
☐	☐	Outline of all detached buildings and structures (sheds, garages)
☐	☐	Total residential unit count
☐	☐	Label main floor elevations
☐	☐	Label principal entrance to building
☐	☐	Specify surface materials (proposed and existing to remain)
☐	☐	Show proposed and existing retailing walls and fences
☐	☐	Show landscaping, berms, swales including slopes and other physical features which could affect utility servicing both on the site and adjoining boulevards
☐	☐	Label and dimension curb cuts to be removed and rehabilitated
		WATER, STORM AND SANITARY SEWER (ON AND ADJOINING THE PARCEL)
☐	☐	Locations and full dimensions for mains, services, manholes, hydrants and valves to property lines, buildings, and other utilities (existing and proposed)
☐	☐	Indicate pipe size, type, class material, length, slope, and bedding material
☐	☐	Location of all manholes and catch basins complete with pipe inverts and rim elevations
☐	☐	Proposed sanitary/storm inverts at property lines and buildings
☐	☐	Pipe support details where applicable: required where foundation wall less than 4 metres from property line
☐	☐	Locations of sanitary test manholes with details of easement if located on private property, if applicable
☐	☐	Pipe capacity for large developments
		SHALLOW UTILITIES (EXISTING AND PROPOSED ON AND ADJOINING THE PARCEL)
☐	☐	Gas (structures, fixtures, crossing signs)
☐	☐	Electrical (poles, fixtures, guy wires/pole anchors, transformer boxes, etc.)

COMPLETED BY APPLICANT	OFFICE USE ONLY	*REQUIRED ITEMS – SITE SERVICING PLANS*
☐	☐	Cable, telephone (poles, fixtures, guy wires/pole anchors, pedestal boxes, etc.)
		SURFACE DRAINAGE
☐	☐	Plot existing and proposed surface grades along property lines and on site
☐	☐	Grade changes & ramps within all driveways and parking areas
☐	☐	Drainage pattern indicated by boundary lines and arrows
☐	☐	Stormwater release rate is being controlled to the rate provided with the Development Permit submission
☐	☐	Surface drainage contained on site which spills to a public roadway (spill elevation and location provided)
☐	☐	Stormwater features such as storm ponds, trap lows, ICDs, oil/grit separators, BMPs, or Low Impact Development Practices.
☐	☐	ICD's and HYDROVEX details (include all HYDROVEX details with application)
		FLOODWAY, FLOOD FRINGE AND OVERFLOW
☐	☐	Floodway/flood fringe/overland flow lines on the plans complete with all step elevations and labels
☐	☐	Dimension distance to buildings and structures
☐	☐	Identify and provide justification for items that do not comply with Tsuut'ina approved policies, laws, or technical guidelines. Attach a separate sheet, if necessary.

NOTE: This application does not relieve the applicant from full compliance with the requirements of any federal, provincial or other municipal legislation, or the terms and conditions of any easement, covenant, building scheme or agreement affecting the building or land.

Applicant's Signature: _____ **Date:** _____

(Confirming that all required information has been provided and is correct)

Checked for Completion by: **Date:**

_____

Tsuut'ina Development Authority

TSUUT'INA DEVELOPMENT AUTHORITY
203, 5 RICHARD WAY, SW, CALGARY, AB, T3E 7M8
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DEVELOPMENT PERMIT PRE-APPLICATION FORM

General Information

This page provides guidance as follows on pre-application meetings:

- Purpose
- Application types requiring a meeting
- Scheduling a meeting
- Attending a meeting
- Application submission standards
- After the pre-application meeting

Anyone wishing to initiate a pre-consultation meeting is asked to complete the attached application form and return it to the Tsuut'ina Development Authority (see "Scheduling a Meeting" below for more information).

Purpose

- Pre-application meetings allow future applicants to meet with Tsuut'ina Development Authority staff and commenting/approval Agencies on development proposals before an application is filed
- Indicate what makes up a complete application(s)
- Provide a better understanding of the approvals process
- Tsuut'ina Development Authority Staff and Agencies review the proposal with the applicant, ask the applicant questions, provide feedback and an opportunity for further questions and answers
- Development processes are reviewed
- Issues for further discussion are flagged
- Notes are taken and the applicant is provided with a list of the required information necessary to file an application (usually within 1 week)

Application Types Requiring Pre-Consultation

The following applications require pre-consultation unless a special exception is made:

- Development Permits
- Taza Development Zoning Law 2018

Scheduling a Meeting

Pre-application meetings are held within a week of receiving the signed application form, prescribed fee, and information supporting your development. A request to schedule a pre-application meeting can be done online on the TDA website.

Applicants will be contacted no later than five days before to the upcoming pre-application meeting to:

- Confirm time and date of their pre-consultation meeting; or
- Arrange the next most suitable meeting date

Attendance

All pre-application meetings are organized by Tsuut'ina Development Authority staff. Meeting attendees include the following:

- Applicant and/or his/her authorized agent(s) and/or advisors;
- Relevant Tsuut'ina Development Authority Staff and/or their consultants; and
- Outside agency Staff as required.

Submission Standards

Please note that electronic submissions shall include:

- Complete application form, signed by the owner
- Project Design Statement (refer to TAZA Development Guidelines)
- Drawing(s), which should detail as much information as possible including:
    - site dimensions
    - proposed and existing buildings
    - access
    - parking areas
    - treed areas
    - other information
- Any additional information that may assist in providing feedback.

After the Pre-Application Meeting

Notes are sent to applicants within approximately 7 days of the meeting.

Applicants may be required to contact the Tsuut'ina Development Authority and Agency staff for additional guidance on issues related to their application including terms of reference of any required studies or reports or any additional studies that may be required on further review of the proposal.

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PRE-APPLICATION FORM

OFFICE USE ONLY

PROPOSED APPLICATION IS FOR:

☐ NEW COMMERCIAL BUILDING ☐ NEW RESIDENTIAL BUILDING ☐ CHANGE OF USE WITHIN EXISTING BUILDING
☐ STRIPPING AND GRADING ☐ ADDITION / AMENDMENT TO EXSITING BUILDING OR SITE ☐ DEMOLITION

DP#	FEES $	DATE RECEIVED

Contact Information

OWNER / DEVELOPER:	APPLICANT/ AGENT (if different from owner / developer):
CONTACT NAME:	CONTACT NAME:
MAILING ADDRESS:	MAILING ADDRESS:
PHONE (OFFICE):	PHONE (OFFICE):
PHONE (CELL):	PHONE (CELL):
EMAIL:	EMAIL:

Legal Description of the Property

LEGAL DESCRIPTION / PLAN NUMBER(S):
EXISTING / APPROVED LAND USE UNDER THE TTN ZONING LAW:
STREET ADDRESS (IF AVAILABLE):

Development Proposal Information

TYPE	NUMBER OF UNITS	BUILDING AREA (SQ.M)
HEIGHT	NUMBER OF STOREYS	PARCEL(S) SIZE

SUPPORTING INFORMATION SUBMITTED WITH THIS FORM:

☐ PROJECT DESIGN STATEMENT ☐ SITE PLAN ☐ ELEVATION DRAWINGS

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NOTE: If the applicant is not the holder of the owner / developer for the property concerned, then owner / developer's signature is required on this application; or a letter of authorization shall accompany this application.

I accept responsibility for delays in processing caused by incorrect or insufficient submissions. Contact the Tsuut'ina Development Authority, if you have any further questions.

_____ _____

Signature of Applicant / Agent Date

_____ _____

Signature of Owner / Developer Date

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DEVELOPMENT PERMIT APPLICATION FORM

APPLICATION FOR:

☐ NEW COMMERCIAL BUILDING ☐ NEW RESIDENTIAL BUILDING ☐ CHANGE OF USE WITHIN EXISTING BUILDING
☐ STRIPPING AND GRADING ☐ ADDITION / AMENDMENT TO EXSITING BUILDING OR SITE ☐ DEMOLITION

FILE#	FEES $	DATE RECEIVED

Contact Information

OWNER / DEVELOPER:	APPLICANT/ AGENT (if different from owner / developer):
CONTACT NAME:	CONTACT NAME:
MAILING ADDRESS:	MAILING ADDRESS:
PHONE (OFFICE):	PHONE (OFFICE):
PHONE (CELL):	PHONE (CELL):
EMAIL:	EMAIL:

Legal Description of the Property

LEGAL DESCRIPTION / PLAN NUMBER(S):
EXISTING / APPROVED LAND USE UNDER THE TTN ZONING LAW:
STREET ADDRESS (IF AVAILABLE):
SUBLEASE REGISTRATION #

Development Permit Application Information

TYPE	NUMBER OF UNITS	BUILDING AREA (SQ.M)
HEIGHT	NUMBER OF STOREYS	PARCEL(S) SIZE
DESCRIPTION OF PROPOSED DEVELOPMENT (*attach additional pages if necessary)*		

NOTE: If the applicant is not the owner / developer for the property concerned, the owner / developer will be required to sign this application, or a letter of authorization shall accompany this application.

I acknowledge that all information provided that is associated with the application, including technical studies, will be treated as public information in the course of the Taza Development Authority's consideration of the development permit application, pursuant to the Taza Development Zoning Law and other legislative documents. By providing this information, you (Owner / Developer / Applicant / Agent) are deemed to consent to its public release.

I accept responsibility for delays in processing caused by incorrect or insufficient submissions. Contact Tsuut'ina Development Authority, if you have any further questions.

_____ _____

Signature of Applicant / Agent Date

_____ _____

Signature of Owner / Developer Date

OFFICE USE ONLY:

Initial Consideration. (5 working days) Staff will review the information submitted with the attached checklist, where they may:

1) Deem the application complete and circulate to commenting agencies; or
2) Hold the application pending submission of additional information;

APPLICATION IS: ☐ COMPLETE ☐ INCOMPLETE (PROVIDE COMMENTS BELOW)

CHECKED FOR COMPLETION BY:

Taza Development Authority Date

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Stripping and Grading Permit Checklist

Development Permit Application Checklist

The Stripping and Grading (SG) Permit Application requirement list outlines all the information necessary to evaluate and provide a timely decision on your application. This application is for any stripping, excavation, and grading of a parcel prior to development.

Refer to the Taza Village Development Plans and the Infrastructure Design Standards and Specifications for the applicable guidelines and standards.

Only applications that are complete will be accepted. Applications and supporting documentation that are submitted must be clear, legible and precise. Plans must be to a professional drafting standard and be clear of any previous approval stamps and notations.

Submission Requirements:

- ☐ Cover letter indicating the project scope and description. For re-submissions the letter must address each item from the previous review and specify any additional changes.
- ☐ Development Permit Number (to be provided by the TDA).
- ☐ Application Fee (refer to current version of the TDA Fee Schedule)

Plan Requirements:

- ☐ ***Contain a title block with information such as:***
  Applicant name and contact information.

  Name of consultant and an original signed engineer's stamp (P.Eng., P.L. (Eng.), P. Tech), and legible permit to practice number.

  Project name and project use.

  Address and legal description (i.e. section number, plan, block, lot).

- ☐ ***Paper size:***
  all plans submitted must be on the same sized paper and be clear and legible.
  Maximum size of drawing A1 594mmx841mm.

*The Tsuut'ina Development Authority may require additional supporting documentation considered necessary to properly evaluate the proposed development.

NOTE: All development permit applications must be submitted without personal information on any plans. Omitting this information will protect builders and tenants by reducing the risk of any personal information being wrongfully displayed. Failure to follow this requirement may result in an incomplete application. If you consider the information to be personal, do not put it on the plans.

Completed by applicant	Office use only	*REQUIRED ITEMS*
☐	☐	A copy of the current **sub-lease**
☐	☐	**Color Photographs** (minimum of four different views, label and identify each photograph) showing:
☐	☐	parcel from front and rear
☐	☐	unique features and aspects of significance to development of the parcel
☐	☐	details of curbs, driveways, sidewalks, garbage enclosures and overhead poles
☐	☐	**Completed** Site Contamination Statement
☐	☐	**Site Plans to include:** *(1:100 metric scale recommended, include scale bar)*
☐	☐	north arrow, pointing to top or left of page
☐	☐	municipal address (i.e. street address) and legal address (i.e. plan/block/lot)
☐	☐	all elements of plan labelled as existing or proposed
☐	☐	property lines
☐	☐	existing survey control stations and markers
☐	☐	details of loam stockpiles; include height, width, length, and volumes
☐	☐	easements, utility rights-of-way, right-of-way setback lines
☐	☐	location of all existing and proposed shallow and deep utilities (e.g. water, sewers, gas, electrical, cable, telephone, either underground or overhead)
☐	☐	the means by which all stormwater in and from the subject lands will be controlled and disposed of, including how drainage from its natural route will be controlled
☐	☐	any intended stripping and grading on adjacent lands, including details of edge conditions, back sloping requirements, and areas to be re-loamed or seeded and maintained until natural conditions are restored
☐	☐	any unusual parcel conditions (features of archaeological value, etc.)
☐	☐	existing trees and major vegetation on the parcel; what is to remain and what is to be removed
☐	☐	**Area Map, including:** *(8.5" x 11" – 21.5cm x 35.5cm)*
☐	☐	area to be stripped and rough graded, outlined in **red**
☐	☐	locations of any stockpiles of stripped loam, outlined in **green**
☐	☐	**Cut/Fill Plans:** cut/fill plans are required for every stripping and grading application **NOTE:** Cut/fill plans are also required when no cut/fill is proposed on the application. This is to provide documented confirmation that no cut/fill activity will take place.
☐	☐	**Phasing Plans:**
☐	☐	indicating areas expected to be developed during the current year
☐	☐	type of soil stabilization proposed for areas to be developed in following years
☐	☐	**Deep Fills Report:** Required when fill is being proposed for depths greater than two metres.
☐	☐	**Erosion & Sediment Control (ESC) Plans and Report (if required):** Documents submitted shall conform to the requirements detailed in the current edition of The Infrastructure Design Standards and Specifications and shall be prepared by a qualified consultant or certified professional specializing in ESC.
☐	☐	**Supporting Information, required depending on site conditions:**

Completed by applicant	Office use only	*REQUIRED ITEMS*
☐	☐	Cross-sections may be required to provide more information on the impact of the proposed stripping and grading on adjacent properties. Cross-section should show the existing grade of the parcel, proposed grade for the parcel, grade of adjacent parcels, and grade of adjacent public streets. **Datum points are required to ensure accuracy**.
☐	☐	Revised site plan showing fencing, including the snow fence required at the boundary of any environmental reserve land.

NOTE: This application does not relieve the applicant from full compliance with the requirements of any federal, provincial or other municipal legislation, or the terms and conditions of any easement, covenant, building scheme or agreement affecting the building or land.

Applicant's Signature: **Date:**

(Confirming that all required information has been provided and is correct)

office use only

Checked for Completion by: **Date:**

Tsuut'ina Development Authority

Appendix C – General Forms and Fee Schedule

1. TDA Fee Schedule (for current version refer to TDA website)
2. Traffic Accommodation Strategy (TAS) Plan Application Form
3. Traffic Accommodation Strategy (TAS) Plan Checklist
4. Indigenous Services Canada (ISC) Forms
5. Stormwater Management Report Checklist
6. Erosion and Sediment Control Report and Drawing Application
7. Erosion and Sediment Control Good Housekeeping Letter Template

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DEVELOPMENT, BUILDING, AND PUBLIC INFRASTRUCUTRE

2025 FEE SCHEDULE

DEVELOPMENT PERMITS & DCC INSPECTIONS

	FEE	NOTES
DP – Commercial, Residential, Mixed-Use	$3,200 (base fee) Plus $1.15 / sq.m	Min.$3,200 (no bldg.) *Base Fee + $1.15 x GFA*
DP - Signage	$650	Includes first 2 reviews
Additional Reviews (3+)	$1,500	Per additional review
DCC – Civil Inspection	$1,500	Includes first 2 inspections
DCC – Landscape Inspection	$1,500	Includes first 2 inspections
Additional Inspections (3+)	$500	Per additional inspection
Amendment after Approval	50% of Original Fee	
Pre-Application Meeting	$500	

STRIPPING, GRADING, EXCAVATION, AND DEMOLITION PERMITS

	FEE	NOTES
Stripping, Grading, Excavation, and Demolition Permits	$2,500	Includes first 2 reviews
Additional Reviews (3+)	$1,000	Per additional review
DCC	$1,500	Includes first 2 inspections
Additional Inspections (3+)	$500	Per additional inspection
Amendment after Approval	50% of Original Fee	

Note: Additional fees may apply depending on parcel size and magnitude of scope.

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VILLAGE DEVELOPMENT PLANS & MASTER PLANS

	FEE	NOTES
Village Development Plan Review (0-10 ha)	$5,495	
Village Development Plan Review (>10 ha)	$550	Per additional hectare
Master Plan Review (MDP, TIA, W/WW MPs)	$5,000	Includes first 2 reviews
Additional Reviews (3+)	$2,500	Per additional review

Note: Additional fees may apply depending on parcel size and magnitude of scope.

PUBLIC INFRASTRUCTURE PERMITS & CCC / FAC INSPECTIONS

	FEE	NOTES
Public Infrastructure Permit (underground, surface works, parks/landscape, W/WW/SW facilities)	$10,000	Includes first 2 reviews
Public Infrastructure Permit (streetlighting and signals)	$5,000	Includes first 2 reviews
Additional Reviews (3+)	$5,000	Per additional review
CCC Application and Inspection	$5,000	Per application (includes first 2 inspections)
FAC Application and Inspection	$5,000	Per application (includes first 2 inspections)
Additional CCC or FAC Inspection	$500	Per additional inspection
Amendment after Approval	50% of Original Fee	

Note: Additional fees may apply depending on parcel size and magnitude of scope.

UTILITY LINE ASSIGNMENT (ULA) PERMITS & TRAFFIC ACCOMODATION STRATEGY (TAS) PLANS

	FEE	NOTES
ULA Permit	$650	Includes first 2 reviews
Traffic Accommodation Strategy/Plan	$650	Includes first 2 reviews
Additional Reviews (3+)	$250	Per additional Review

Notes: Any amendments to the approved ULA or TAS permit will require a new permit fee.

SPECIAL EVENT PERMITS

	FEE	NOTES
Special Event Permit	$1,500	Flat rate *(see notes)*

Note: additional fees may apply depending on parcel size, magnitude of scope, and potential community impacts. Any Special Event Permit which includes a temporary structure will also require a Building Permit (i.e. tents, air supported structures, stages, portable washrooms, amusement parks, cultural structures, or other temporary structures).

BUILDING PERMITS

	FEE	NOTES
Building Permit – Commercial	10.05	Per $1000 construction value
Building Permit – Multi-Unit Residential	10.05	Per $1000 construction value
Electrical Permit	Based on cost of construction	See page 4 fee schedule Plus $6,150 + 0.4 % value of electrical installation over $1,000,000
Plumbing Permit	$160 base fee	Base plus $12.00 per outlet
Gas Permit	$340 base fee	Plus $49 per additional BTUs over 2 million
Temporary Gas Permit	$160	Per tank set

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ELECTRICAL CONTRACTOR FEE SCHEDULE

Value of Electrical Work	Permit Fee
0 - $5,000	**$200**
$5,001 - $10,000	**$390**
$10,001 - $20,000	**$525**
$20,001 - $30,000	**$725**
$30,001 - $40,000	**$900**
$40,001 - $50,000	**$1000**
$50,001 - $100,000	**$1,350**
$100,001 – $250,000	**$2,000**
$250,001 - $500,000	**$2,900**
$500,001 - $1,000,000	**$2,900 +0.65 % value of electrical installation over $500,000**
Greater than $1,000,000	**$6,150 + 0.4% value of electrical installation over $1,000,000**

	PERMIT FEE			PERMIT FEE
Temporary Service 100 Amps or Less	$160		**Underground Service 125 Amps or less**	$160

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TAZA DEVELOPMENT
TRAFFIC ACCOMODATION STRATEGY (TAS) PERMIT APPLICATION FORM

OFFICE USE ONLY		
PERMIT#:	FEES: **$ 650**	DATE RECEIVED:

Applicant Contact Information:

APPLICANT:
CONTACT NAME:
MAILING ADDRESS:
PHONE:
EMAIL:

Description of Detour or Road Closure:

IMPACTED ROADWAYS:
CONSTRUCTION ACTIVITY REQUIRING TAS PLAN:
DURATION / SCHEDULE (DATES AND TIMES):
ADJACENT BUSINESSES IMPACTED:
DOES THE DETOUR / CLOSURE IMPACT ALBERTA TRANSPORTATION INFRASTRUCTURE? IF YES, APPROVAL FROM AT IS ALSO REQUIRED.

I acknowledge that all information provided that is associated with the application will be treated as public information in the course of the Tsuut'ina Development Authority's consideration of the TAS Plan application, pursuant to the relevant legislative documents. By providing this information, you Applicant are deemed to consent to its public release.

I accept responsibility for delays in processing caused by incorrect or insufficient submissions. Contact the Tsuut'ina Development Authority if you have any further questions.

_____ _____

Signature of Applicant Date

Approval Timeline (min. 10 working days). Submitted drawings must follow the current version of the Taza Infrastructure Design Standards and Specifications.

TDA will review the information submitted where they may:

1) Deem the application complete and issue an APPROVED PERMIT or
2) Issue review comments which must be addressed prior to approval and implementation.

AN APPROVED PERMIT IS REQUIRED FOR ANY DETOURS OR ROAD CLOSURES IMPLEMENTED WITHIN THE TAZA DEVELOPMENT AND TSUUT'INA NATION LANDS.

TSUUT'INA DEVELOPMENT AUTHORITY
203, 5 RICHARD WAY, SW, CALGARY, AB, T3E 7M8
E: TDA@TSUUTINA.COM
W: TDA.TSUUTINA.COM

TAZA DEVELOPMENT
TRAFFIC ACCOMODATION STRATEGY (TAS) PERMIT APPLICATION CHECKLIST

The Traffic Accommodation Strategy (TAS) Permit application Checklist outlines all the information necessary to evaluate and provide a timely decision on your application.

Refer to the Taza Infrastructure Design Standards and Specifications for the applicable guidelines and standards.

Only applications that are complete will be accepted. Applications and supporting documentation that are submitted must be clear, legible and precise. Plans must be to a professional drafting standard and be clear of any previous approval stamps and notations.

Submission Requirements:

- ☐ Application Fee (See current version of Fee Schedule)
- ☐ Application Form (The form is to be completed in full and signed by the Applicant.)
- ☐ One (1) digital copy (PDF) of the Traffic Accommodation Strategy (TAS) Plan drawings, including any supporting drawings/documentation, as required.

COMPLETED BY APPLICANT	Office use only	*REQUIRED ITEMS*
		Drawing Requirements:
☐	☐	Plans to be in metric scale, minimum 1:100, and noted on drawing
☐	☐	North arrow, pointing to top or left of page
☐	☐	Drawing title
☐	☐	Road names
☐	☐	Existing infrastructure including roadways, sidewalks, medians, etc. (linework or aerial image)
☐	☐	Location of existing signage, pavement markings, signals, etc.
☐	☐	Location of active work zones and staging areas
☐	☐	Proposed revisions to lane widths, if applicable
☐	☐	Traffic Utility Corridor (TUC) limit, if applicable
		Project Information (to be included on plans):
☐	☐	Schedule (including start and end of detour/closure and times of day)
☐	☐	Site contact information
☐	☐	Location (i.e. street address, legal address, road names, etc.)
		Traffic Control Devices (as needed on plans)
☐	☐	*Signage images and/or TAC sign codes*
☐	☐	*Signage locations and spacing*
☐	☐	*Delineation devices and spacing (delineators, cones, drums, etc.)*
☐	☐	*Lane taper lengths noted*

COMPLETED BY APPLICANT	Office use only	*REQUIRED ITEMS*
☐	☐	*Barriers and barricades*
☐	☐	*Message and arrow boards*
☐	☐	*Flag person locations*
☐	☐	*Posted speed limit*
☐	☐	*Temporary road markings*
☐	☐	*Fencing*
☐	☐	*Location of existing signage to be covered or removed*
☐	☐	***Turning Movements (if requested)***

NOTE: This application does not relieve the applicant from full compliance with the requirements of any federal, provincial or other municipal legislation, or the terms and conditions of any easement, covenant, building scheme or agreement affecting the building or land.

Applicant's Signature: _____ **Date:** _____

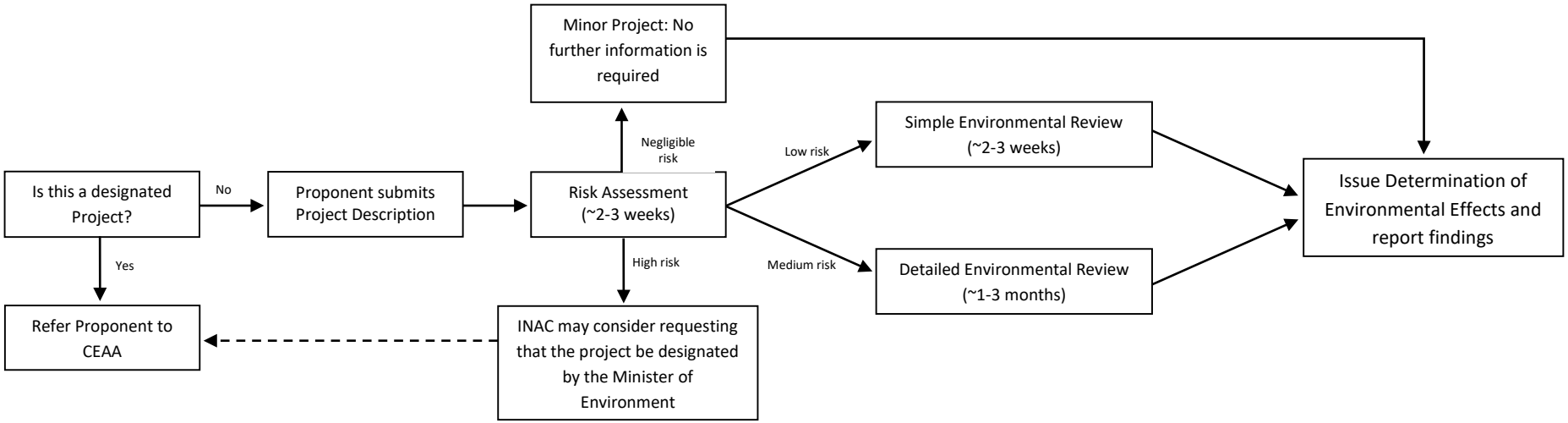
(Confirming that all required information has been provided and is correct)

office use only

Screened by: **Date:**

Tsuut'ina Development Authority

Indigenous Services Canada (ISC) Environmental Review Process



Guiding Principles

- ISC's Environmental Review Process (ERP) is designed to meet the legislative requirements described in sections 66-72 of the *Canadian Environmental Assessment Act, 2012* (CEAA 2012)
- The level of review should be proportionate with the project's potential level of risk
- The ERP will ensure due diligence is exercised and environmental effects are considered thoroughly prior to the issuance of any authorizations
- There will be collaboration between ISC Program Officers, Environment Officers, and proponents, resulting in an efficient and transparent process

Process

- Proponent initiates the Environmental Review Process with the submission of a Project Description form to the Environment Unit at ISC
- Low risk projects: Proponent completes and submits a Simple Environmental Review Report by filling in the Simple Environmental Review Report form
- Medium risk projects: Proponent completes and submits a Detailed Environmental Review Report as outlined in the "Guide for Completing a Detailed Environmental Review Report"
- Environment Officer to review the project and make a recommendation on likelihood of significant adverse environmental effects

Timelines

- Non-designated projects are not subject to legislated timelines, however, ISC aims to complete reviews in a timely fashion so that projects are not delayed unnecessarily and mitigation measures can be built into the project design
- The review and sign-off for a Simple Environmental Review will take approximately 2-3 weeks, and a Detailed Environmental Review approximately 1-3 months

Approval of new facilities

This approval process is applicable to:
1. A facility that is owned and operated by a First Nation on reserve land.
2. A facility that is owned and operated by a First Nation owned company/business (e.g. incorporated) on First Nation land.
3. A facility that is owned by a First Nation but operated by a non-Nation individual/company/business on First Nation land.
4. A facility that is owned and operated by a non-Nation individual/company/business/municipality on leased First Nation land.

A **Facility** is defined as a food establishment, personal service establishment, swimming pool, daycare or institution that is accessible to members of the public (First Nations or non First Nations) that operates in accordance with federal or provincial legislation and regulations.

Construction plan review
At least 14 days prior to construction, provide EPHS with a relevant floor plan. Please contact this office for a detailed list of facility-specific plan requirements.

The plans will be reviewed by the Environmental Public Health Officer to ensure compliance with applicable public health legislation/standards/guidelines, and recommendations will be provided in writing.

If the facility is not connected to a public water and wastewater system, please provide a description and schematic of the system(s) to be used.

The plan review and any recommendations set forth are public health-based, only address the applicable public health regulation requirements and do not set aside or limit the requirements of other applicable requirements (e.g.: ABC). Once approved, construction can begin.

Operational review
When construction is complete, contact EPHS for an opening public health inspection, with at least one week's notice before you plan to open. All construction must be completed, and the premises must be in a "ready to operate" condition for the inspection to take place. A written inspection report will be provided. If deficiencies are noted, they will have to be addressed and a re-inspection conducted prior to opening. Note that plan approval does not necessitate operational approval.

Facilities are expected to meet the applicable legislative requirements and related health standards, guidelines and codes.

Please contact the EPHS office if you are uncertain of the requirements for your facility or if you require further information.

Environmental Public Health Services
First Nations and Inuit Health, Indigenous Services Canada
Suite 310, 9911 Chiila Blvd
Tsuut'ina T2W 6H6
403-299-3939

Indigenous Services Canada | Services aux Autochtones Canada

ANNEX A – Project Description Guidance

Part A: Infrastructure Projects Checklist

This checklist is intended to assist proponents in completing the environmental **PROJECT DESCRIPTION FORM**. The Project Description (PD) form will be used to conduct an environmental review of your proposed project. When completed, the PD form should contain the essential details of the project and the existing physical environment. Please ensure all of the below information is included in your completed PD form. A site map, and any other supporting documents, may be attached to the form.
Any missing information may result in delays to the project's review and approval.

Section A: Project Information

- ☐ Project name/title
- ☐ **Name and contact information** of the First Nation and/or proponent
- ☐ Proposed start and expected completion date of the construction phase for the project
- ☐ **Project location** within the community:
    - ☐ Lot Number and Plan Number (Legal Subdivision (LSD) Style) (if available) **OR**
    - ☐ Latitude and Longitude of project site (if available)

Project Summary:

- ☐ Brief overview of the project including the nature of the project
- ☐ Description of physical works related to the project including purpose, size, capacity, and expected lifespan
- ☐ Attach a **project site map** showing the location of:
    - ☐ All existing and/or proposed buildings/infrastructure setback distances (distance to water, roadways)
    - ☐ All existing or proposed fuel tank(s) and fuel tank system(s) (if applicable)
    - ☐ Proposed and existing water well(s) and pipes (if applicable)
    - ☐ Proposed and existing septic tank(s)/field system(s) and pipes (if applicable)
    - ☐ Shoreline or in-water works (including docks, boathouses, intake structures, etc.)
- ☐ Identification of any hazard lands, wetlands, other environmentally sensitive areas, or known species at risk critical habitat

**Site maps can be in the form of aerial photos, professional maps or site plans, if available. If not, hand- drawn is acceptable. Indicate compass direction and scale.*

Infrastructure:

- ☐ Describe any new or existing permanent and/or temporary infrastructure required for this project (E.g. Fuel tanks, buildings, garages, sewer lines, gas lines, power lines, communication lines, etc.) including:
    - ☐ All building size(s) (ft^2 or m^2)
    - ☐ Type of heating system(s) (i.e. diesel, electric, propane, wood, geothermal, solar, or mixed)
    - ☐ Type/size, age and condition of fuel tank(s) (if applicable)
    - ☐ Type of water (communal piped, well(s))
    - ☐ Type of sewage (communal piped, septic tank or field)

FOR SEPTIC SYSTEMS AND WELLS, the proponent must:

- ☐ Provide name & contact info of the ISC Environmental Health Officer
- ☐ Indicate if the EHO has been or will be asked to conduct an inspection of these works as per Part 7 (Plumbing Services and Health) of the Alberta Building Code and
- ☐ Confirm that well installation will be completed by a contractor that has current Approval to Drill Water Wells under the *Alberta Water Act* and the *Water (Ministerial) Regulation*

FOR FUEL SYSTEMS, the proponent must:

- ☐ Use a certified installer. Home heating oil tanks (or emergency generator tanks) less than 2500L are not subject to the Federal Storage Tank Regulations (SOR/2008-197), however they must be installed in accordance with CAN/CSA-B139 "Installation Code for Oil Burning Equipment"
- ☐ Meet the current design standards, be identified with Environment and Climate Change Canada, be installed by a person qualified to do so by the Province of Alberta, have a product transfer area designed to contain spills, and have an emergency plan. The CEPA Storage Tank Systems Regulations for Petroleum and Products and Allied Petroleum Products Regulations (SOR/2008-197) apply to all underground tanks, and all aboveground tanks greater than 230L (except for tanks less than 2500L and connected to a heating device or emergency generator). For details please see the storage tank website: https://www.canada.ca/en/environment-climate-change/services/pollutants/storage-tanks-petroleum-allied-products.html

Activities:

- ☐ Describe all components of the project over the **entire life cycle** of the project, including site preparation, construction, operation, decommissioning, and site restoration or rehabilitation

Waste generation:

- ☐ Description of any solid, liquid, gaseous or hazardous waste that is likely to be generated during any phase of the project
- ☐ Plans to manage these identified wastes

Type of project/activity:

- ☐ Identify if there may be any financial support from federal departments or agencies
- ☐ If yes, identify which departments
- ☐ Identify all permits, licenses or approvals (including provincial and municipal requirements) that need to be obtained for the project

Section B: Land Description

- ☐ Indicate all surface water bodies (lakes, rivers, streams, wetlands, bogs, floodplains, salt marshes, estuaries, etc.) in or within 30m of the project area
- ☐ Identify any drinking water wells or aquifer recharge zones (i.e. a land area into which water can infiltrate into and replenish an aquifer relatively easily)
- ☐ Depth to the water table (if known)
- ☐ Select the topography and dominant soil type
- ☐ List all known past land uses (E.g. Natural state, agricultural, waste site, gas station, oil and gas lease, commercial, etc.)
- ☐ List current land uses and planned resource use within the boundaries or surrounding areas of the site that may be affected by the proposed project (E.g. farming, forestry, mining, commercial fisheries, wildlife populations/distribution, trapping/hunting, forestry, location of traditional plants, or water resources)
- ☐ Select adjacent land uses
- ☐ Indicate name of Provincial or National park, and/or details of utility corridors, industrial use, or other
- ☐ Identify any permanent, seasonal or temporary residences and enter the distance to those residences

Section C: Flora and Fauna

- ☐ Identify any plant and animal species that are listed under the federal Species at Risk Act that have the potential to be present in the project area
- ☐ Identify if the project has the potential to impact migratory birds – as populations and as individuals – or their habitats, eggs and nests
- ☐ Describe the predominant vegetation in the area (such as forests, marshes, grass fields, cultivated fields) including upper story, under story and ground cover, as well as in the adjacent areas

Section D: Indigenous Traditional/Cultural Uses

- ☐ Identify any historical, archaeological and/or cultural use areas in the project area. This information will help inform whether Indigenous consultation by ISC is warranted
- ☐ Identify any traditional use areas (E.g. hunting, fishing, trapping, gathering, etc.)

Section E: Indigenous Consultation and Public Participation

- ☐ Indicate if the project has the potential to cause off-reserve impacts. This will assist ISC in determining whether consultation with other Indigenous or non-Indigenous groups may be required prior to the project's authorization

Section F: Comments and Other Information

- ☐ Provide any additional comments or information you feel pertinent for the reviewing officer to know about the project

Section G: Contact Information

- ☐ This section involves identifying the First Nation (if not the proponent) and an alternative contact in case the primary contact (as identified in Section A) cannot be reached

Part B: Examples

The following are examples of the detail that is expected in the environmental **PROJECT DESCRIPTION FORM**. For further guidance on filling out this form, please go to http://www.aadnc-aandc.gc.ca/eng/1396209697978/1396209820805.

Location:
The following are examples of acceptable Legal Land Descriptions:
ABC Reserve #4: Lots 10, 11, and 13 Any Street
DEF First Nation, # 12 and 40 Some Road
Lot 31, CLSR 9#####

Project Summary:
The Project Summary should provide a brief description of the project, including the number of houses, the size of the lot, if this is a new construction or renovation, if it is on an existing lot or if clearing is required, and the life expectancy of the structures. The following are examples of acceptable Project Summaries:

This project is to secure a MLG loan to build six new housing units on one and half acres of land that requires clearing. These new houses have a life expectancy of 40 years.

This project is to add a two story, three room addition to an existing house. The addition has a life expectancy of 30 years.

This project is to purchase an existing house and out buildings (boathouse, detached garage, shed) located on 1 acre of land. The house has an estimated life expectancy of 20 years.

Infrastructure:
This section should clearly outline all new or renovated infrastructures that are part of the project. This should include the number and size of houses, type of construction (E.g. slab-on-grade with wooden frame), type of services (E.g. water lines and septic field), type of heating (E.g. 400 L fuel oil tank), any new roads, etc. An example of an acceptable infrastructure description is:

The project involves the construction on existing lots of 2-3 bedroom homes, each with a footprint of 90m^3. The homes will be slab-on-grade with a wood frame construction. Services include water line and electricity hook-up and new septic systems. The homes will be heated using 400 L Roth tanks.

Activities:
This section should outline all activities related to pre-planning, site preparation, construction, operation and decommissioning. For example:

The project involves the fencing off of land used by migratory birds as a nesting site and the clearing and leveling of land. Construction will include the digging of footings and foundation walls, septic tank and fields and the back filling of those excavations.

Waste Generation:
This section should describe all types of waste expected to be generated as part of the project and how they will be disposed of. For example:

The construction work is expected to generate solid waste normally associated with the construction of a house. These wastes include wood, metal trim and fasteners, asphalt shingles, plastics, adhesives, paints, and solvents. All waste will be correctly classed and disposed of at the community waste transfer station and trucked off reserve in accordance with the communities Municipal Type Service Agreement with the neighboring township.

Indigenous Services Canada | Services aux Autochtones Canada

ISC ENVIRONMENTAL REVIEW – PROJECT DESCRIPTION

Purpose: Under the *Canadian Environmental Assessment Act,* 2012 (CEAA 2012) Indigenous Services Canada (ISC) is required to ensure that projects and/or activities that occur on federal/reserve lands requiring authorization by the department do not cause significant adverse environmental effects. This form gathers the preliminary information required to assist in the determination of the potential adverse effects from a proposed project prior to the department making any decision that would allow the project to proceed. This form will also help determine if further information and/or further review is required. For more information please visit: http://www.aadnc-aandc.gc.ca/eng/1345141628060/1345141658639.

Proponents are to complete sections A though G. Please email the completed document to the assigned Environment Officer or to the Alberta Environment Review Email (aadnc.paeab-erpab.aandc@canada.ca) to have an EO assigned to your project.

Section A: Project Information

Project Name:

Band/Reserve:

Proponent Name:

Proponent Contact:

Role/Position:	**Telephone No.**
Proponent Address:	**Postal Code:**
Email Address:	**Fax No.**

Project Start Date (Construction Phase):

Project Completion Date (Construction Phase):

Location

LSD Style: Latitude/Longitude:

Project Summary:

Infrastructure:
Activities:
Waste Generation:

Type of Project/Activity:

a) Is there any financial support that federal departments or agencies are, or may be, providing to the project? ☐ YES ☐ NO

   a. If **YES**, which Department(s) or Agency(s)?

b) Are there any other permits, licenses or other authorizations that may be required in order to carry out the project? ☐ YES ☐ NO

   a. If **YES**, please list the requirements:

Section B: Land Description

a) Is there surface water present on/or within 30 meters of your project boundary? ☐ YES ☐ NO

b) What is the approximate distance to the nearest surface water body?

Ground water: Are there drinking water wells or aquifer recharge zones:

a) Present on your site? ☐ YES ☐ NO

b) Within 500 meters of your project boundary? ☐ YES ☐ NO

Approximate depth of the water table:

Topography: **Dominant Soil Type:**

Past Land Uses:

Current Land Uses:

Adjacent Land Uses: (Select all that apply)

☐ School	☐ Daycare	☐ Railway
☐ Agricultural	☐ Airport	☐ Other
☐ Recreation Area	☐ Commercial	
☐ Provincial or National Park (Conservation Area)		
☐ Utility Corridor (Pipelines, gas lines, power lines, water lines, etc.)		
☐ Industrial (Oil and gas, manufacturing, sawmill, etc.)		
☐ Residential		

Describe any unique features of the land

Section C: Flora and Fauna

Wildlife: Is/are there any:

a) **Species at Risk** in or adjacent to the proposed project area? ☐ YES ☐ NO ☐ UNKNOWN
For information and maps on Species at Risk please visit the **Species at Risk Public Registry.**
If **YES**, please name the species and describe the habitat and nature of the potential impact.

b) Migratory Birds that use the area at any time during the year? ☐ YES ☐ NO ☐ UNKNOWN
For information please see the Migratory Birds List.
If **YES**, please name the species and nature of the potential impact.

c) **Migratory Birds** (or eggs or nests) likely to be captured or killed? ☐ YES ☐ NO ☐ UNKNOWN
If **YES**, please describe circumstances and rationale.

d) Fish or Fish Habitat that could be impacted by the project? ☐ YES ☐ NO ☐ UNKNOWN
Fish and **Fish Habitat** defined in Section 2 of the Fisheries Act
If **YES**, please describe the nature of the potential impact.

Vegetation:
List the predominant vegetation in and adjacent to the site. Include upper story, under story, and ground cover.

Are there potentially any plant species at risk on the site? ☐ YES ☐ NO ☐ UNKNOWN
For more information visit: http://www.sararegistry.gc.ca/default.asp?lang=En&n=24F7211B-1
If **YES,** please list the species.

Section D: Indigenous Traditional/Cultural Uses

a) Are there any **Cultural, Historical or Archaeological** sites/areas within or near the project area?
If **YES**, please describe. ☐ YES ☐ NO ☐ UNKNOWN

b) Are there any **Traditional use** areas within or near the project area?
If **YES**, please describe. ☐ YES ☐ NO ☐ UNKNOWN

Section E: Indigenous Consultation and Public Participation

a) Are there potential off-reserve impacts? ☐ YES ☐ NO

If **YES**, do you plan on engaging potentially affected aboriginal groups and/or public? ☐ YES ☐ NO

If **YES**, please enter the date.

Section F: Comments and Other Information

Use this space to add any additional comments or information you consider relevant to the project.

Section G: Contact Information

Please give a First Nation contact if different from proponent:

First Nation:	
Contact Name:	
Role/Position:	
First Nation Address:	
Postal Code:	**Telephone No.**
Email Address:	**Fax No.**

Please enter an alternate contact if available:

Other Contact:	
Contact Name:	
Role/Position:	
Contact Address:	
Postal Code:	**Telephone No.**
Email Address:	**Fax No.**

Indigenous Services Canada | Services aux Autochtones Canada

ISC – SIMPLE ENVIRONMENTAL REVIEW REPORT

Purpose: Following a review of your submitted Project Description, it has been determined that your project requires a standard environmental review as per ISC's (Indigenous Services Canada) environmental review process to satisfy the requirements of s.67 of the *Canadian Environmental Assessment Act*, 2012 (CEAA 2012).

Canada has statutory, contractual and common law obligations to consult with Indigenous groups when the Crown contemplates conduct that might adversely impact potential and/or established Indigenous or Treaty rights. In some cases, environmental effects can trigger Canada's obligations to consult and, where appropriate, accommodate. ISC relies on the proponents to gather information about the impact of the proposed project on the potential and/or established Indigenous or Treaty rights for s.67 determinations. The information collected and any additional research will be used by the department in its decision-making process.

Please note that funding for your project or issuance of an instrument (E.g. permit, lease, designation, loan guarantee, etc.) cannot be confirmed until a determination of environmental effects and the duty to consult has been completed by ISC. This form or other approved form(s) will need to be adequately completed before a determination can be made. ISC may also require additional mitigation measures not listed in this form.

It is the responsibility of the proponent to ensure that the proposed activity or project complies with all applicable federal, provincial/territorial and municipal legislation and regulations. The proponent should include a list of all permits/approvals required for this project, along with relevant correspondence, in Appendix A.

Instructions: Please provide responses to all of the questions in each of the categories below, based on current knowledge or preliminary investigations by checking the appropriate box. If you are uncertain of a response to a question, it is the proponent's responsibility to conduct further consultation or studies to accurately answer the question. When answering the questions describe the project preparation, construction, operation and decommissioning. Mitigation or impact management measures are only to be described for any question with an answer of "yes."

Alternatively, you may produce a report that includes the information necessary to determine whether your project is likely or unlikely to cause adverse environmental effects. When identifying the appropriate mitigation measures, consider any impacts to the environment as well as to human health and socio-economic conditions during project preparation, construction, operation and decommissioning. To expedite the processing of your file please provide us with the most accurate and comprehensive information possible.

The form, or alternative report, must be returned (preferably by email) to the appropriate Environmental Officer at ISC. Should you have any questions please contact your regional Environmental Officer.

During project implementation, all mitigation measures listed in the following sections must be documented in the ISC Mitigation Measures Compliance Report.

Project Name: _____

Proponent Name: _____

Band/Reserve: _____

Project Location: _____

Surface and Groundwater

Note: Surface water includes rivers, lakes, canals, reservoirs, oceans, marshes, ponds, streams and other wetlands

Will your project have the potential to:

a) Impact surface water quality, quantity or flow?	☐ YES	☐ NO
b) Impact ground water quality, quantity or movement?	☐ YES	☐ NO
c) Cause sedimentation or erosion on or off site?	☐ YES	☐ NO
d) Allow a polluting substance to enter a water body?	☐ YES	☐ NO
e) Impact surface or ground water from accidental spills or releases?	☐ YES	☐ NO

If you answered **YES** to any of the above please describe the appropriate mitigation measure(s) and how they will be implemented.

IMPORTANT NOTE: If your project is within 30m of a water body and/or work will be occurring within a waterbody, please consult Fisheries and Oceans Canada's (DFO) "Measures to Avoid Causing Harm to Fish and Fish Habitat" for advice that may apply to your project. Engage DFO and/or Environment and Climate Change Canada (ECCC) regional staff to confirm if further information, mitigation requirements and/or a DFO review are required under the Fisheries Act. (Please consult http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html for more information).

The Land

Will your project have the potential to:

a) Require the clearing of trees, shrubs, or ground vegetation? ☐ YES ☐ NO

If **YES**, provide the following information:

Surface area affected:

Species affected:

Proposed clearing dates: to

b) Affect any unique, sensitive (e.g. wetland, protected area or park) or threatened features of the land? ☐ YES ☐ NO

c) Impact adjacent properties (e.g. will there be water run-off from your property that could impact your neighbor)? ☐ YES ☐ NO

If you answered **YES** to any of the above please describe the appropriate mitigation measure(s) and how they will be implemented.

IMPORTANT NOTE: If you are clearing trees and will be selling the timber in commercial quantities, your project may require a Timber permit (or license) issued by ISC. Please contact your regional Environmental Officer for more information. Also, your project may require a Species at Risk permit issued by ECCC. Please list any potential *Species at Risk Act* (SARA) plant species in the Flora and Fauna section of this form.

Flora and Fauna

Will your project have the potential to:

a) Impact any flora or fauna species under SARA or their habitat? ☐ YES ☐ NO
List of species under SARA available at: http://www.registrelep.gc.ca/species/default_e.cfm

i. If so, what species? _____

ii. Permit reference (if applicable) _____

b) Impact migratory birds or their habitat? ☐ YES ☐ NO
The Migratory Birds Convention Act available at: http://laws-lois.justice.gc.ca/eng/acts/M-7.01/

i. Permit reference (if applicable) _____

c) Impact fish or fish habitat? ☐ YES ☐ NO

If you answered **YES** to any of the above please describe the appropriate mitigation measure(s) and how they will be implemented.

IMPORTANT NOTE: If you answered YES to (a) and/or (b) ECCC may need to be engaged and provide permits where required. For more information please go to http://www.sararegistry.gc.ca/default.asp?lang=En&n=DAB77B7A-1. If you answered YES to (c) DFO may need to be engaged and provide authorization where required. For more information please go to http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html.

Air and Noise

Will your project have the potential to:

a) Impact air quality from emissions (e.g. nitrogen dioxide, sulphur dioxide, suspended particulates, other pollutants, etc.)? ☐ YES ☐ NO

b) Impact air quality from the emission of dust or odours? ☐ YES ☐ NO

c) Impact any noise-sensitive receptors in the project area, either during construction, operation, or decommissioning? (Sensitive receptors may include residences, daycares, schools, hospitals, places of worship, nursing homes, etc.) ☐ YES ☐ NO
Please consult guidance provided by Health Canada at: https://www.canada.ca/en/health-canada/corporate/publications/health-canada-participation-environmental-assessments.html

If you answered **YES** to any of the above please describe the appropriate mitigation measure(s) and how they will be implemented. Please provide details on the expected duration of the noise, distance from project site to noise-sensitive receptors, identification of baseline sounds (measured or estimated) and a description of the methods used to obtain these levels.

Socio-Economic, Culture and Heritage

Will your project have the potential to:

a) Result in Indigenous community and/or public concerns related to health and safety (including concerns regarding increased traffic)? ☐ YES ☐ NO

b) Impact local businesses, institutions or public facilities? ☐ YES ☐ NO

c) Impact physical or cultural heritage resources (Indigenous or non- Indigenous) including areas of historical, archaeological, paleontological or architectural significance within or outside your site? ☐ YES ☐ NO

d) Impact the current use of lands and resources for traditional purposes? ☐ YES ☐ NO

If you answered **YES** to any of the above please describe the appropriate mitigation measure(s) and how they will be implemented.

Other Considerations

Will your project have the potential to:

a) Result in the creation of waste material requiring disposal (e.g. oil products for machinery, treated wood, lead paint, PCBs, asbestos, petroleum or gasoline containers, resins, toxins, pesticides, fertilizer, caustic agents, etc.)? ☐ YES ☐ NO

If you answered **YES** to question (a), please describe the plan for waste management and spill prevention.

b) Involve the installation of a fuel tank over 230L, which is outside a building and will not be connected to a heating appliance or emergency generator? ☐ YES ☐ NO

If you answered **YES** to question (b) or you have an underground system, you may be subject to the *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations* (http://laws-lois.justice.gc.ca/eng/regulations/SOR-2008-197/index.html). There may be a need to provide information or documentation to ECCC as outlined by the regulation. Please describe how the Storage Tank Regulations will be adhered to.

c) Will the project's implementation require the use of soil or material, such as sand, gravel, or rocks?

☐ YES ☐ NO

If you answered **YES** to question (c) please provide the type, volume, source location and how you will determine if it is free of contaminants.

d) Is the use of explosives planned as part of the project and/or do you need authorization to mix ANFO explosives or a license to manufacture explosives? ☐ YES ☐ NO

i. If **YES**, contact Natural Resources Canada-Explosive Regulatory Division (http://www.nrcan.gc.ca/explosives) as your project may require a license.

ii. License reference # (if applicable) _____

Supporting Documentation

Please list any supporting documentation submitted with this form.

Signatures:

I hereby certify that the information provided above is accurate and complete and corresponds to my interpretation of the project.

Signature: _____ Date: _____

Name: _____

Title: _____

Email: _____ Phone: _____

I, as the Proponent or a representative thereof, hereby certify that the information provided above is accurate and complete and agree to implement the mitigation measures as described in this review.

Signature: _____ Date: _____

Name: _____

Title: _____

Email: _____ Phone: _____

TO BE COMPLETED BY ISC ENVIRONMENT OFFICIALS ONLY

Recommendation and Decision of ISC Officials

ISC Environmental Officer Comments and/or Recommendations:

I have analyzed the project and its potential environmental effects and agree/recommend that the project:
(Select one)

☐ taking into account the proposed mitigation measures, is not likely to cause significant adverse environmental effects.
☐ taking into account the proposed mitigation measures AND the above recommendations, is not likely to cause significant adverse environmental effects.
☐ is likely to cause significant adverse environmental effects.
☐ should undergo a detailed environmental review based on the information supplied.

EO Signature:_____ Date:_____

Name: _____

Title: _____

Email: _____ Phone: _____

Responsible Manager:

Manager's Name	Signature	Date

APPENDIX A
Relevant Legislation/Regulations

The following table should list all Federal and Provincial permits/approvals applicable to this project, along with relevant correspondence.

Name of Legislation/Regulation	Project Complies		License/Permit Required		Correspondence Attached	
	Yes	No	Yes (Include #)	No	Yes	No
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐

TSUUT'INA DEVELOPMENT AUTHORITY
203, 5 RICHARD WAY, SW, CALGARY, AB, T3E 7M8
E: TDA@TSUUTINA.COM
W: TDA.TSUUTINA.COM

PUBLIC INFRASTRUCTURE & PRIVATE REALM

STORMWATER MANAGEMENT REPORT CHECKLIST

Project Name:	**Submission Number:**
Village Name:	
Phase Number:	**Consultant:**
Developer:	**Contact Name:**
Public Infrastructure OR Development Permit Number(s):	**Contact Email:**

The Stormwater Management Report (SWMR) Checklist outlines all the information necessary to evaluate and provide a timely decision on your application. This Checklist has been designed to accompany SWMR submissions that pertain to the Public Realm and/or the Private Site.

Refer to the *Taza Development Guidelines* and the *Taza Infrastructure Design Standards and Specifications* for the applicable guidelines and standards.

Only SWMR submissions that are complete will be accepted. SWMR and supporting documentation that are submitted must be clear, legible and precise. Plans must be to a professional drafting standard and be clear of any previous approval stamps and notations.

The Tsuut'ina Development Authority may require additional supporting documentation considered necessary to properly evaluate the proposed Development.

COMPLETED BY APPLICANT	NOT APPLICABLE OR INCOMPLETE	OFFICE USE ONLY	*REQUIRED ITEMS*
☐	☐	☐	ALL items identified as “Not Applicable” or “Incomplete” by the Applicant are explained in the Comments section below.
☐	☐	☐	Provide one (1) un-editable and printer-friendly electronic copy (PDF) of the complete Stormwater Management Report (SWMR) that includes the Engineering Consultant’s stamp (i.e. P.Eng., P.L.Eng., or P.Tech) and the Permit to Practice number.
☐	☐	☐	Outline any outstanding area(s) in the SWMR that could not meet the Taza Infrastructure Design Standards and Specifications in the cover letter.
☐	☐	☐	List any related Master Drainage Plans, Staged Master Drainage Plans and/or related Stormwater Management Reports.
			Site Description and Design Criteria
☐	☐	☐	Include the Village name and Phase number, if applicable.
☐	☐	☐	State the legal land location, Site address and total area in hectares.
☐	☐	☐	Provide a Study Area Figure and Location Plan that summarizes the location of the proposed Development and the adjacent area(s) and phases
☐	☐	☐	State design objectives.
			Analysis Methodology and Data
☐	☐	☐	Include a brief description of the computer model, methodology, design storm parameters, catchment parameters, catchbasin/inlet curves, manhole losses, and/or storage curves.
☐	☐	☐	Outline criteria used for sizing of the minor system.
☐	☐	☐	Catchment boundaries should align with preceding reports. If discrepancies exist, provide supplemental information to rationalize the changes.
☐	☐	☐	Identify any areas beyond the construction boundary, including their size, that contribute to the stormwater management system.
☐	☐	☐	Explicitly state the flows that are beyond the construction boundary that may impact on-site conditions and/or on-site flows that may impact offsite conditions.
			Modelling Results
☐	☐	☐	Include a figure and table delineating sub-catchments and sizes of the sub-catchments within the Development.
☐	☐	☐	Provide a schematic drawing that supports the computer model and submitted drawings.
☐	☐	☐	Attach the computer input, summary and output files.
☐	☐	☐	If there is an increase in overland and/or minor system offsite flows, illustrate how impact to downstream systems have been minimized and that normal function is maintained.
☐	☐	☐	Identify all stormwater quality and quantity treatment facilities or other Best Management Practices (BMPs) proposed within the Development. If no water quality treatment is provided within the Development, identify downstream ponds or water quality enhancement provisions.
☐	☐	☐	List any Low Impact Developments (LIDs) that have been incorporated in the stormwater management design of the Development. Provide supplemental information on the LID design and functionality, if applicable.
☐	☐	☐	Show overland flows, velocities, depths for all critical segments within the Development boundaries. Clearly label trap low spill information. Confirm that Alberta Environment depth-velocity guidelines have been addressed, and confirm that all drainage gutters fully contain the 1:100 year peak flow rate without overtopping/spillover into adjacent area(s).

COMPLETED BY APPLICANT	NOT APPLICABLE OR INCOMPLETE	OFFICE USE ONLY	*REQUIRED ITEMS*
☐	☐	☐	Overland or minor system flow is not permitted to discharge to natural areas unless supported by preceding stormwater management reports. If discharge to natural areas is unavoidable, provide confirmation that the design has no negative impacts to the area.
☐	☐	☐	Ensure that the traplow storage table shows all trap lows in the Development and those on/adjacent to the construction boundary.
☐	☐	☐	Include summary table of minor system flows for the 1 in 100 year event or other approved storm trunk design method to ensure that pipe design flows are not exceeded.
☐	☐	☐	Include surcharge (HGL) analysis on a site-specific basis for areas impacted by the High Water Level (HWL) from stormwater ponds or other conditions. Tabulate HGL results.
☐	☐	☐	Tabulate all major and minor system boundary conditions entering and/or exiting the Development.
☐	☐	☐	Tabulate permissible discharge rates and on-site storage requirements for adjacent (private) sites within the Development.
			Private Site Additional Requirements
			NOTE: If completion of this checklist is in support of a Public Infrastructure SWMR, the following section can be disregarded.
☐	☐	☐	Ensure that natural flows from upstream are not impeded.
☐	☐	☐	Ensure that on-site minor system is designed for the 1:5 year flow rate.
☐	☐	☐	Explicitly state permissible release rate (expressed in L/s and L/s/ha), permissible runoff volume (mm) water quality objectives and the invert elevations, pipe sizes and Hydraulic Grade Line (HGL) elevation at the tie-in location to the public storm sewer system, with reference to preceding related reports.
☐	☐	☐	Where the public storm system is surcharged, ensure that the flow control is sized for free-flow conditions, and the HGL and trap low storage requirements within the Development are sized based on the HGL of the public storm sewer system.
☐	☐	☐	A dynamic hydraulic analysis has been conducted for flow controls that are in series.
☐	☐	☐	Identify minimum building elevations (MGs) based on critical spillover elevation, located within the Development or within adjacent areas.
☐	☐	☐	Ensure that the maximum 1:100 year level in the on-site storm sewer system is at least 0.30m below slab elevation of affected building.
☐	☐	☐	Ensure that low-lying areas, such as parkades, are not negatively impacted by overland flows and/or backwater conditions in the on-site storm sewer system.
PUBLIC INFRASTRUCTURE DRAWING REQUIREMENTS			
			General Drawing Requirements:
☐	☐	☐	Plans to be in metric scale, minimum 1:100, all elevations in metric are NAD 83 Geodetic Datum Ground Coordinates
☐	☐	☐	North arrow, pointing to top or left of page
☐	☐	☐	Address (i.e. street address) and legal address (i.e. plan/block/lot)
☐	☐	☐	Size of parcel (ha)
☐	☐	☐	Label all elements of plan as existing or proposed (Proposed to be used for in circulation elements)
☐	☐	☐	Signed and dated Engineering Consultant's stamp (i.e. P.Eng., P.L.Eng., or P.Tech)
☐	☐	☐	Permit to Practice number

COMPLETED BY APPLICANT	NOT APPLICABLE OR INCOMPLETE	OFFICE USE ONLY	*REQUIRED ITEMS*
☐	☐	☐	Construction boundary
			Overland Drainage Drawing Requirements:
☐	☐	☐	Q,v,d's for critical segments
☐	☐	☐	Traplow storage table
☐	☐	☐	Traplow location and outline at spill elevation
☐	☐	☐	ICDs, catch basin types, and interconnected catch basins
☐	☐	☐	Manhole and catchbasin rim elevations
☐	☐	☐	Overland arrows indicating traplow spill locations and associated Q, v, d for the 1:100 event.
☐	☐	☐	Concrete drainage gutter locations and details for deep or non-standard gutter sections
☐	☐	☐	Direction of drainage flow, displayed by arrows, from the high points to a low point. Include a slope value.
☐	☐	☐	Original ground contour lines
			Storm Drainage Area Drawing Requirements:
☐	☐	☐	Minor system table that follows a logical flow pattern
☐	☐	☐	ICDs, catch basin types, and interconnected catch basins
☐	☐	☐	Pipe layout including pipe sizes and manhole numbers
☐	☐	☐	Overall drainage plans, if applicable
☐	☐	☐	Pipe inverts, and rim elevations at all manhole and catchbasins
☐	☐	☐	Pipe numbering system, if applicable
☐	☐	☐	Drainage area boundary lines
☐	☐	☐	Drainage area sizes, release rate and/or runoff coefficients
☐	☐	☐	Catchment IDs and arrows indicating tie-in manhole locations
DEVELOPMENT PERMIT / SITE SERVICING PLAN DRAWING REQUIREMENTS			
			General Drawing Requirements:
☐	☐	☐	Plans to be in metric scale, minimum 1:100, all elevations in metric are NAD 83 Geodetic Datum Ground Coordinates
☐	☐	☐	North arrow, pointing to top or left of page
☐	☐	☐	Address (i.e. street address) and legal address (i.e. plan/block/lot)
☐	☐	☐	Size of parcel (ha)
☐	☐	☐	Label all elements of plan as existing or proposed (Proposed to be used for in circulation elements)
☐	☐	☐	Signed and dated Engineering Consultant's stamp (i.e. P.Eng., P.L.Eng., or P.Tech)
☐	☐	☐	Permit to Practice number
☐	☐	☐	Construction boundary
			Underground Layout Plan Drawing Requirements:
☐	☐	☐	Overall site plan
☐	☐	☐	Building outlines, parking lots, driveways and parking garage access routes
☐	☐	☐	Layout and detail of existing and proposed utilities including storm and sanitary systems and connection(s), and showing separation from adjacent utilities and utility right-of-ways (RoWs)
☐	☐	☐	Catchment boundaries and area sizes
☐	☐	☐	Pipe size, type, class, material, length, slope and bedding material

COMPLETED BY APPLICANT	NOT APPLICABLE OR INCOMPLETE	OFFICE USE ONLY	*REQUIRED ITEMS*
☐	☐	☐	Pipe inverts, and rim elevations at all manhole and catchbasins
☐	☐	☐	Minor system table that follows a logical flow pattern
☐	☐	☐	Sanitary sewer manholes requiring seals or one-hole manhole lids
☐	☐	☐	All ICDs, CB type and locations, and interconnected CBs
☐	☐	☐	Sump pump and details
☐	☐	☐	Pump start and stop elevations, and pump rating curve (excluding sump pumps)
☐	☐	☐	Special hydraulic requirements (e.g. benching, backwater valves, HGLs)
☐	☐	☐	Minimum Main Floor (MF/MMF/MSE/TOS) elevation(s) for buildings.
☐	☐	☐	Floodway, flood fringe, and overland flow zone lines complete with all step elevations and labels, as well as distance to buildings and structures
☐	☐	☐	Details of source control practices (SCPs) (e.g. OGS including type and model number, installation details, etc.)
☐	☐	☐	Underground storage including capacity required, elevations and design details
☐	☐	☐	Water quality requirements and applicable details
			Surface and Grading Plan Drawing Requirements
☐	☐	☐	Adjacent properties and streets including contours, property line elevations, and (critical) traplow spillover elevations
☐	☐	☐	Direction of drainage flow, displayed by arrows, from high points to low points. Include a slope value.
☐	☐	☐	Permitted release rate (in L/s and L/s/ha)
☐	☐	☐	Imperviousness values and/or runoff coefficients
☐	☐	☐	Trap low low point, 1:100 year and spillover elevations, depth, capacity and 1:100 year storage requirements, and outline at spillover elevation
☐	☐	☐	Traplow storage table
☐	☐	☐	Roof top storage including capacity required, discharge rate and design details
☐	☐	☐	Grading showing landscaping, berms, escape routes, ponds, and applicable elevations
☐	☐	☐	Type, alignment, elevations and cross-sections of drainage gutters or swales (concrete and grass)
☐	☐	☐	Drainage crossing locations
☐	☐	☐	Overland arrows indicating traplow spill locations and associated Q, v, d for the 1:100 event.
☐	☐	☐	Q,v,d's for critical segment
NOTE: FOR SITE SERVICING PLAN SUBMISSIONS THAT REQUIRE A SWMR, A STORMWATER MANAGEMENT PLAN MAY BE REQUIRED, IN WHICH CASE THE FOLLOWING MUST BE SATISFIED:			
			Additional Drawing Requirements (as required)
☐	☐	☐	Catchment boundaries and area sizes
☐	☐	☐	Imperviousness and runoff coefficients
☐	☐	☐	Pipe layout including pipe sizes and manhole numbers
☐	☐	☐	Pipe inverts, and rim elevations at all manhole and catchbasins
☐	☐	☐	ICDs, catch basin types, and interconnected catch basins
☐	☐	☐	Details and / or specifications for OGS units, custom ICDs, LID design elements, roof drains, etc.

NOTE: This application does not relieve the applicant from full compliance with the requirements of any federal, provincial or other municipal legislation, or the terms and conditions of any easement, covenant, building scheme or agreement affecting the building or land.

COMMENTS:

Applicant's Signature: **Date:**

(Confirming that all required information has been provided and is correct)

Permit to Practice Stamp or Number **Engineer Stamp**

Checked for Completion by: **Date:**

Tsuut'ina Development Authority

TSUUT'INA DEVELOPMENT AUTHORITY
203, 5 RICHARD WAY, SW, CALGARY, AB, T3E 7M8
E: TDA@TSUUTINA.COM
W: TDA.TSUUTINA.COM

PUBLIC INFRASTRUCTURE & PRIVATE REALM
EROSION AND SEDIMENT CONTROL REPORT AND DRAWING APPLICATION

The Erosion and Sediment Control (ESC) Report and Drawing Application outlines all the information necessary to evaluate and provide a timely decision on your Application. Refer to the Taza Development Guidelines and the Taza Infrastructure Design Standards and Specifications for the applicable guidelines and standards.

Only ESC Report and Drawing Application submissions that are complete will be accepted. ESC Report and Drawing Applications and supporting documentation that are submitted must be clear, legible and precise. Plans must be to a professional drafting standard and be clear of any previous approval stamps and notations.

The Tsuut'ina Development Authority may require additional supporting documentation considered necessary to properly evaluate the proposed development.

A. Project Information

A.1 Project Name _____

A.2 Village Name _____

A.3 Phase Number _____

A.4 Site Size (ha) _____

A.5 Legal Land Location _____

A.6 Civic Site Address _____

A.7 Receiving Storm Pond _____

A.8 Receiving Water Body & Relevant Outfall _____

A.9 Application Type _____
(i.e Stripping & Grading, Industrial/Commercial/Institutional, Public Infrastructure)

A.10 Servicing Agreement Number (if applicable) _____

A.11 Development Permit/Public Infrastructure Permit Number _____

B. Contact Information

		Company Name	Contact Name	Office Phone # / Cell Phone #	Email
B.1	Owner/Developer/Project Manager				
B.2	Engineering Consultant				
B.3	ESC Consultant				
B.4	ESC Implementation, Inspection & Maintenance Contact				

C. Project Details

C.1 Estimated Project Start-up Date _____

C.2 Project Overview

- Provide a brief description of the intent of the construction project including what will remain on the site after construction is complete.

C.3 Existing Site Conditions (i.e. Cover and Measures/Practices) Based on Recent Site Visit

Please specify the date of the site visit and any limitation(s) of the visit.

- Specify the existing cover of the site, whether it is vegetated or stripped. If the site has vegetation, identify the location(s) and the density of the vegetation present.
- Provide information on the existing ESC Measures/Practices, stockpiles and/or berms.
- List the date of the visit, limitations encountered on site, and site photos taken from different angles.

C.4 Critical Area(s)

- Provide areas of the proposed development, within or adjacent to the site, that could be susceptible to erosion, sediment-laden run-off or sedimentation.
- Example of critical areas include: steep slopes, highly erodible soils, water bodies, etc.

C.5 Low Impact Development(s)

- Provide detail on the location and purpose of the proposed Low Impact Developments (LIDs) that will be present in the final design. Specify at which stages (phase) the LID will be installed.

C.6 Run-on and Run-off Location(s)

- Specify any locations on the site that cannot be controlled and will be draining offsite. Also, specify any locations that will be draining onto the site from adjacent areas as the ESC measures/practices may need to be designed accordingly.

C.7 Emergency Overland Flow Location(s)

- Specify the overland flow path during high flow events during all stages of construction.

C.8 Referenced Document(s)

- List any referenced documents or resources that may have assisted the Applicant in the completion of the ESC Application.

D. Erosion and Sediment Drawings

Check all relevant drawings pertaining to your Application Type. If certain drawings were required or omitted, please provide a brief statement in the *Additional Notes* box below. Refer to the City of Calgary *Instruction Manual for Erosion and Sediment Control Applications* for details on drawing content and format.

Application Type: _____

Drawing Number	Drawing Description	Stripping and Grading	Industrial/Commercial/Institutional	Public Realm
☐ ESC1	Before Stripping and Grading	Required	*Site Dependent	
☐ ESC2	During Stripping and Grading	Likely Required	*Site Dependent	
☐ ESC3	Post Stripping and Grading	Required	*Site Dependent	
☐ ESC4	**Cut and Fill	Likely Required	Site Dependent	Site Dependent
☐ ESC5	Before Development		Required	Required
☐ ESC6	Post Underground		Required	Required
☐ ESC7	Above Ground Work		Required	Required
☐ ESC8	Development Completion		Required	
☐ ESC9	Landscaping		Required	Site Dependent
☐ ESC10	Phasing Plan	Site Dependent	Site Dependent	Site Dependent

*Site Dependent – Stripping & Grading Drawings would only be required for a Site that needs to be stripped and graded and there are currently no previous approved plans.
**Cut and Fill Plans are only required for Sites that will have cut and/or fill greater than or equal to two (2) meters.

Additional Notes: Please make note of any additional drawings that were required or omitted.

E. Erosion and Sediment Control Products

The following are common Erosion and Sediment Control (ESC) Measures and Practices that are often implemented on a Site. Refer to the City of Calgary Erosion and Sediment Control Standards and Specifications for further information pertaining to each of the Specifications detailed below.
The Applicant is not limited to the following ESC Measures and Practices. Section F.4 has been provided for those that wish to provide Nonstandard Specifications.

F.1 Erosion Control

F.1.1 **SEED** Specification # 200.1.1

C-Value	Type % Cover	Drawings Represented On	Location Description	Supplemental Information

F.1.2 **SOD** Specification # 200.1.2

C-Value	Sod Type	Drawings Represented On	Location Description	Supplemental Information

F.1.3 **ROLLED EROSION CONTROL PRODUCTS (RECP)** Specification # 200.1.3

C-Value	Blanket Type	Drawings Represented On	Location Description	Supplemental Information

F.1.4 **HYDROMULCH/TACKIFIER** Specification # 200.1.4

C-Value	Type & Application Rates	Drawings Represented On	Location Description	Supplemental Information

F.1.5 **COMPOST BLANKETS** Specification # 200.1.5

C-Value	Type and Application Rates	Drawings Represented On	Location Description	Supplemental Information

F.1.6 **AGGREGATE COVER** Specification # 200.1.6

C-Value	Type and Application Rates	Drawings Represented On	Location Description	Supplemental Information

F.2 Sediment Control

F.2.1	**WATTLES/LOGS/BARRIERS** Specification # 200.2.1				
	P-Value	Product Type and Size	Drawings Represented On	Location Description	Supplemental Information

F.2.2	**SEDIMENT CONTAINMENT SYSTEMS** Specification # 200.2.2				
	P-Value	Containment System Type	Drawings Represented On	Location Description	Supplemental Information

F.2.3	**DIVERSION CHANNELS** Specification # 200.2.3				
	P-Value	Maximum and Minimum % Slope	Drawings Represented On	Location Description	Supplemental Information

F.2.4	**DIVERSION BERMS** Specification # 200.2.4				
	P-Value	Width and Height of Berm	Drawings Represented On	Location Description	Supplemental Information

F.2.5	**SURFACE TEXTURING** Specification # 200.2.5				
	P-Value	Texturing Types	Drawings Represented On	Location Description	Supplemental Information

F.2.6	**SILT FENCE** Specification # 200.2.6				
	P-Value	Configuration	Drawings Represented On	Location Description	Supplemental Information

F.3 Support Practices

F.3.1	**STABILIZED GRAVEL ACCESS** Specification # 200.3.1				
	P-Value	Number Present	Drawings Represented On	Location Description	Supplemental Information

F.3.2	**STORM INLET CONTROLS** Specification # 200.3.2				
	P-Value	Number Present	Drawings Represented On	Location Description	Supplemental Information

F.4 Nonstandard Specification

Include the manufacturer's Specification Sheet for any Nonstandard Erosion and Sediment Control Measures and Practices proposed on-site. Alternatively, you can fill out the Nonstandard Specification form found on the next page.

Nonstandard Control (Only if Required)

A nonstandard control is a control or practice that is not found in Section F such as rip rap and cable concrete. To use a nonstandard control, populate this section of the application.

Name and Type of Control		Description of Control or Practice		
P-Value	**Number Present**	**Drawing(s) When Used**	**Description Where Used**	**Additional Information**
Design Limitations and Requirements		**Installation Method**		
Inspection Requirements	**Maintenance Requirements**		**Winter Operations**	**Removal Requirements**

F. Sediment Containment Systems Data

The following table is utilized to summarize the Sediment Containment Systems that are existing or proposed on the Site at any stage:

G.1	G.2	G.3	G.4	G.5	G.6	G.7
Drawing Number	Location Description	Sediment Containment System Identifier	Volume in Cubic Metres	Area Served in Hectares	Design Volume	P-Value

G. Stockpile Control Plan

The following table is utilized to summarize the Stockpiles that are existing or proposed on the Site at any stage:

H.1	H.2	H.3	H.4
Drawing Number	Material Stockpiled	Volume	Approximate Length of Time
Example: ESC5 Before Development	Topsoil	1000m3	25 days

H. Winterization Plan / Winter Operations

List ALL ESC Measures/Practices Used on Site (Match Section E)	**Winter Removal? (YES/NO)**	**If NO – Provide maintenance requirements. If YES – When will it be installed?**	**Can it be installed on Frozen and/or Snow Covered Ground? (YES/NO)**	**If NO - Provide an Alternate Measure/Practice if installation is required during frozen conditions**

I. RUSLE Calculations

The following table is a guide for Applicants when completing RUSLE Calculations for each Drawing and should be submitted as part of the ESC Report and Application submission:

RUSLE CALCULATIONS													
Drawing Name and Number													
												Site Erosion Potential	
A1	**A2**	**A3**	**A4**	**A5**	**A6**	**A7**	**A8**	**A9**	**A10**	**A11**	**A12**	**A13**	**A14**
Drainage Area Identifier	LS Area Size (ha)	LS Identifier	Slope (%)	Slope Length (m)	Description of Measures and Practices	R-Value	K-Value	LS-Value	C-Value	P-Value	A-Value (tonnes/hectare*year) **	Soil Loss With Measures and Practices (tonnes/year)	Soil Loss Without Measures and Practices (tonnes/year)
											A12 = (A7)*(A8)*(A9)*(A10)*(A11)	A13 = (A2)*(A12)	A14 = (A2)*(A7)*(A8)*(A9)
Overall Site Size (ha)											**Total Soil Loss Estimates**		
Supplemental Information													

** The A-Value **must** be equal to or less than 2 tonnes/hectare*year.

J. Inspection Sheet

K.1 Project Location Details:

- Project Name _____
- Village Name _____
- Legal Land Location _____
- Civic Site Address _____

K.2 Project Timelines:

- Project Start Date _____
- Project End Date _____

K.3 Site Details:

- Owner/Developer/Project Manager _____
- Engineering Consultant _____
- ESC Consultant _____
- ESC Implementation, Inspection & Maintenance Contact _____

K.4 Site Inspection(s):

- Inspection Date _____
- Weather (Including past 48 hours) _____
- Other Attendees _____
- Previous Inspection Date _____

Inspection Checklist

ESC Measure/ Practice	Drawing	Location	Observations - Effectiveness of the Measure/ Practice Used - Include Deficiencies or Noted Concerns. - Optional Photo.	Maintenance Requirements or Changes Required to the ESC Report and/or Drawings	Performed Actions - When and What Repairs/Maintenance Completed - By Whom	Performance (Concerns/ Meets/ Exceeds)

Inspection Checklist Continued

ITEM No.	YES	NO	NOT APPLICABLE	ESC INSPECTION CRITERIA	NOTES
1				1. Are the approved ESC documents and inspection sheets available on-site?	
2				2. Does the site match the approved drawing for the present phase?	
3				3. Are all socks, donuts, or other forms of inlet protection in place approved on the drawing?	
4				4. Are appropriate measures in place to control overland run-on and run-off?	
5				5. Are all stockpiles adequately located and stabilized?	
6				6. Are construction exits properly stabilized and maintained?	
7				7. Are critical areas adequately protected?	
8				8. Is site stripping inside the approved boundaries?	
9				9. In completed areas, are permanent stabilization measures adequate?	
10				10. Have all temporary controls that are no longer needed been removed?	
11				11. Does water or sediment need to be removed from ponds to maintain volumes?	
12				12. Is the site adequately protected with existing controls?	
13				13. Has dust control been implemented?	
14				14. If required, has mandatory cover been installed on inactive areas after 45 days?	
15				15. If after November 15 – has proper winter shut down occurred?	
16				16. Have deficiencies in the site inspection documents been promptly corrected?	
17				17. Has sediment been tracked onto a street?	
18				18. Has there been a sediment discharge to the storm drainage system?	
19				19. Has there been a sediment discharge to a neighbouring property?	
20				20. Has there been a sediment discharge to an environmental reserve?	
21				21. Has there been a sediment release to a water body?	

Applicant's Signature: **Date:**

(Confirming that all required information has been provided and is correct)

Permit to Practice Stamp or Number **Engineer Stamp**

Office use only

Screened by: **Date:**

Tsuut'ina Development Authority

TSUUT'INA DEVELOPMENT AUTHORITY
203, 5 RICHARD WAY, SW, CALGARY, AB, T3E 7M8
E: TDA@TSUUTINA.COM
W: TDA.TSUUTINA.COM

PUBLIC INFRASTRUCTURE & PRIVATE REALM
EROSION AND SEDIMENT CONTROL GOOD HOUSEKEEPING LETTER REQUEST

This Erosion and Sediment Control Good Housekeeping Letter Request outlines all the information necessary to evaluate and provide a timely decision on your Application.

A. Project Information

A.1 Project Name _____

A.2 Village Name _____

A.3 Phase Number _____

A.4 Legal Land Location _____

A.5 Civic Site Address _____

A.6 Site Size (ha) _____

A.7 Disturbed Soil Area Size (ha) _____

A.8 Development Permit/Public Infrastructure Permit Number _____

B. Contact Information

		Company Name	Contact Name	Office Phone # / Cell Phone #	Email
B.1	Owner/Developer/Project Manager				
B.2	Engineering Consultant				
B.3	ESC Consultant				
B.4	ESC Implementation, Inspection & Maintenance Contact				

TSUUT'INA DEVELOPMENT AUTHORITY
203, 5 RICHARD WAY, SW, CALGARY, AB, T3E 7M8
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W: TDA.TSUUTINA.COM

C. Project Description

Brief description of planned work, with a specific focus on soil disturbance activities.

- Provide a brief description of planned work, with a specific focus on soil disturbance activities.

☐ Check to confirm you've included a basic map showing:

- Site boundaries,
- Soil disturbance areas (including access roads/laydown areas), and
- Area sizes (in hectares) for both the total site area as well as the soil disturbance area.

D. Authentication

TSUUT'INA DEVELOPMENT AUTHORITY
203, 5 RICHARD WAY, SW, CALGARY, AB, T3E 7M8
E: TDA@TSUUTINA.COM
W: TDA.TSUUTINA.COM

Applicant's Signature: **Date:**

(Confirming that all required information has been provided and is correct)

Permit to Practice Stamp or Number **Engineer Stamp**

Office use only

Screened by: **Date:**

Tsuut'ina Development Authority

Appendix D – Specifications & Plan Drawings

1. McAvity (Clow Canada) Hydrant Specifications and Spec Sheet
2. Shallow Frame and Tsuut'ina Cover by Trojan Industries Inc.
3. Taza ATS Signage Specifications

1. GENERAL

1.1 INTENT

.1 Read this Section in conjunction with other sections for location, use, placement and installation of hydrants.

1.2 RELATED SECTIONS

.1	Trench Excavating and Backfilling:	Section 02319.
.2	PVC Pressure Pipe and Fittings:	Section 02512.
.3	Valves and Valve Boxes	Section 02515.

2. PRODUCTS

2.1 HYDRANTS

.1 Distribution Piping

.1 Distribution Piping

.1 Polyvinyl Chloride (PVC), 100-300mm

- IPEX
- Royal Flex-Lox
- Rehau
- Or approved equal

.2 Polyvinyl Chloride (PVC), 400mm

- IPEX
- Royal Flex-Lox
- Or approved equal

.3 High Density Polyethylene (HDPE), 50 - 300mm

.2 Hydrants

.1 Hydrants

- Clow
- Daigle
- Mueller
- Canada Valve
- Terminal City
- AVK Model 2700
- Or approved equal

.3 Distribution Valves

.1 Line Valves

.1 Resilient Seated Gate Valves, sizes 150-300 mm

- Mueller A-2360
- Clow
- AVK
- Or approved equal

.2 Bronze Mounted Solid Wedge Gate Valves, size 400mm

- Terminal City
- Clow-McAvity
- Or approved equal

.2 Tapping Valves

.1 Resilient Seated Gate Valves

- Mueller A-2360
- Clow
- Or approved equal

.3 Butterfly Valves

- Dresser 450
- Jenkins Fig. 2544
- Lineseal III B-32-11
- Clow M & H 4500

.4 Fittings

.1 Cast Iron / Ductile Iron Fittings (tees, crosses, elbows, reducers, plugs) Sizes 100 – 400mm

- Crane-McAvity
- Terminal City
- Norwood
- Tyler Pipe
- Or approved equal

.2 PVC Injection Moulded Fittings (tees, crosses, elbows, reducers, plugs, couplings
Sizes 100 – 200mm for line and repair couplers and sizes 100 to 250mm for reducers and plugs.

.3 PVC Extruded Fittings, long body 5° elbows, sizes 100 to 400mm

- IPEX
- Or approved equal

.4 PVC Fiberglas Reinforced Repair Couplings, sizes 300-400mm

- IPEX
- Or Approved Equal

.5 Couplings

.1 Bolted Sleeve-Type Couplings

.1 Non-Isolating, sizes 100 to 300mm

- Robar 1519
- Or approved equal.

.2 Isolating, sizes 100 to 400mm

- Robar 1519 c/w boots
- Or approved equal.

.2 Flanged Coupling Adapters

.1 Non-Isolating Couplings, sizes 100-300mm

- Robar 7506
- Smith-Blair 912
- Or approved equal.

.2 Isolating Couplers, sizes 100-300mm

- Robar 7511
- Or approved equal.

.3 Isolating Flange Kit

- Pikotek, PGE-WS Isolating Flange Kit
- PSI, Gasket Seal™ Isolating Flange Kit, 250mm and larger

2.2 HYDRANT SPECIFICATIONS

.1 General

.1 Hydrants shall be ULC, UL or FM approved dry barrel compression type conforming to AWWA 502-94. Hydrant inlet elbow connections shall be bell-end 150 mm CI. OD. pipe supplied with moulded rubber-ring gaskets conforming to AWWA C111-95.

.2 NBR (Nitrile) gaskets to be installed in areas contaminated or potentially contaminated with organic solvents or petroleum products.

.3 Hydrants to be of a “dry top” design sealed with O-rings with a grease lubricated operating housing. The drain valve shall close as the compression valve starts to

open and the interface between removable parts of the main valve assembly and hydrant body shall be bronze to bronze.

.4 The operating nut shall be 32mm x 32mm and turn counter-clockwise to open.

.5 All nuts, bolts, and washers to be stainless steel.

.6 Outlet nozzles shall be fastened into the barrel by threaded connection and supplied with cast iron caps. All hydrants to have two (2) 57mm hose connections at 180º with Alberta Mutual Aid Thread and one (1) 114mm pumper connection (4 threads per 25.4mm, 154mm OD., root 145mm with 0.51mm flat top and bottom.

.7 Hydrants to be supplied with 300mm-barrel and stem extension located immediately below the grade line flange. The dimension from the grade line flange to centreline of the lowest outlet nozzle is a minimum of 400mm.

.8 The exterior of the hydrant 300mm above and below the grade line flange shall be coated with a single component liquid modified polyurethane copolymer as follows:

- Bright Lime, C.I.L. #3486, Valspar 20-G-684 or approved equal
- Black Caps, C.I.L. #3486, Valspar 20-G-684 or approved equal
- Black Tops, C.I.L. #3486, Valspar 20-G-684 or approved equal

The remainder of the hydrant exterior shall be coated with a Multi-Component Urethane Coating System as follows:

Primer: The primer shall be one of the following or an approved equal:

- Valspar 13-R-159
- Carboline

Top Coat: The top coat shall be one the following or approved equal:

- Valspar 89 series
- Carboline 890
- Bar-Rust 235

.9 The hydrant depth of bury shall be defined as the distance from the invert of the suction elbow to the underside of the grade line flange.

3. HYDRANT INSTALLATION

.1 General

.1 Install hydrants at indicated locations in accordance with AWWA Manual of Practice and as detailed on construction drawings.

.2 Set hydrants plumb, with hose outlets parallel with edge of pavement or curb line and pumper connection facing roadway with body flanges set at an elevation of 50mm above final grade.

.3 Damaged to factory applied thermosetting epoxy shall be repaired as follows:

- Apply Scotchkote 314
- Apply "Hot Melt Patch Compound" (Scotchkote 202P)
- Tape wrap with Greenline accessory tape, Maflowrap PT10 or PT3 10
- or an approved equal

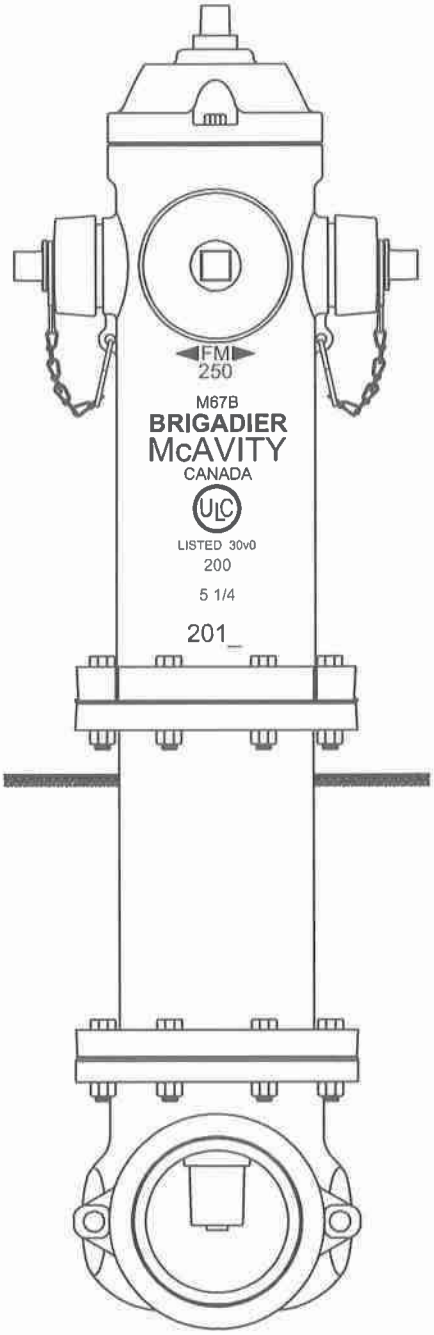
.4 Cathodically protect all metallic components.

.5 Where after the installation of the hydrant, it has been determined by the engineer that a high water table exists, the contractor shall plug the drain hole, paint the hydrant red and attach a sign reading "Fire Use Only".

END OF SECTION

	PATT OR DIE No.	FINISH	UNLESS OTHERWISE SPECIFIED DECIMAL DIM'S IN 2 PLACES + or - .02 DIM'S IN 3 PLACES + or - .01 FRACTION DIM'S UNDER 6" + or - DIM'S OVER 6" + or -
LETTER CHANGE	MATERIAL	WEIGHT	

REF. Nos.



DRAWN	CHECKED	EXAMINED	NOTED	APPROVED
L.G. McKAY				

M67B 2 HOSE 1 PUMPER WITH 6" PUSH-ON ELBOW

SCALE NOT TO SCALE DATE SEPT. / 2010

CLOW CANADA

M67B - 022

CLOW CANADA - M-67 / M93 BRIGADIER FIRE HYDRANT SPECIFICATION

TESTING AND DESIGN SPECIFICATIONS (PER AWWA C502 / NSF /ULC & FM)

1. Hydrant shall be manufactured in accordance with AWWA C502 latest revision
2. Hydrant Has been certified by **UL** in accordance with the **ANSI/NSF 61 and ANSI/NSF 372** (LEAD CONTENT VERIFICATION OF PRODUCTS INCONTACT WITH POTABLE WATER)
3. Hydrant shall be designed for 250 *PSI* working pressure and tested to 500 *PSI* hydrostatic pressure.
4. Hydrant shall be rated for 250 *PSI*. **FM** working pressure and 200 *PSI*. **ULC** working pressure.
5. Hydrant shall be a compression type, dry barrel design with centre operating stem construction.
6. The O-ring seating surface on the upper stem shall be constructed of stainless steel.
7. Epoxy coating to be applied to interior and exterior of hydrant shoe for corrosion protection.
8. Hydrant shall be manufactured with operating nut and integral thrust collar made of bronze. A Delrin washer bearing shall be located above thrust collar for ease of hydrant operation.
9. Hydrant shall have a lower valve assembly that fully encapsulates the lower operating rod threads. This allows for increased corrosion resistance and ease of disassembly.
10. Intermediate section shall be ductile iron. (AWWA C110 – 08)

STANDARD HYDRANT FEATURES

1. Body style: Round
2. Hydrant shall have an internally lubricated bronze operating nut with O-ring seals. Operating nut shall be of the Hydra-lubeTM design to ensure self lubrication during operation.
3. Hydrant hose nozzles shall be mechanically locked into place by an external allen screw, and have O-ring seals.
4. Hydrant Lower rod shall be 1-1/4" in sq.
5. Hydrant shall have a main valve opening of 5-1/4".
6. Hydrant shall be a traffic model, complete with safety flanges and stem coupling. Upper body can be rotated 360 degrees to adjust pumper direction.
7. Hydrant shall be manufactured with a lower valve plate that bottoms out in the shoe for maximum opening.
8. Hydrant shall be backed by manufacturer's 12 year limited warranty
9. Hydrant shall be the Clow Canada Brigadier as manufactured by Clow Canada.

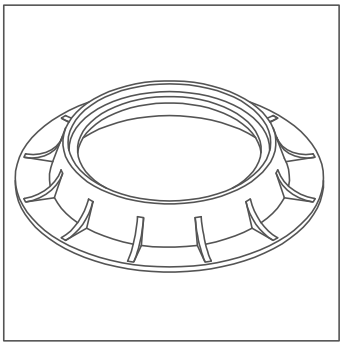
OPTIONAL HYDRANT FEATURES

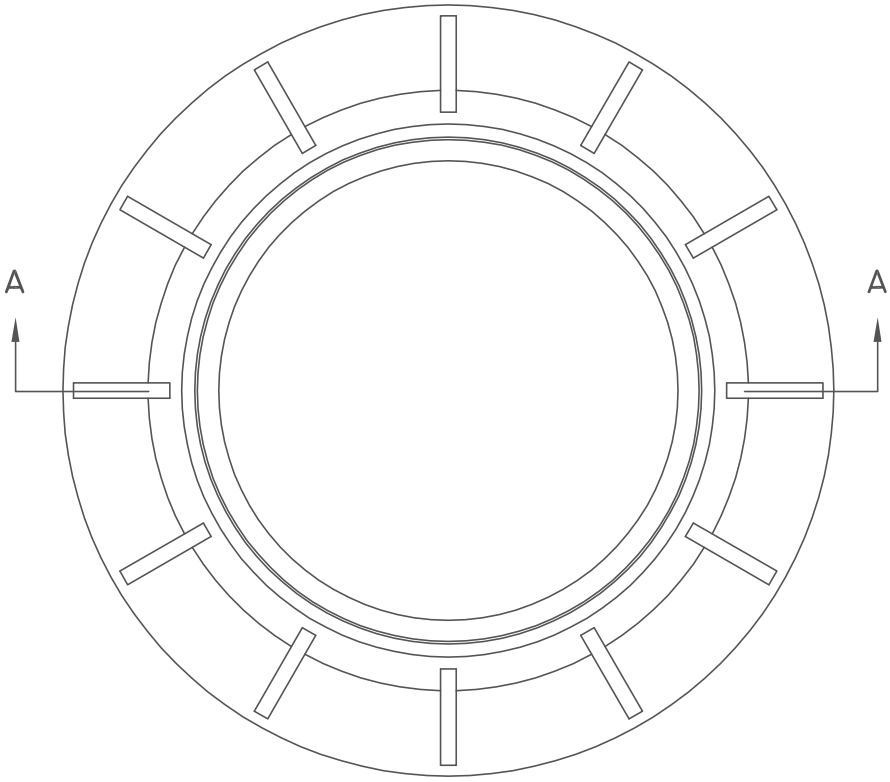
1. 2hose **or** 2hose & one pumper upper body
2. AVAILABLE INLETS:
   150mm (6") Mechanical Joint (ANSI A-21.11)
   150mm (6") Online chamber flanged (ANSI B16.1 Class 125) for (AWWA C110 – 08) tee
   200mm (8") Mechanical Joint (ANSI A-21.11)
   200mm (8") Online chamber flanged (ANSI B16.1 Class 125) for (AWWA C110 – 08) tee
   150mm (6") flanged (ANSI B16.1 Class 125)
   150mm (6") flanged (ANSI B16.1 Class 250)
   150mm (6") Tyton (AWWA C111/A21.11)
3. All standard inlets available in CAST IRON ASTM A126 Class B
   Or Ductile Iron ASTM A536 (65-45-12)
4. Hydra-lube operating nut – see standard shapes on submittal drawing
5. Two 65mm (2.5") hose nozzles - threads on nozzle ends to suit national, provincial or municipal standard or STORZ quick connect
6. One 114mm (4.5") pumper nozzle - threads on nozzle ends to suit national, provincial or municipal standard
7. 100mm (4") or 125mm (5") STORZ quick connect pumper nozzle.
8. Nozzle caps to suit – see standard shapes on submittal drawing.
9. Two external .375" NPT plugs in inlet @ 180 degrees / one internal .25" NPT plug
10. Hose & pumper nozzle cap chains
11. Hydrants painted / coated to suit national, provincial or municipal standard per AWWA C502 / AWWA C550

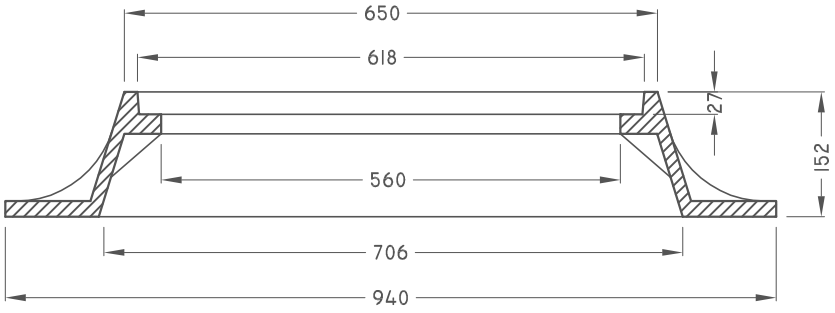
SHALLOW FRAME

TF-50

PLAN







SECTION A-A

GREY CAST IRON ASTM A48

ISO 9001-2000 CERTIFIED

RATED FOR HS-20 LIVE LOAD

MEASUREMENTS IN MILLIMETERS

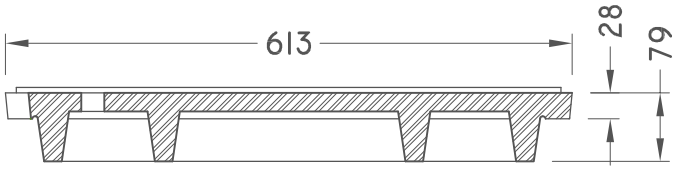
TROJAN INDUSTRIES INC.

CALGARY • EDMONTON, ALBERTA

TSUUT'INA COVER

TF-50CT

PLAN



SECTION

ISO 9001-2000 CERTIFIED

RATED FOR HS-20 LIVE LOAD

MEASUREMENTS IN MILLIMETERS

TROJAN INDUSTRIES INC.

CALGARY • EDMONTON, ALBERTA

Taza Development Group

60X60cm

45X60cm

60X60cm

45X60cm

60X30cm

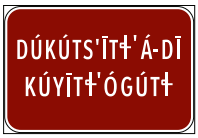
45X30cm

45X30cm

45X30cm

45X60cm

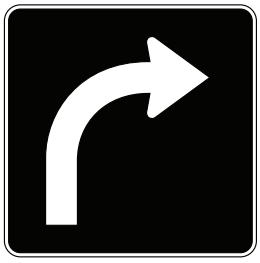
45X30cm



45x45cm

60X75cm

60X60cm



60X30cm

60X30cm

All Signs are Produced With:
HIP on AL1
1.5" Crop
7/16" Holes

ATS Traffic

9015 14 Street NW
Edmonton, AB T6P 0C9
T 780.440.4114

4830 32 Street NW
Calgary, AB T2B 2S6
T 403.248.3241

Contact:
Curtis Resch/Account Manager/ATS Traffic
C: 403-462-3004 / T: 403-248-3241 / TF: 800-242-8408
CurtisR@atstraffic.ca

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